

AGENDA
 IRVINE RANCH WATER DISTRICT
 ENGINEERING AND OPERATIONS COMMITTEE MEETING
 TUESDAY, FEBRUARY 21, 2023

This meeting will be held in-person at the District’s headquarters located at 15600 Sand Canyon Avenue, Irvine, California. The meeting will also be broadcasted via Webex for those wanting to observe the meeting virtually.

To observe this meeting virtually, please join online using the link and information below:

Via Web: <https://irwd.webex.com/irwd/j.php?MTID=m7eeea55fc4330092bfc5d21c4d62fe0b>
 Meeting Number (Access Code): 2483 578 3223
 Meeting Password: ziJ8V298ZQM (94588298 from video systems)

PLEASE NOTE: Webex observers of the meeting will be placed into the Webex lobby when the Board enters closed session. Participants who remain in the “lobby” will automatically be returned to the open session of the Board once the closed session has concluded. Observers joining the meeting while the Board is in closed session will receive a notice that the meeting has been locked. They will be able to observe the meeting once the closed session has concluded.

CALL TO ORDER 1:30 p.m.

ATTENDANCE Committee Chair: Doug Reinhart _____
 Committee Member: Karen McLaughlin _____

ALSO PRESENT

Paul Cook	_____	Kevin Burton	_____	Wendy Chambers	_____
Jose Zepeda	_____	Paul Weghorst	_____	Cheryl Clary	_____
Steve Choi	_____	Jim Colston	_____	Fiona Sanchez	_____
Rich Mori	_____	Eric Akiyoshi	_____	Joseph McGhee	_____
Jacob Moeder	_____	Malcolm Cortez	_____	Ken Pfister	_____
Harry Cho	_____	Alex Murphy	_____		_____
	_____		_____		_____
	_____		_____		_____

PUBLIC COMMENT NOTICE

If you wish to address the Committee on any item, please submit a request to speak via the “chat” feature available when joining the meeting virtually. Remarks are limited to three minutes per speaker on each subject. Public comments are limited to three minutes per speaker on each subject. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 9:00 a.m. on Tuesday, February 21, 2023.

COMMUNICATIONS

1. Notes: Burton
2. Public Comments
3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted, and determine which items may be approved without discussion.

INFORMATION

4. UPCOMING PROJECTS STATUS REPORT – AKIYOSHI / CORTEZ / MOEDER / MORI / BURTON

Recommendation: Receive and file.

ACTION

5. WELL ET-1 REHABILITATION – SPANGENBERG / CORTEZ / BURTON

Recommendation: That the Board authorize the addition of Project 12262, Well ET-1 Rehabilitation, to the FY 2022-23 Capital Budget in the amount of \$748,000 and approve Contract Change Order No. 1 in the amount of \$448,585 to Best Drilling and Pump, Inc. for Well ET-1 Rehabilitation, Project 12262.

6. THREE-YEAR JANITORIAL SERVICES CONTRACT AWARD – MANNING / CHAMBERS

Recommendation: That the Board authorize the General Manager to execute a three-year janitorial services contract with DMS Facilities Services in the amount of \$1,335,781.44.

7. SANTIAGO CREEK DAM IMPROVEMENTS CONSULTANT VARIANCE – MOEDER / BURTON

Recommendation: That the Board authorize the General Manager to execute Variance No. 4 with AECOM Technical Services, Inc. in the amount of \$189,524 for the additional costs to complete the geotechnical investigations for the cracking study at the Santiago Creek Dam.

OTHER BUSINESS

8. Directors' Comments

9. Adjournment


Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available electronically via the Webex meeting noted. Upon request, the District will provide for written agenda materials in appropriate alternative formats, and reasonable disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments at public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to comments@irwd.com. Requests made by mail must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.

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February 21, 2023

Prepared by: E. Akiyoshi / M. Cortez /
J. Moeder / R. Mori

Submitted by: K. Burton

Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

UPCOMING PROJECTS STATUS REPORT

SUMMARY:

A status report of Irvine Ranch Water District's Upcoming Projects is presented to the Committee for information.

BACKGROUND:

The information, which is provided as Exhibit "A", is a status report submitted quarterly to the Committee for review.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Upcoming Projects Status Report

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EXHIBIT "A"

