

AGENDA
IRVINE RANCH WATER DISTRICT
ENGINEERING AND OPERATIONS COMMITTEE
TUESDAY, APRIL 18, 2017

CALL TO ORDER 7:00 a.m., IRWD's Operations Center, First Floor Committee Room,
3512 Michelson, Irvine Ranch Water District

ATTENDANCE Committee Chair: Steve LaMar _____
Committee Member: John Withers _____

<u>ALSO PRESENT</u>	Paul Cook	_____	Patrick Sheilds	_____	Harry Cho	_____
	Kevin Burton	_____	Eric Akiyoshi	_____	Paul Weghorst	_____
	Rich Mori	_____	Scott Toland	_____	Tom Roberts	_____
	Kellie Lew	_____	Ken Drake	_____	Ken Pfister	_____
	Lars Oldewage	_____	Arseny Kalinsky	_____	Steve Malloy	_____
	Malcolm Cortez	_____	Bruce Newell	_____		_____

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.
4. Determine which items may be approved without discussion.

ACTION

5. OUT-OF-AREA SERVICE AGREEMENT WITH ORANGE COUNTY
SANITATION DISTRICT FOR PORTIONS OF LAKE FOREST –
BURTON

Recommendation: That the Board authorize the General Manager to execute the Out-of-Area Service Agreement with Orange County Sanitation District for the conveyance of sewage in two portions of IRWD's service area within the City of Lake Forest to Orange County Sanitation District's jurisdictional boundary, subject to non-substantive changes.

6. IRVINE LAKE PIPELINE NORTH CONVERSION RESERVOIR
CONTRACT CHANGE ORDER – LYNCH/MOEDER/MORI/BURTON

Recommendation: That the Board approve Contract Change Order No. 4 in the amount of \$351,014 and an additional 20 contract days with Pascal & Ludwig for the ILP North Conversion Reservoir, Project 05407.

ACTION (Continued)

7. DYER ROAD WELL FIELD SURGE TANKS CONSTRUCTION
 PHASE SERVICES CONSULTANT SELECTION – CHO/CORTEZ/
 BURTON

Recommendation: That the Board authorize the General Manager to execute a Professional Services Agreement with Tetra Tech for construction phase services in the amount of \$126,000 for the Dyer Road Well Field Surge Tanks, Projects 05473 and 06165.

OTHER BUSINESS

8. A. Directors Comments

 B. Adjourn

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 at the entrance of the meeting room at the District's Operation's Committee Room at 3512 Michelson, Irvine, California. The Irvine Ranch Water District's Committee Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5312 during business hours at least seventy-two (72) hours prior to the scheduled meeting.

April 18, 2017

Prepared and

submitted by: K. Burton

Approved by: Paul Cook



ENGINEERING AND OPERATIONS COMMITTEE

OUT-OF-AREA SERVICE AGREEMENT WITH ORANGE COUNTY SANITATION DISTRICT FOR PORTIONS OF LAKE FOREST

SUMMARY:

An Out-of-Area Service Agreement with Orange County Sanitation District (OCSD) is required to allow sewage from two areas of IRWD's service area within the City of Lake Forest to be conveyed to Revenue Area 14 within OCSD's jurisdictional boundary. Staff recommends that the Board authorize the General Manager to execute the Out-of-Area Service Agreement with Orange County Sanitation District for portions of Lake forest, subject to non-substantive changes.

BACKGROUND:

OCSD maintains two separate Revenue Areas, the Consolidated Revenue Area (CRA) and Revenue Area 14 (RA14), to provide for segregated accounting of revenues and expenses. RA14 is entirely within IRWD's jurisdictional boundary, and within the boundary IRWD provides the local sewage collection and treatment service. IRWD delivers a portion of the sewage collected to OCSD's trunk sewer and treatment plant facilities for treatment and disposal, pursuant to the terms and conditions of agreements between IRWD and OCSD, as the successor to County Sanitation District No. 14 of Orange County (RA14 Agreements). RA14 encompasses the portion of IRWD's service area from which sewage flows are discharged either to IRWD's Michelson Water Recycling Plant (MWRP) or to OCSD's regional treatment facilities. Under the RA14 Agreements, IRWD is not allowed to convey sewage into OCSD's service area that may reach OCSD's facilities without OCSD's authorization.

Out-of-Area Service Agreement:

Portions of IRWD's service area within the City of Lake Forest have historically or were originally proposed to discharge sewage to IRWD's Los Alisos Water Recycling Plant (LAWRP) or Santa Margarita Water District's Chiquita Water Recycling Plant (CWRP), both within the jurisdictional boundary of the South Orange County Wastewater Authority (SOCWA).

Portola Hills: A portion of Portola Hills (Area 1) was historically served by a temporary IRWD lift station that pumped sewage to a gravity sewer owned by Trabuco Canyon Water District (TCWD) along El Toro Road through which sewage could flow to LAWRP or be pumped further by TCWD to CWRP. In 2013, IRWD constructed a new gravity sewer in Glenn Ranch Road and abandoned the temporary lift station serving Portola Hills. The new sewer in Glenn Ranch Road is tributary to the MWRP within OCSD's jurisdictional boundary.

Baker Ranch: A portion of Baker Ranch (Area 2), which is currently under construction, was originally proposed to be served by a lift station that would pump sewage from Alton Parkway to

Bake Parkway where the sewage would flow by gravity to LAWRP. In 2012 when the extension of Alton Parkway was completed between Irvine Boulevard and Towne Centre Drive, IRWD revised its sewer master plan to eliminate the proposed lift station in favor of a gravity sewer in Alton Parkway. The sewer within Alton Parkway is tributary to the MWRP within OCSD's jurisdictional boundary.

The locations of Areas 1 and 2 are shown in the figure in Exhibit "A".

An Out-of-Area Service Agreement is required because Areas 1 and 2 are tributary to MWRP within OCSD's jurisdictional boundary. Staff coordinated with OCSD to develop an agreement that addresses the out-of-area sewage flows and the associated operation, maintenance and capital costs in the same manner as other RA14 flows per the RA14 Agreements. The Agreement has a term of three years from the date of execution during which OCSD and IRWD will seek annexation of the two areas into OCSD. IRWD will serve as the applicant to the Local Agency Formation Commission for the annexation.

The Agreement, attached as Exhibit "A", has been reviewed by both IRWD's and OCSD's legal counsels. OCSD will present the Agreement to their Board in April 2017. SOCWA has no objection to the proposed Agreement.

FISCAL IMPACTS:

The out-of-area sewage flows have been conveyed to the MWRP since 2012 and the operation and maintenance costs are already included in the FY 16-17 operating budget.

ENVIRONMENTAL COMPLIANCE:

This item is categorically exempt from CEQA (categorical exemption Class 20) as a project consisting of changes in organization of local agencies not changing the area in which existing powers are exercised, under the California Environmental Quality Act Code of Regulations, Title 14, Article 19, Section 15320.

RECOMMENDATION:

That the Board authorize the General Manager to execute the Out-of-Area Service Agreement with Orange County Sanitation District for the conveyance of sewage in two portions of IRWD's service area within the City of Lake Forest to Orange County Sanitation District's jurisdictional boundary, subject to non-substantive changes.

LIST OF EXHIBITS:

Exhibit "A" – Out-of-Area Service Agreement with OCSD

EXHIBIT "A"

AGREEMENT RELATING TO IRVINE RANCH WATER DISTRICT LOS ALISOS AREA AND INCLUSION OF FLOWS IN REVENUE AREA 14 FLOW CALCULATIONS

THIS AGREEMENT is made and entered into, to be effective this ____ day of _____, 2017, by and between ORANGE COUNTY SANITATION DISTRICT, a County Sanitation District, hereinafter referred to as "OCSD," and IRVINE RANCH WATER DISTRICT, hereinafter referred to as "IRWD."

RECITALS

WHEREAS, OCSD is a duly organized County Sanitation District, existing pursuant to the County Sanitation District Act, California Health & Safety Code Sections 4700 et seq., providing for the ownership, operation, and maintenance of sewage collection, treatment, and disposal facilities; and

WHEREAS, IRWD is organized and existing pursuant to the California Water District Law, California Water Code Section 34000 et seq., and also owns, operates, and maintains sewage collection, treatment, recycling and disposal facilities pursuant to powers granted by such Law; and

WHEREAS, OCSD has established and maintains two (2) separate Revenue Areas, the Consolidated Revenue Area (CRA) and Revenue Area 14 (RA14), to provide for, among other things, segregated accounting of revenues and expenses; and

WHEREAS, RA14 is entirely within IRWD's jurisdictional boundaries, and within said boundaries IRWD provides local sewage collection service and delivers a portion of the sewage collected within IRWD's service area to OCSD's trunk sewer and treatment plant facilities for

treatment and disposal, pursuant to the terms and conditions of those certain agreements between IRWD and OCSD, as the successor to County Sanitation District No. 14 of Orange County (“RA14 Agreements”); and

WHEREAS, the RA14 Agreements provide for IRWD’s use and funding of capacity and ownership equity on the basis of OCSD’s annual integration adjustment and Capital Outlay Revolving Fund (“CORF”)-sharing formulas, utilizing flows generated within RA14; and

WHEREAS, RA14 encompasses the portions of IRWD’s service area from which sewage flows are diverted to OCSD’s regional treatment facilities or are capable of being discharged either to IRWD’s Michelson Water Recycling Plant (“MWRP”) or OCSD’s regional treatment facilities, and through RA14 and OCSD trunk sewers, OCSD conveys to its regional treatment and disposal facilities the sewage flows from the portion of the IRWD service area that are in excess of the amount of sewage IRWD delivers to MWRP; and