UPCOMING PROJECTS STATUS REPORT

Project Name	Code No.	Project No.	Program	Project	Planning	Design	Construction	Construction
			Manager	Manager				Final Acceptance
IBC Sidewalk Relocations	7726	12053	Cortez	Bonkowski	Completed	Completed	Completed	Mar-23
SR 133 - 36" Trunk Sewer Relocation	7903	12125	Cortez	Bonkowski	Completed	In-Process	Mar-24	-
Riparian View Paving	7877	12215	Cortez	Bonkowski	Completed	Completed	Mar-23	May-23
MWRP Compressed Natural Gas and Diesel/Gasoline Fueling Station	7706	07881, 07882	Cortez	Burk	Completed	Completed	In-Process	May-24
MWRP Tertiary Filter Rehabilitation	7764	07892	Cortez	Burk	Completed	Completed	Apr-23	Sep-25
Operations Center Purchasing Warehouse	7796	11854, 11855	Cortez	Burk	Completed	In-Process	Sep-23	-
MWRP Biosolids Misc. Improvements		12138	Cortez	Burk	Completed	In-Process	Jul-23	-
Coastal Z2 and Z4 Pump Stations Rehabilitation	7925	11912	Cortez	James	Completed	In-Process	Aug-23	-
Silverado Bridge 174 DW Improvements	7836	11588	Cortez	James	Completed	In-Process	Sep-23	-
Silverado Bridge 175 DW Improvements	7588	11587	Cortez	James	Completed	In-Process	Sep-23	-
Woodbridge RW Replacement	7763	11571	Cortez	James	Completed	Completed	In-Process	Oct-23
Sewer Siphon Improvements Phase II	7916	11841	Cortez	Lu	Completed	In-Process	May-23	-
Main/Cartwright Manhole Rehabilitation	7917	11778	Cortez	Lu	Completed	Completed	In-Process	Mar-23
El Toro Road Manhole Raise to Grade	7918	11778	Cortez	Lu	Completed	Completed	In-Process	Jul-23
Serrano Creek Raw Water Pipeline Replacement		12423	Cortez	Mai	Completed	In-Process	Jun-23	-
Radio Tower Improvements		11154	Cortez	Mai	In-Process	Apr-23	-	-
Lake Forest Woods Sewer Improvements	7936	11123	Cortez	Murphy	Completed	In-Process	Apr-23	-
Santiago Canyon Pump Station Improvements	7524	01398	Cortez	Murphy	Completed	Completed	In-Process	Dec-23
Turtle Rock Chloramine Booster Station	7850	11840	Cortez	Murphy	Completed	Completed	In-Process	Dec-23
Wells 10 and 12, IDP Well ET-1 Rehabilitation	7895	07087, 11845, 12262	Cortez	Spangenberg	Completed	Completed	In-Process	Dec-23
PDF Sodium Hypochlorite Storage and Feed System	7393	06214	Moeder	Moeder	Completed	Completed	In-Process	Mar-23
Santiago Creek Dam Outlet Tower and Spillway Improvements	7140	01813	Moeder	Moeder	Completed	In-Process	Aug-24	-
Rattlesnake Dam Risk Reduction Investigation		12101	Moeder	Moeder	In-Process	-	-	-
Santiago Canyon Fleming Zone 8 Tank and Zone 8-9 BPS	7614	10101	Moeder	Cho	Completed	Completed	In-Process	Jan-25
Generator Fuel Storage Upgrades		11536, 11537	Moeder	Cho	Completed	In-Process	Apr-23	-
Orange Heights Zone 6 Reservoir	6892	7138	Moeder	Cho	Completed	On-Hold	-	-
Well OPA-1 PFAS Treatment	7728	11720	Mori	Marcacci	Completed	Completed	In-Process	Jul-23
Well ET-1 and SGU PFAS Treatment	7732	11171/11834	Mori	Marcacci	Completed	Completed	In-Process	Dec-23
Orange Heights SAC/Baker Pipeline Relocation	6691	02766	Mori	Marcacci	Completed	Completed	On-Hold	-
San Joaquin Reservoir Filtration	7430	10436	Mori	McGehee	Completed	Completed	In-Process	Aug-24
Zone A to Rattlesnake Reservoir BPS	7410	05476/06216	Mori	McGehee	Completed	Completed	In-Process	Dec-23
MWRP Phase 3 Expansion	-	01659/01797/11833	Mori	McGehee	In-Process	Jun-23	-	-
Orange Heights Zn 5 to 6 and C+ to E Pump Stations	-	07136/07139	Mori	McGehee	Completed	On-Hold	-	-
Syphon Reservoir Improvements	7847	03808	Mori	Mori	Completed	In-Process	Dec-24	-
Wells 51 and 52 Wellhead Equipping and Offsite Pipelines	-	11828/11829	Mori	Mori	In-Process	Jul-23	-	-
Syphon Reservoir Intersection Improvements and Access Road	7846	03808	Mori	Mwe	Completed	In-Process	Aug-23	-
Lake Forest Zone B-C BPS	7608	11168	Mori	Mwe	Completed	Completed	In-Process	May-23
Enterprise RW Pipeline Replacement	-	12407	Mori	Palecek	Completed	In-Process	May-23	-
PA 1, Jeffrey Road Extension RW (RA w/CDC)	7547	11500	Akiyoshi	Rios	Completed	Completed	In-Process	Mar-23
PA 51, District 5, F and N St DW, RW	7306	10875/10878	Akiyoshi	Rios	Completed	Completed	In-Process	Mar-23
PA 51, District 5, Astor DW, RW (RA w/Heritage Fields)	7277	10863/10864	Akiyoshi	Rios	Completed	Completed	In-Process	Mar-23
PA 51, Marine Way from Alton Pkwy to Bake Pkwy DW, RW (RA w/Heritage Fields)	7388	11176/11177	Akiyoshi	Rios	Completed	Completed	Completed	Mar-23
PA 51, Marine Way at Bake Parkway DW (RA w/Heritage Fields)	7607	11939	Akiyoshi	Rios	Completed	Completed	Mar-23	-
PA 51, Serrano Creek Sewer Relocation	7806	12146	Akiyoshi	Rios	Completed	Completed	In-Process	Jun-23
PA 51, District 5 South Harrier DW, SS, RW (RA with Heritage Fields)	7808	12228/12229/12230	Akiyoshi	Rios	Completed	Completed	Completed	Mar-23
PA 51, District 5 South Chinon DW, RW (RA with Heritage Fields)	7809	12231/12232	Akiyoshi	Rios	Completed	Completed	In-Process	Apr-23
PA 51 GP-5 from Skyhawk to Treble DW, SS, RW (RA with Heritage Fields)	7740	12143/12144/12145	Akiyoshi	Rios	Completed	Completed	Completed	Mar-23
PA 51, Marine Way from Skyhawk to Treble DW, RW (RA with Heritage Fields)	7902	12371/12386/12387	Akiyoshi	Rios	Completed	In-Process	Mar-23	-
PA 51, Treble from GP5 to Marine Way DW, RW (RA with Heritage Fields)	7909	12404/12405/12406	Akiyoshi	Rios	Completed	In-Process	Mar-23	-
PA 51 Lynx from Harrier to Marine Way DW, SS (RA with Heritage Fileds)	7931	12432/12433	Akiyoshi	Rios	Completed	In-Process	Mar-23	-
PA 1, Orchard Hills Neighborhood 4 RW (RA with TIC)	7568	01722	Akiyoshi	Rios	Completed	Completed	In-Process	Apr-23
East Orange, Orange Heights Tract 16199 SS, RW	6762	07484/07486	Akiyoshi	Rios	In-Process	On-Hold	-	-