WHEREAS, OCSD, in partnership with Orange County Water District, is engaged in the indirect potable reuse of sewage through the Ground Water Replenishment System, and the treated effluent tributary to the Ground Water Replenishment System, including all sewage and urban runoff diversions from RA14, is subject to advanced source control requirements to limit substances that would render the sewage unsuitable for subsequent indirect potable reuse; and

WHEREAS, IRWD is prohibited from bringing sewage into OCSD’s service area that may reach OCSD’s facilities, directly or indirectly, without OCSD authorization; and

WHEREAS, IRWD’s service territory also includes areas that discharge sewage to IRWD’s Los Alisos Water Recycling Plant (“LAWRP”) and/or other treatment facilities, as depicted in Exhibit “A,” attached hereto and incorporated herein by this reference (the “Los Alisos Area”); and

WHEREAS, IRWD currently is not authorized to discharge from LAWRP to MWRP via the San Diego Creek Interceptor Sewer, since this flow originates from outside of OCSD's service area; and

WHEREAS, more particularly, the Los Alisos Area includes the following subareas, depicted in Exhibit "A," attached hereto and incorporated herein by this reference:

- Portion of Portola Hills ("Area 1") – flows were delivered by a lift station to Santa Margarita Water District's Chiquita Water Recycling Plant. IRWD has removed the lift station and constructed a gravity sewer that conveys Area 1 flows to MWRP;
- Portion of Baker Ranch ("Area 2") – when Area 2 is developed, flows from a portion of the area will be tributary to MWRP, and flows from the remainder will be tributary to LAWRP;
- The former Los Alisos Water District (LAWD) service area, consolidated with IRWD on December 31, 2000, with IRWD as the consolidated successor district, ("Area 3") – flows are tributary to LAWRP, but could also be delivered to MWRP with system modifications; and

WHEREAS, Areas 1, 2 and 3 of the Los Alisos Area are located outside of, but in close proximity to, the jurisdictional boundary of OCSD, and to provide for discharge capability from areas outside the OCSD boundary to RA14, an out-of-area service agreement is required between IRWD and OCSD; and

WHEREAS, OCSD and IRWD intend to set forth the terms and conditions for an out-of-area service agreement that will initially cover Areas 1 and 2 (referred to hereafter as the "Included Area"); and

WHEREAS, IRWD does not intend to send sewage, treated sewage or solids from Area 3 to MWRP, or by extension to OCSD facilities at this time; and

WHEREAS, because the flows to RA14 from the Included Area, as measured through the

Main Street Flume as sewage or diverted solids, constitute flows that are tributary to MWRP, the Parties have determined that the formula adjustment of flows to highest-four-months, specified in the RA14 Agreements for purposes of calculating IRWD's annual integration adjustment and CORF-sharing allocation, shall be applicable to flows from the Included Area conveyed to the RA14 and OCSD regional collection, treatment and disposal facilities;

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the parties hereto agree as follows:

Section 1: Out of Area Service. OCSD and IRWD agree that the Included Area shall receive out-of-area service from OCSD under the terms and conditions of this Agreement. At the effective date of this Agreement, the Included Area shall consist of Area 1 and Area 2 only. Area 3 is specifically excluded from this Agreement at this time and flows from Area 3 will not be allowed to be conveyed to RA14 or by extension to MWRP as these flows of sewage and sludge would be tributary to OCSD.

Section 2: Delivery to RA14 and OCSD. OCSD agrees to IRWD's connection of its sewage collection systems serving the Included Area to IRWD's trunk sewer system having the capability of delivering flows to RA14 and OCSD facilities for conveyance, treatment and disposal.

Section 3: Addition of Included Areas Flows to RA14 Flows. For purposes of determining the RA14 share of the OCSD CORF and operation and maintenance costs, RA14 will be charged for flows and/or solids delivered from the Included Area to OCSD's regional trunk sewer system in the same manner as for other RA14 flows measured at the Main Street Flume, pursuant to the RA14 Agreements. This flow information shall be displayed via the

Monthly Gallonage Summary Report that is generated by OCSD.

Section 4: Inclusion in RA14 Cost Sharing To Be In Lieu of OCSD Charges. In consideration of the application of the funding obligations with respect to the Los Alisos Area flows as described in Section 2, no capital facilities charges, connection charges or other charges shall be owed to OCSD for the Included Area.

Section 5: Industrial Waste Monitoring. The parties agree that Area 1 and 2 shall, upon becoming an Included Area, be subject to the Memorandum of Understanding between County Sanitation District No. 14 of Orange County, California and Irvine Ranch Water District Governing Industrial Waste Program Administration, dated February 11, 1987. All Class 1, Class 2, Urban Runoff, and Special Purpose Dischargers shall obtain permits from OCSD per OCSD Ordinance 48, which may be amended from time to time. IRWD and OCSD shall bring the Included Area into permit compliance within 120 days of the effective date of this Agreement. All OCSD permit fees and charges shall be billed to IRWD as any RA14 permit would be billed. IRWD shall collect any user fees directly from customers.