UPCOMING PROJECTS STATUS REPORT

Project Name	Code No.	Project No.	Program	Project	Planning	Design	Construction	Construction
			Manager	Manager				Final Acceptance
East Orange, Orange Heights Tract 17995 DW, RW	6799	07376/07377	Akiyoshi	Rios	In-Process	On-Hold	-	-
East Orange, Orange Heights Jamboree and Chapman DW SS, RW	6815	07451/07452/07453	Akiyoshi	Rios	In-Process	On-Hold	-	-
The Meadows, SS (RA w/Toll Brothers)	7624	11749	Akiyoshi	Rios	Completed	Completed	In-Process	Apr-23
CIP Project Packaging for IRWD Production Wells			Akiyoshi	Johnson	In-Process	Apr-23	-	-
Steel Tank Assessment			Akiyoshi	Johnson	In-Process	Apr-23	-	-
Pump Station and Lift Station Assessment			Akiyoshi	Robinson	In-Process	Apr-23	-	-
CIP Asset Management Phase II - Linear Asset Prioritization			Akiyoshi	Robinson	Apr-23	-	-	-
Lead and Copper Rule Revision - Lead Pipe Inventory			Akiyoshi	Johnson	In-Process	Oct-24	-	-
UC Regents Ag Research Center Redevelopment Planning			Akiyoshi	Robinson	In-Process	Jun-23	-	-

February 21, 2023

Prepared by: C. Spangenberg / M. Cortez

Submitted by: K. Burton

Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

WELL ET-1 REHABILITATION

SUMMARY:

Well ET-1 is part of the IRWD's Principal Aquifer Plant (PAP), which is designed to remove volatile organic compounds (VOC) from groundwater. The PAP will be shut down in June 2023 to allow for the construction of per-and polyfluoroalkyl substances (PFAS) treatment improvements. Well ET-1 has experienced decreased production over the years and needs to be rehabilitated prior to the construction of the new PFAS treatment system. Staff recommends that the Board:

- Authorize the addition of Project 12262 to the FY 2022-23 Capital Budget in the amount of \$748,000; and
- Approve Contract Change Order No. 1 in the amount of \$448,585 to Best Drilling and Pump, Inc. for the Well ET-1 Rehabilitation.

BACKGROUND:

IRWD operates and maintains the PAP, including Well ET-1 and its VOC treatment facilities in accordance with the 2001 Settlement Agreement. Water from Well ET-1 is treated at a maximum flow of 1,000 gallons per minute and is then delivered into the recycled water distribution system.

Well ET-1 has experienced decreased production over the years and needs to be rehabilitated to increase its specific capacity and production capacity. The rehabilitation work will include mechanical cleaning, nylon and/or wire brushing, air bursting, chemical addition, swabbing, air lifting, and mechanical development to break up and remove consolidated material caused by microbial and inorganic fouling.

Construction Change Order No. 1:

Due to the limited space at the PAP, the completion of the Well ET-1 rehabilitation is a prerequisite to the construction commencement of the PFAS treatment system improvements where the contractor mobilization is anticipated in June 2023. To accomplish the well rehabilitation within the tight schedule, staff requested Richard C. Slade & Associates to complete the rehabilitation design. The design was completed and staff then requested Best Drilling & Pump, Inc. (Best) to submit a cost proposal to complete the rehabilitation as a contract change order to its current construction contract for the Dyer Road Wellfield (DRWF) Well Nos. 10 and 12 Rehabilitation.