Section 6: Termination. This agreement shall terminate three years after the effective date. This term will allow for the lawful conveyance of sewage from the Included Area while the Parties work to agree on a longer-term plan for the service provision to the Los Alisos Area. The Parties acknowledge their mutual intention that the longer-term plan will be implemented by seeking annexation of the Included Area to OCSD, along with OCSD's administrative inclusion of the Included Area in RA14. The Parties agree to work diligently and in good faith to pursue such actions as expeditiously as possible. IRWD agrees to serve as the applicant to the Local Agency Formation Commission for the annexation of the Included Area to OCSD.

Section 7: Entire Agreement. This instrument contains the entire agreement between

the parties relating to the rights herein granted and the obligations herein assumed.

IN WITNESS WHEREOF, this Agreement has been executed in duplicate in the names of the respective Districts by their duly authorized officers, effective as of the day and year first above written.

ORANGE COUNTY SANITATION DISTRICT

By _____
Chair, Board of Directors

By _____
Clerk of the Board

APPROVED AS TO FORM:
BRADLEY R. HOGIN,
DISTRICT COUNSEL

By _____

IRVINE RANCH WATER DISTRICT

By _____
General Manager

By _____
Secretary

APPROVED AS TO FORM:
BOWIE, ARNESON,
WILES & GIANNONE

By _____

Exhibit A



April 18, 2017

Prepared by: T. Lynch/J. Moeder/R. Mori

Submitted by: K. Burton

Approved by: Paul Cook 

ENGINEERING AND OPERATIONS COMMITTEE

IRVINE LAKE PIPELINE NORTH CONVERSION RESERVOIR CONTRACT CHANGE ORDER

SUMMARY:

Pascal & Ludwig (P&L) is constructing the Irvine Lake Pipeline (ILP) North Conversion Reservoir which is approximately 15% complete. Staff recommends that the Board approve Contract Change Order No. 4 in the amount of \$351,014 for modified work hours and additional soils handling and disposal activities for the ILP North Conversion Reservoir project.

BACKGROUND:

As part of IRWD's strategic plan to increase recycled water usage and reduce reliance on imported water supplies, IRWD is converting a significant portion of the ILP from untreated water to recycled water. The ILP North Conversion Reservoir project includes construction of a 2.4 million gallon buried concrete reservoir, modifications at the Rattlesnake complex, and modifications at the Orchard Hills Strainer Facility. Construction of the ILP North Conversion Reservoir project began October 2016.

Contract Change Order No. 4:

Staff and P&L completed negotiations for Contract Change Order No. 4, attached as Exhibit "A", for modified work hours and additional soils handling and disposal activities at the Santiago Hills Reservoir site. The change order consists of two change requests described below.

Modified Work Hours: Per the Contract Documents, the contractor is allowed to start work at 7:00 a.m. Once the excavation activities began and the contractor began hauling soils from the reservoir site, traffic on Santiago Canyon Road was immediately impacted and became significantly congested. Staff quickly coordinated with the City of Orange to modify the start time of the hauling activities from 7:00 a.m. to 8:30 a.m., which immediately improved the traffic conditions. With the later start time, the contractor's work day was reduced by 1.5 hours which decreased the contractor's daily production level and increased the overall duration of the hauling activities. The cost associated with this item is \$83,970, and P&L is requesting that 10 additional calendar days be added to the contract time to account for the reduced daily working hours and extended duration of the hauling activities.

Additional Soils Handling and Disposal: The design for the reservoir included an estimate that a total quantity of 56,000 cubic yards of excess soil material would need to be exported from the reservoir site and disposed. The contractor has nearly completed the exporting operation and has determined that a total of 76,000 cubic yards of excess soil requires exporting, which includes material associated with removing a portion of the berm along Santiago Canyon Road, removal of unsuitable structural backfill, and removal of non-structural backfill to provide adequate space

to construct the reservoir. Below is a summary of the three major contributors to the additional disposal quantity.

- Staff directed the contractor to remove a portion of the existing berm along the site frontage to reduce the overall amount of excavation work that the future pipeline contractor would be required to perform during construction of the reservoir inlet and outlet pipelines. This berm was initially intended to be removed during the Irvine Company's road widening project, but since that project has been delayed, staff determined that it would be more cost effective for the reservoir contractor to perform the berm removal rather than the pipeline contractor.
- The original 56,000 cubic yard estimate was based on the engineer's determination that a portion of the excavated soils would be suitable for reuse as structural and non-structural backfill for the reservoir. As the excavation progressed, geotechnical testing of the excavated soils identified that the onsite soils were unsuitable for reuse as structural backfill and therefore required exporting for disposal.
- The geotechnical testing also identified that the onsite material could be used for non-structural backfill. Although the onsite material met non-structural backfill requirements and could be reused, the contractor and staff examined various options for staging the material onsite and determined that due to the site constraints, the contractor would need to export and dispose of the non-structural backfill to provide adequate space to construct the reservoir.