Best submitted a proposal in the amount of \$448,585. Staff compared the proposed bid items' unit cost to those of the current DRWF Wells 10 and 12 contract, provided in the supporting

documentation for Contract Change Order No. 1 in Exhibit “A”. The unit costs for nearly all of the work items were identical. For those items where the unit costs do not match, staff found these to be reasonable.

FISCAL IMPACTS:

Well ET-1 Rehabilitation, Project 12262, needs to be added to the FY 2022-23 Capital Budget as shown below:

Project No.	Current Budget	Addition <Reduction>	Total Budget
12262	\$-0-	\$748,000	\$748,000

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 which provides exemption for minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. A Notice of Exemption for the project was filed with the County of Orange on December 28, 2022.

RECOMMENDATION:

That the Board authorize the addition of Project 12262, Well ET-1 Rehabilitation, to the FY 2022-23 Capital Budget in the amount of \$748,000 and approve Contract Change Order No. 1 in the amount of \$448,585 to Best Drilling and Pump, Inc. for the Well ET-1 Rehabilitation, Project 12262.

LIST OF EXHIBITS:

Exhibit “A” – Contract Change Order No. 1

EXHIBIT "A"
CONTRACT CHANGE ORDER



Irvine Ranch Water District

15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
(949) 453-5300

C.O. No. One (1)

Final

Project No. 07087,11845,12262

Rehabilitation of DRWF Well Nos. 10 and 12
Project Title

Date: February 1, 2023

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Rehabilitation of IRWD Well No. ET-1 as per attached Scope and fee schedule.	\$448,585.00		+76
2. Additional time to extend Well No. 10 rehabilitation after Well ET-1.	-\$0-		+124
With approval of change order number one (CO1) the substantial completion date is revised to November 1, 2023.			
TOTAL	\$448,585.00		+200

DAYS ±

1. NET AMOUNT THIS CHANGE ORDER	=	\$448,585.00	+200
2. ORIGINAL CONTRACT AMOUNT	=	\$2,133,834.00	200
3. TOTAL PREVIOUS CHANGE ORDER(S)	=	-\$0-	-0-
4. TOTAL BEFORE THIS CHANGE ORDER (2+ 3)	=	\$2,133,834.00	200
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	=	\$2,582,419.00	400

We hereby agree to make the above change subject to the terms of this change order for the sum of: Four hundred
forty eight thousand five hundred and eighty-five and 0/100 ----- Dollars

2-7-2023
Date

Best Drilling and Pump, Inc.
Contractor

Chris Brown
By

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
IRWD Engineer or Consulting Engineer <u>Malcolm A Cortez</u> Engineering Manager	Date <u>2/7/23</u> Date	Department Director Approval Required <input type="checkbox"/> Executive Director Approval Required <input type="checkbox"/> General Manager Approval Required <input type="checkbox"/> Board Approval Required <input checked="" type="checkbox"/>
Executive Director of Technical Services	Date	
General Manager	Date	
		Purchase Order No. 633140

NOTE: The documents supporting this Change Order, including any drawings and estimates of cost, if required are attached hereto and made a part hereof. This Change Order shall not be considered as such until it has been signed by the Owner and the Contractor. Upon final approval, distribution of copies will be made as required. The parties mutually agree the pricing set forth in this Change Order are complete and fair compensation for the entirety of the work authorized under this Change Order and that no additional compensation is warranted nor shall it be allowed.

CHANGES: All workmanship and materials called for by this Change Order shall be fully in accord with the original Contract Documents insofar as the same may be applied without conflict to the conditions set forth by this Change Order. The time for completing the contract will not be extended unless expressly provided for in this Change Order.


REHABILITATION COST CHANGE ORDER FORM
IRWD WELL ET-1
IRVINE RANCH WATER DISTRICT

Item Num	Description	Unit of Measure	Quantity	Unit Price	Line Total
1	Mobilization/Demobilization of pump rig, equipment and accessories. Prepare contract documents and other preliminary work and prepare site.	Lump Sum (LS)	1	\$27,500.00	\$27,500.00
2	Disconnect motor from electrical system, remove discharge header, pipe, motor column pipe, vertical turbine pump, couplings, electrical cable and all other appurtenances and sound well. Deliver pump and motor to DISTRICT MWRP Operations Center	LS	1	\$12,500.00	\$12,500.00
3	Clear water column and provide initial and interim downwell, clear-viewing, color video surveys of well casing.	Per Video	3	\$ 1,500.00	\$ 4,500.00
4	Conduct initial biocleaning of the casing walls by injecting hydrogen peroxide into the well during brushing and ball sediment fill following brushing.	LS	1	\$34,475.00	\$34,475.00
5	Brush well casing with a nylon wire brush.	Per Hour	24	\$ 465.00	\$11,160.00
6	Airlift sediment fill from the bottom of the well.	LS	1	\$12,500.00	\$12,500.00
7	Install patch(es) in the well (optional) at depths as directed by the DISTRICT.	EA	3	\$12,500.00	\$37,500.00
8	Conduct well redevelopment using "air-jetting" methods, via the AirBurst® or BoreBlast® methods.	LS	1	\$19,500.00	\$19,500.00
9	Perform chemical treatment of well water using HercChemTech chemical treatment plan.	LS	1	\$79,000.00	\$79,000.00
10	Perform mechanical redevelopment (airlifting and swabbing) of the well.	Per Hour	60	\$ 550.00	\$33,000.00
11	Conduct treatment and discharge of mechanical and/or pumping redevelopment fluids (as applicable) via neutralization and blending and disposal of solids/sludges per specifications, including treatment, sampling, analysis, and reporting for NPDES compliance.	LS	1	\$25,000.00	\$25,000.00
12	Mobilize, install, maintain, remove, and demobilize a diesel or gasoline engine, temporary test pump, equipment, and other appurtenances/accessories as necessary.	LS	1	\$30,000.00	\$30,000.00
13	Perform pumping redevelopment of the well including monitoring of water levels, pumping rates, and sand content.	Per Hour	60	\$ 550.00	\$33,000.00
14	Perform a four-point, 12-hour (maximum) step drawdown test, and a maximum 12-hour constant rate pumping test, including monitoring of water levels, pumping rates, and sand content.	Per Hour	24	\$ 550.00	\$13,200.00
15	Perform a flowmeter (spinner) survey under dynamic (pumping) conditions throughout the screened sections of the well.	LS	1	\$ 8,300.00	\$ 8,300.00
16	Clear water column and provide the final downwell color video survey of the well casing.	LS	1	\$ 1,500.00	\$ 1,500.00
17	Conduct a static spinner survey of the well under non-pumping conditions.	LS	1	\$ 4,500.00	\$ 4,500.00
18	Conduct well disinfection and clean-up site.	LS	1	\$ 3,500.00	\$ 3,500.00
19	Standby time with Active rig and crew as directed by DISTRICT.	Per Hour	16	\$ 100.00	\$ 1,600.00
20	Standby time with Inactive rig and crew as directed by DISTRICT.	Per Hour	16	\$ 150.00	\$ 2,400.00
21	Restore site and proximity to pre-existing conditions	LS	1	\$ 5,000.00	\$ 5,000.00
22	Pick-up and re-install a deep well, line-shaft, turbine pump into the well. Include new column pipe, couplings, line shaft, adaptors, and all other items necessary to complete pump installation; refurbish discharge head and installation of a sounding port; allowance for additional costs for parts and/or materials during re-installation of permanent pump; re-establish wiring and connection of permanent pump and motor into DISTRICT electrical system, in the presence of a DISTRICT electrician and conduct testing of the permanent pump for a period of three (3) consecutive days; and provide for vibration monitoring and testing of the permanent pump (initial).	LS	1	\$ 48,950.00	\$ 48,950.00
				TOTAL ESTIMATE:	\$ 448,585.00