As a result of the above items, the contractor removed an additional 20,000 cubic yards of material beyond what was originally identified in the Contract Documents. The cost associated with this work is \$267,044, and P&L is requesting that 10 additional calendar days be added to the contract time to account for the time needed to complete the additional work. Soils handling and disposal was identified as a unit price item in the bid form, and staff confirmed that the submitted cost is based on the unit price included in the original bid.

Staff reviewed the change order and recommends approval of Contract Change Order No. 4 in the amount of \$351,014 and 20 additional calendar days. A summary of change orders to date is provided as Exhibit "B".

FISCAL IMPACTS:

Project 05407 is included in the FY 2016-17 Capital Budget. The existing budget is sufficient to fund the contract change order.

The ILP North Conversion Project, which includes the reservoir and associated off-site pipelines, is receiving grant funding from the United States Department of Bureau of Reclamation (USBR) and the State Water Resources Control Board (SWRCB). The USBR funding, in the amount of \$300,000 is being provided through the Drought Resiliency Grant program with 75 percent IRWD matching requirements. The SWRCB is providing Proposition 1 Recycled Water

Program grant funds, which will contribute up to a 35 percent match on eligible construction costs up to a maximum of \$29,510,300 in project costs.

ENVIRONMENTAL COMPLIANCE:

This project is subject to the California Environmental Quality Act (CEQA) and in conformance with California Code of Regulations Title 14, Chapter 3, Article 6, a Notice of Intent to adopt a Mitigated Negative Declaration was filed with the County of Orange on November 3, 2015. Pursuant to State Guideline § 15073, the Initial Study/Mitigated Negative Declaration (IS/MND) was made available for public review for a period of 30 days from November 4, 2015 through December 3, 2015. The IS/MND was adopted by IRWD Board of Directors at its January 11, 2016 meeting. A Notice of Determination was filed with the Orange County Clerk/Recorder and the CA State Clearinghouse on January 12, 2016.

RECOMMENDATION:

That the Board approve Contract Change Order No. 4 in the amount of \$351,014 and an additional 20 contract days with Pascal & Ludwig for the ILP North Conversion Reservoir, Project 05407.

LIST OF EXHIBITS:

Exhibit "A" – Contract Change Order No. 4
Exhibit "B" – Contract Change Order Summary Log

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. 04☐ FinalProject No. 05407

ILP N. Conversion Santiago Hills Zone C+ Reservoir

Project Title

Date: 3/31/2017

THE FOLLOWING CHANGE TO CONTRACT, DRAWINGS AND SPECIFICATIONS IS PROPOSED.	\$ ADDITIONS	\$ DELETIONS	DAYS ±
1. Change Request 09 - City of Orange Modified Work Hours. This change request includes impacts associated with the City imposed modified work hours in the City's encroachment permit.	\$ 83,970.00	\$ -	10
2. Change Request 13 - Additional Handling and Disposal. This change request includes disposing of an additional 20,000 cubic yards of material at the unit rate of \$11.11/cy plus the \$2.11/cy processing fee.	\$ 267,044.00	\$ -	10
Note: With the execution of this contract change order, the revised contract completion date is 10/2/2018.			
TOTAL	\$ 351,014.00	\$ -	20

			DAYS ±
1. NET AMOUNT THIS CHANGE ORDER	= \$	351,014.00	20
2. ORIGINAL CONTRACT AMOUNT	= \$	9,038,010.00	690
3. TOTAL PREVIOUS CHANGE ORDER(S)	= \$	42,527.00	73
4. TOTAL BEFORE THIS CHANGE ORDER (2+3)	= \$	9,080,537.00	763
5. PROPOSED REVISED CONTRACT AMOUNT TO DATE (1+4)	= \$	9,431,551.00	783

We hereby agree to make the above change subject to the terms of this change order for the sum of:

Three Hundred Fifty One Thousand Fourteen and 0/100

----- Dollars

3-31-17 Pascal & Ludwig Scott Floyd
Date Contractor By:

SIGNATURE	DATE	APPROVAL LEVEL REQUIRED
<u>[Signature]</u> IRWD Engineer or Consulting Engineer	<u>4/6/17</u> Date	Department Director Approval Required ☐
<u>[Signature]</u> Principal Engineer	<u>04/06/17</u> Date	Executive Director Approval Required ☐
<u>[Signature]</u> Executive Director of Engineering & Water Quality	<u>4/10/17</u> Date	General Manager Approval Required ☐
<u>[Signature]</u> General Manager	<u> </u> Date	Board Approval Required ☒
		Purchase Order No. <u> </u>

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.