ET-1 Rehabilitation
Cost Comparison to
IRWD Wells 10 and 12

ET-1 Item No.	Well 10 Item No.	Well 12 Item No.	Description	Unit	Qty.	ET-1		Well 10		Well 12	
						Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
E1	A2	B1	Mobilization/Demobilization of pump rig, equipment and accessories. Prepare contract documents and other preliminary work and prepare site as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02480.	LS	1	\$27,500.00	\$27,500.00	\$125,000.00	\$125,000.00	\$125,000.00	\$125,000.00
E2	A3	B2	Disconnect motor from electrical system, remove discharge header, pipe, motor column pipe, vertical turbine pump, couplings, electrical cable and all other appurtenances and sound well. Deliver pump and motor to DISTRICT MWRP Operations Center as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02482.	LS	1	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00	\$12,500.00
E3	A4	B3	Clear the water column in the entire casing and perform an initial color video survey of the well as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02496. (3 videos)	EA	3	\$1,500.00	\$4,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$4,500.00
E4, E5, E6	A5	B4	Brush well casing with a nylon wire brush. Conduct initial biocleaning of the casing walls by injecting hydrogen peroxide into the well during brushing and bail sediment fill following brushing, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02483.	LS	1	\$58,135.00	\$58,135.00	\$11,160.00	\$11,160.00	\$11,160.00	\$11,160.00
E7	A23-3	B22-3	Install patch(es) in the well (optional) at depths as directed by the DISTRICT, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02489.	EA	3	\$12,500.00	\$37,500.00	\$12,500.00	\$37,500.00	\$13,500.00	\$40,500.00
E8	A7	B6	Conduct well redevelopment using "air-jetting" methods, via the AirBurst® or BoreBlast® methods as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02491.	LS	1	\$19,500.00	\$19,500.00	\$19,500.00	\$19,500.00	\$19,500.00	\$19,500.00
E9	A8	B7	Perform chemical treatment of well water using HereChemTech chemical treatment plan, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02492.	LS	1	\$79,000.00	\$79,000.00	\$110,000.00	\$110,000.00	\$110,000.00	\$110,000.00
E10	A9	B8	Perform mechanical redevelopment (airlifting and swabbing) of the well, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02493.	HRS	60	\$550.00	\$33,000.00	\$550.00	\$33,000.00	\$550.00	\$33,000.00
E11	A10	B9	Conduct treatment and discharge of mechanical and/or pumping redevelopment fluids (as applicable) via neutralization and blending and disposal of solids/sludges per specifications, including treatment, sampling, analysis, and reporting for NPDES compliance, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02494.	LS	1	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$25,000.00
E12	A12	B10	Mobilize, install, maintain, remove, and demobilize a diesel or gasoline engine, temporary test pump, equipment, and other appurtenances/accessories as necessary, and in accordance with the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02497.	LS	1	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00
E13	A13	B12	Perform pumping redevelopment of the well including monitoring of water levels, pumping rates, and sand content, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02498.	HRS	60	\$550.00	\$33,000.00	\$550.00	\$33,000.00	\$550.00	\$33,000.00
E14	A14	B13	Perform a 12-hour (maximum) step drawdown test and a minimum 24-hour (maximum 48-hour) constant rate pumping test, including monitoring of water levels, pumping rates, and sand content, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02499.	HRS	24	\$550.00	\$13,200.00	\$550.00	\$13,200.00	\$550.00	\$13,200.00
E15	A15	B14	Perform a flowmeter (spinner) survey under dynamic (pumping) conditions throughout the perforated sections of the well, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02500.	LS	1	\$8,300.00	\$8,300.00	\$8,300.00	\$8,300.00	\$8,300.00	\$8,300.00
E16	A17	B16	Clear water column and provide the final downwell color video survey of the well casing, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02503.	LS	1	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00
E17	A18	B17	Conduct a static spinner survey of the well under non-pumping conditions as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02504.	LS	1	\$4,500.00	\$4,500.00	\$4,500.00	\$4,500.00	\$4,500.00	\$4,500.00
E18	A20	B19	Conduct well disinfection and clean-up site, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02505.	LS	1	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00
E19	A21-1	B20-1	Standby time with Active rig and crew as directed by DISTRICT, as specified in the Technical Specifications Section 02506.	HRS	16	\$100.00	\$1,600.00	\$100.00	\$1,600.00	\$100.00	\$1,600.00
E20	A21-2	B20-2	Standby time with Inactive rig and crew as directed by DISTRICT, as specified in the Technical Specifications Section 02506.	HRS	16	\$150.00	\$2,400.00	\$150.00	\$2,400.00	\$150.00	\$2,400.00
E21	A22	B21	Restore site and proximity to pre-existing conditions, as specified in the General Requirements Section 01840, the Special Provisions Section 00200 & the Technical Specifications Section 02507.	LS	1	\$5,000.00	\$5,000.00	\$7,500.00	\$7,500.00	\$13,500.00	\$13,500.00
E22	Not in scope of work	Not in scope of work	Pick-up and re-install a deep well, line-shaft, turbine pump into the well. Include new column pipe, couplings, line shaft, adaptors, and all other items necessary to complete pump installation; refurbish discharge head and installation of a sounding port; allowance for additional costs for parts and/or materials during re-installation of permanent pump; re-establish wiring and connection of permanent pump and motor into DISTRICT electrical system, in the presence of a DISTRICT electrician and conduct testing of the permanent pump for a period of three (3) consecutive days; and provide for vibration monitoring and testing of the permanent pump (initial).	LS	1	\$48,950.00	\$48,950.00		\$0.00		\$0.00
Total							\$448,585.00		\$480,660.00		\$492,660.00

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February 21, 2023
Prepared by: J. Manning
Submitted by: W. Chambers
Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

THREE-YEAR JANITORIAL SERVICES CONTRACT AWARD

SUMMARY:

Staff recommends that the Board authorize the General Manager to execute a three-year janitorial services contract with DMS Facility Services in the amount of \$1,335,781.44 with its term expected to end on March 31, 2026.

BACKGROUND:

IRWD's Sand Canyon Headquarters, Operations Center, Los Alisos Water Recycling Plant, Baker Treatment Plant, Biosolids Treatment Facility, and Duck Club/Marsh facilities totaling 122,500 square feet require ongoing janitorial services.

A request for proposal was distributed to American Building Maintenance, DMS Facilities Services, and CAM Property Services. Proposals were submitted by all three companies. Two conforming proposals were received from CAM Property Services and DMS Facility Services. The low bid, DMS Facility Services, totaled \$1,335,781.44 for three years and met the requirements set forth by IRWD in the request for proposal. IRWD is familiar with this janitorial services company as it has provided services to IRWD in the past and DMS performed well.

FISCAL IMPACTS:

Sufficient funding for janitorial services is included in the current fiscal year budget to cover the proposed increase for April 1, 2023 through June 30, 2023. This expense for janitorial services will be included in the upcoming Operating Budget starting July 1, 2023.

ENVIRONMENTAL COMPLIANCE:

This item is not a project as defined in the California Environmental Quality Act, California Code of Regulations, Title 14, Chapter 3, Section 15378.

RECOMMENDATION:

That the Board authorize the General Manager to execute a three-year janitorial services contract with DMS Facilities Services in the amount of \$1,335,781.44.