EXHIBIT "B"

ILP N. Conversion Santiago Hills Zone C+ Reservoir Project PR 5407

Construction Change Order Summary

Date: April 6, 2017
Contractor: Pascal & Ludwig
Design Engineer: Kleinfelder

			Contract Amount						Contract Days				Original Completion Date:
			Original Contract Amount: \$9,038,010.00						Original Days: 690				7/1/2018
Change Order No	Description	Category	Change Order Line Item Amount	Change Order Amount	Previous Change Orders	Cumulative Total of Change Orders	% of Original Contract Amount	Revised Contract Amount	Change Order Days	Previous Change Order Days	Cum. Change Order Days	Revised Total Contract Days	Revised Completion Date
1	Approved by Executive Director of Eng and WQ Approved on November 22, 2016 CR-1: Addition of 4-inch water line at Santiago Canyon Reservoir Site CR-2: Removal of fencing along Santiago Canyon Road CR-3: Modifications to the strainer backwash pumps CR-4: Modifications to the fencing plan at the Santiago Canyon Hills Reservoir Site CR-5: Addition of a project sign at the Irvine Company disposal site	B D D C C	 \$10,628.00 \$818.00 \$1,491.00 \$7,159.00 \$750.00	\$ 20,846.00	\$ -	\$ 20,846.00	0.23%	\$9,058,856.00	0	0	0	690	7/1/2018
2	Approved by Executive Director of Eng and WQ Approved on March 28, 2017 CR-6: Additional potholing at Rattlesnake Complex CR-7: Addition of mulch at Rattlesnake Complex CR-8: Modification to the stainless steel tapping sleeve CR-10: Addition of Proposition 1 Funding Agreement requirements CR-11: Addition of remote control station on 30-inch ball valve CR-12: Time extension request for weather delays	B C A C D B	 \$3,283.00 \$2,065.00 \$12,605.00 \$0.00 \$3,728.00 \$0.00	\$21,681.00	\$ 20,846.00	\$ 42,527.00	0.47%	\$9,080,537.00	48	0	48	738	8/18/2018
3	Approved by Executive Director of Eng and WQ Approved on March 31, 2017 CR-15: Additional time for delay in disposal site availability	B		\$0.00	\$ 42,527.00	\$ 42,527.00	0.47%	\$9,080,537.00	25	48	73	763	9/12/2018
4	Approved by Board Approved on CR-9: City of Orange modified work hours CR-13: Additional handling and disposal	C B	 \$83,970.00 \$267,044.00	\$351,014.00	\$ 42,527.00	\$ 393,541.00	4.35%	\$9,431,551.00	20	73	93	783	10/2/2018

Category	Total Amount	Contract
A - Owner Directed Change	\$12,605.00	0.14%
B - Differing/Unknown Condition	\$280,955.00	3.11%
C - External Agency, Regulatory, and/or Permit Required Change	\$93,944.00	1.04%
D - Design Oversight	\$6,037.00	0.07%
E - Design Error	\$0.00	0.00%
Total Change Order Amount (A + B + C + D + E)	\$393,541.00	4.35%

April 18, 2017

Prepared by: H. Cho/M. Cortez

Submitted by: K. Burton *KLB*

Approved by: Paul Cook *[Signature]*

ENGINEERING AND OPERATIONS COMMITTEE

DYER ROAD WELL FIELD SURGE TANKS CONSTRUCTION PHASE SERVICES CONSULTANT SELECTION

SUMMARY:

The Dyer Road Well Field (DRWF) Surge Tanks project will replace the existing surge tanks at Well 11 and Well 15 that are corroding and will install new surge tanks at Well 5 and Well 7 to provide protection against pressure surges in the Zone 1 system. The project is currently out to construction bid with the bid opening scheduled for April 18, 2017. Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Tetra Tech for construction phase services in the amount of \$126,000 for the DRWF Surge Tanks.

BACKGROUND:

The DRWF was constructed in the 1990s as a domestic water source for IRWD and consists of 18 wells located in Santa Ana. The wells were constructed with surge tanks located underground at Well 11 and Well 15 and aboveground at Well 13 to protect against pressure surges. The surge tanks at Well 11 and Well 15 are mostly buried with one end located in a vault that includes a tank manway. Inspection of the surge tank walls in the vaults at Well 11 and Well 15 indicate that the walls of both surge tanks are thinning from corrosion and are near the end of their useful lives. As part of the investigation into their replacement, Flow Science was retained to complete a comprehensive surge analysis of the entire DRWF Zone 1 system including the Well 21/22 Treatment Plant. Flow Science recommended new surge tanks at Well 5, Well 7, and Well 16 that have room for the proposed surge tanks in addition to replacing the two existing surge tanks at Well 11 and Well 15.

The DRWF Surge Tanks project will replace the existing surge tanks at Well 11 and Well 15 and install new surge tanks at Well 5 and Well 7. The four well sites are shown in Exhibit "A". The surge tank at Well 16 is currently being built as part of the Initial Disinfection Facility (IDF) Sodium Hypochlorite Storage and Feed System project since Well 16 and IDF are located on the same site.