LIST OF EXHIBITS:

Exhibit "A" – Contract Proposal Summary

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EXHIBIT “A”

Three-Year Janitorial Services Contract Proposal Summary

February 21, 2023

Table 1 – Summary of Proposals Received


Contractor	Area 1 Headquarters and Operations Center	Area 2 Community Room	Area 3 Marsh Campus	Area 4 Baker Water Treatment Plant	Area 5 Los Alisos Water Recycling Plant	Area 6 Biosolids Treatment Facility	Three Year Lump Sum
American Building Maintenance*	\$652,653	\$43,350	\$142,607	\$47,420	\$31,372	\$77,914	\$995,315
DMS Facilities Services, Inc.	\$1,010,477	\$37,176	\$112,553	\$49,903	\$42,212	\$83,459	\$1,335,781
CAM Property Services	\$1,201,081	\$39,585	\$541,750	\$36,325	\$20,354	\$172,233	\$2,011,327

* Submitted Non conforming bid

Table 2 – Annual Costs for DMS Facilities Services, Inc.

Year	Area 1 Headquarters and Operations Center	Area 2 Community Room	Area 3 Marsh Campus	Area 4 Baker Water Treatment Plant	Area 5 Los Alisos Water Recycling Plant	Area 6 Biosolids Treatment Facility	Year Total
1	\$317,401	\$11,677	\$35,354	\$15,675	\$13,259	\$26,215	\$419,582
2	\$336,445	\$12,378	\$37,475	\$16,616	\$14,055	\$27,788	\$444,757
3	\$356,632	\$13,121	\$39,724	\$17,613	\$14,898	\$29,455	\$471,442
Total	\$1,010,477	\$37,176	\$112,553	\$49,903	\$42,212	\$83,459	\$1,335,781

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February 21, 2023
Prepared by: J. Moeder
Submitted by: K. Burton
Approved by: Paul A. Cook 

ENGINEERING AND OPERATIONS COMMITTEE

SANTIAGO CREEK DAM IMPROVEMENTS CONSULTANT VARIANCE

SUMMARY:

Irvine Ranch Water District and Serrano Water District approved Variance No. 2 with AECOM in May 2022, which included geotechnical investigations to gather additional information to complete a cracking study for the dam's embankment. AECOM had originally retained ABC Liovin Drilling to complete the drilling program at the Santiago Creek Dam, but ABC Liovin subsequently declined to complete this work. AECOM requested a proposal from Gregg Drilling to complete the work, which included a different drilling technique required by the Division of Safety of Dams (DSOD). Based on the proposal AECOM received from Gregg Drilling, staff recommends that the Board authorize the General Manager to execute a variance in the amount of \$189,524 with AECOM for the additional costs to complete the geotechnical investigations for the cracking study.

BACKGROUND:

As part of integrating Risk Informed Decision Making (RIDM) into IRWD's Dam Safety Program, IRWD completed risk analysis for its five earth embankment dams in 2021. For the Santiago Creek Dam (at Irvine Lake), the risk analysis identified areas of uncertainty regarding the potential for seismically induced cracking of the embankment. To minimize the potential for revisiting areas of uncertainty in the future when major improvements at Santiago Creek Dam are complete, AECOM started analyzing the potential for dam cracking. Part of its analysis included a two-dimensional model that utilized limited geotechnical information from past reports. The draft analysis indicated that the results are sensitive to the geotechnical parameters and that additional geotechnical information would significantly improve the understanding of the dam's performance.

In May 2022, the respective boards of IRWD and Serrano Water District approved Variance No. 2, which included \$561,246 to gather and analyze several boring samples in Santiago Creek Dam. The budget for this task was based on ABC Liovin Drilling performing the work. AECOM prepared a Geotechnical Investigation Work Plan, and staff submitted the plan to DSOD for its review. One of DSOD's comments on this plan was that the rotary wash drilling method used on the embankment borings must deflect the drilling fluid upward to avoid disturbance of the soil sample. ABC Liovin Drilling subsequently declined to perform the work and, Gregg Drilling, who has completed the bulk of the recent exploration activities at Santiago Creek Dam, submitted a proposal to complete the work according to DSOD's requirements. Gregg Drilling's proposal to perform the work has a higher cost than ABC Liovin Drilling's cost due to the limited availability of the specialized drilling tool and the extended length of time required to drill with this specialized method. AECOM is requesting a variance in the amount of \$189,524 for the additional costs to complete this study. Serrano staff has reviewed the additional cost and supports proceeding with the work.

FISCAL IMPACTS:

This project will be funded 75% by IRWD and 25% by Serrano in accordance with the Irvine Lake ownership agreements. IRWD will fund its portion using 94.8% Water Replacement Fund and 5.2% Regional Potable Split.

ENVIRONMENTAL COMPLIANCE:

This project is exempt from the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulation, Title 14, Chapter 3, Section 15306 a Notice of Exemption was filed with the Orange County Clerk Recorder on November 18, 2022. Section 15306 provides exemption for projects that consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

RECOMMENDATION:

That the Board authorize the General Manager to execute Variance No. 4 with AECOM Technical Services, Inc. in the amount of \$189,524 for the additional costs to complete the geotechnical investigations for the cracking study at the Santiago Creek Dam.

LIST OF EXHIBITS:

Exhibit "A" – Variance No. 4

Exhibit "A"
IRVINE RANCH WATER DISTRICT
PROFESSIONAL SERVICES VARIANCE

Project Title: Santiago Creek Dam Outlet Tower and Spillway Improvements

Project No.: 01813 Date: February 13, 2023
 Purchase Order No.: 619735 Variance No.: 4

Originator: IRWD ENGINEER/CONSULTANT Other (Explain) _____

Description of Variance (*attach any back-up material*):

Additional drilling cost to complete geotechnical investigation for cracking study in accordance with the drilling method requested by Division of Safety of Dams (DSOD).

Engineering & Management Cost Impact:

Classification	Manhours	Billing Rate	Labor \$	Direct Costs	Subcon. \$	Total \$
See attached table						
Total \$ =						\$189,524



Schedule Impact: No impact

Task No.	Task Description	Original Schedule	Schedule Variance	New Schedule
Task 21a2	Geotechnical Investigation - Embankment	Start Feb 6, 2023	7 weeks	Start Mar 27, 2023

Required Approval Determination:

Total Original Contract	\$ <u>4,989,380</u>	<input type="checkbox"/> Director: Cumulative total of Variances less than or equal to \$75,000.
Previous Variances \$	<u>2,855,725</u>	<input type="checkbox"/> Executive Director: Cumulative total of Variances less than or equal to \$125,000.
This Variance \$	<u>189,524</u>	
Total Sum of Variances	\$ <u>3,045,249</u>	<input type="checkbox"/> General Manager: Cumulative total of Variances less than or equal to \$200,000.
New Contract Amount	\$ <u>8,034,629</u>	
Percentage of Total Variances to Original Contract	<u>61</u> %	<input checked="" type="checkbox"/> Board: Cumulative total of Variances greater than \$200,000.

ENGINEER/CONSULTANT: AECOM Technical Services, Inc. IRVINE RANCH WATER DISTRICT
 Company Name

 2/13/23 Kevin L Burton 2/14/23
 Project Engineer/Manager Date Department Director Date
 2/13/23 _____ _____
 Engineer's/Consultant's Management Date General Manager/Board Date

IRVINE RANCH WATER DISTRICT

PROFESSIONAL SERVICES VARIANCE REGISTER

Project Title: <u>Santiago Creek Dam Outlet Tower and Spillway Improvements</u>				
Project No.: <u>01813</u> Project Manager: <u>Jacob Moeder</u>				
Variance No.	Description	Dates		Variance Amount
		Initiated	Approved	
1	Dam Embankment Cracking Evaluation and Technical Memorandum	6/7/2021	6/8/2021	\$46,780
2	Additional preliminary design and final design phase services	4/15/2022	5/24/2022	\$2,618,959
3	Construction traffic permitting and supplemental geotechnical investigation for water diversion berm	1/24/2023	2/2/2023	\$189,986
4	Additional geotechnical investigation effort for cracking study	2/13/2023		\$189,524

February 13, 2023

Mr. Jacob Moeder P.E.

Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, California 92618

Subject: Updated Proposal for Task 21-a2 (Geotechnical investigation to further evaluate PFM 103) Santiago Creek Dam Outlet Tower and Spillway Improvements PR 01813

Dear Jacob:

This letter provides our updated fee estimate for Task 21-a2 of Variance 2 (Geotechnical investigation to further evaluate PFM 103) for the Santiago Creek Dam Outlet Tower and Spillway Improvements Project. The revision to the total cost is due to the changes on proposed drilling days. Based on drilling subcontractor's re-evaluation of the scope of the work considering DSOD comments and concerns, the total field days for rotary wash drilling was revised from 20 days to 36 days. The table below summarizes the revised cost and compare it with the original budget.

Based on the revised drilling cost, we propose performing professional engineering services for the task described above on a time-and-materials basis, for a not-to-exceed amount of \$750,770.00.

Subcontractor's Cost		
Task Description	Subcontractor	Subtotal
Sonic borings on dam embankment (2 borings)	Yellow Jacket	\$ 44,980.00
Rotary wash borings on dam embankment (10 borings)	Gregg Drilling	\$ 460,504.15
Downhole geophysics (at 7 borings)	Geovision	\$ 29,075.00
Disposal of drilling cuttings	AIS	\$ 24,045.00
Total AECOM Subcontractor Costs		\$ 558,604.15

	AECOM Labor Costs	AECOM Subcontractor Costs	AECOM Direct Costs & Materials (including laboratory testing)	Total
Original Proposal (Task 21-a2)	\$ 94,350.00	\$ 396,320.00	\$ 70,576.00	\$ 561,246.00
Updated Proposal (Task 21-a2)	\$ 126,754.81	\$ 558,604.15	\$ 65,411.04	\$ 750,770.00
	\$ (32,404.81)	\$ (162,284.15)	\$ 5,164.96	\$ (189,524.00)

Mr. Jacob Moeder P.E.
Updated proposal for PFM 103 Field Investigation Program
February 13, 2023

If you have any questions or comments, please contact me at (714) 483-1354 or via e-mail at bryan.paine@aecom.com.

Sincerely,

AECOM Technical Services, Inc.

A handwritten signature in black ink, appearing to read "B.C.Paine". The signature is stylized and written in a cursive-like font.

Bryan C. Paine, PE
Associate Vice President, Project Manager