Tetra Tech was retained to provide design plans and project manual to replace the surge tanks at Wells 11 and 15 and to construct new surge tanks at Wells 5 and 7. To eliminate tank corrosion, the tanks are designed so they are not directly buried in the ground. At Well 11, the surge tank will be constructed in a recessed pit 12 feet below ground surface similar to the surge tank at OPA Well 1. At Well 15, the surge tank will be constructed in an underground vault due to the lack space at the site. The surge tanks at Wells 5 and 7 will be constructed aboveground. Tetra Tech completed the design in March 2017, and the project went out to construction bid. The engineer's estimate is \$5,500,000, and the bid opening is scheduled for April 18, 2017.

Consultant Selection:

Staff solicited a proposal from Tetra Tech for construction phase services; Tetra Tech's proposal is in the amount of \$126,000 as shown in Exhibit "B". Staff reviewed the proposal and found it in line with proposal amounts for other projects with similar scopes of work. The OPA Well 1 Project construction bid was \$5,341,000, and the construction phase services contract with URS Corporation was \$156,900. Since Tetra Tech completed the design and is most familiar with the project, staff recommends awarding the construction phase services to Tetra Tech.

FISCAL IMPACTS:

Projects 05473 and 06165 are included in the FY 2016-17 capital budget. Budget increases to Projects 05473 and 06165 to fund the construction and construction phase services will be presented to the Board at the April 24, 2017 meeting.

ENVIRONMENTAL COMPLIANCE:

This activity is categorically exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15301 (b) which provides exclusion for minor alteration of public facilities; Section 15302 which provides for replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose; and Section 15303 which consists of exclusion for minor alteration of public facilities such as water and other utility extensions. A Notice of Exemption was filed with the Orange County Clerk-Recorder on May 25, 2016.

RECOMMENDATION:

That the Board authorize the General Manager to execute a Professional Services Agreement with Tetra Tech for construction phase services in the amount of \$126,000 for the Dyer Road Well Field Surge Tanks, Projects 05473 and 06165.

LIST OF EXHIBITS:

Exhibit "A" – Site Location Map
Exhibit "B" – Tetra Tech Proposal

EXHIBIT "A"

DRWF Surge Tank Project

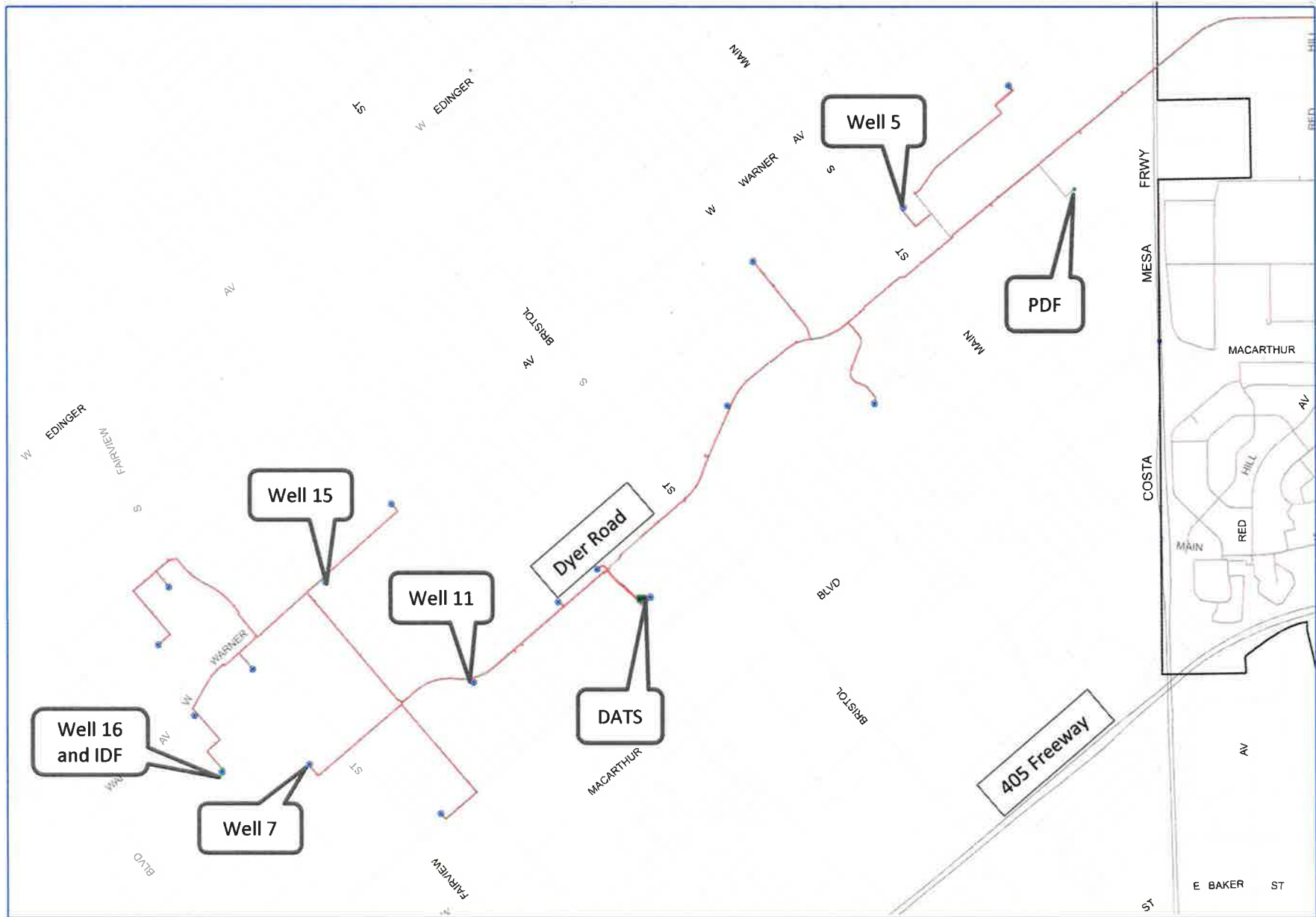


EXHIBIT "B"



TETRA TECH

March 31, 2017

Mr. Malcolm Cortez, P.E.
Irvine Ranch Water District
3512 Michelson Drive
Irvine, CA 92612

**Reference: Proposal to Provide Construction Phase Services for the
Dyer Road Well Field Surge Tanks, Project Nos. 05473 & 06165**

Dear Mr. Cortez:

Tetra Tech has completed the design and is currently providing bid phase services for the Dyer Road Well Field Surge Tanks Project under Purchase Order No. 529097. Our original approved budget was for \$290,000 and did not include construction support services. Variance No. 1 was approved for \$64,000 and was for replacing the PLCs, relocating the SCE transformer, designing sunshade at Well 11 and miscellaneous other items of work.

By this correspondence, Tetra Tech is requesting approval of this proposal to provide construction phase services for the Dyer Road Well Field Surge Tanks Project.

SCOPE OF WORK

The construction support services depend greatly on the Contractor's construction schedule, the adequacy of his submittals, and the amount of issues/conflicts that arise during the construction of the project. Tetra Tech does not control the amount of the submittals, RFIs or the issues that arise during the construction process. Based on the Contract Documents, the time for completion shall be within 420 calendar days (about 14 months) from the date of the Notice of Award.

Task 1 – Project Management

Services will include preparation of monthly invoices and invoice backup spreadsheets. We are assuming a duration of fourteen (14) months.

Task 2 – Project Meetings

Attend twenty (20) project meetings of two (2) hours each at IRWD and provide minutes for each meeting.

Task 3 – Contractor's Request for Information

Respond to forty (40) Request for Information. We have assumed that ten (10) of these responses will require a sketch or exhibit.

Task 4 – Minor Plan Revisions

Provide sixty (60) hours of staff time for minor plan revisions to the construction drawings.

Task 5 – Site Visits

Conduct ten (10) site visits of two (2) hours each as needed during construction.

Tetra Tech, Inc.

17885 Von Karman Avenue, Suite 500, Irvine, CA 92614-6213
Tel 949.809.5000 Fax 949.809.5010 www.tetrattech.com

Mr. Malcolm Cortez, P.E.
March 31, 2017
Page 2

Task 6 – Shop Drawing Submittals

Review and respond to one hundred (100) shop drawing submittals. We have assumed that fifty (50) submittals will require a second review.

Task 7 – Record Drawings

Prepare record drawings on 24-inch by 36-inch mylars at the construction completion using Contractor's and District Inspector's red-lines. Deliver final mylars, reissued signed mylars (as needed) and AutoCAD electronic files.

BUDGET

Tetra Tech will perform the above services on a Time and Material Basis and will provide status summaries to the District each month. The following is our requested budget for the Construction Support Services:

Task 1 – Project Management (14 months)	\$ 2,600
Task 2 – Project Meetings (20)	\$ 6,900
Task 3 – Contractor's Request for Information (40/10)	\$ 19,700
Task 4 – Minor Plan Revisions (60 hours)	\$ 8,000
Task 5 – Site Visits (10)	\$ 3,500
Task 6 – Shop Drawing Submittals (100/50)	\$ 68,000
Task 7 – Record Drawings	<u>\$ 17,300</u>
Hourly but Not-to-Exceed Budget	\$ 126,000

The following page provides our person-hour estimate per task for this work. The fee is based on a salary multiplier of 3.1. Tetra Tech is pleased to submit this proposal to provide the above scope of services for a not-to-exceed fee amount of \$ 126,000. It is our understanding that this work will be performed under a new Agreement for Professional Services including the corresponding new purchase order.

If you have any questions or require additional information, please do not hesitate to call.

Sincerely,


Tom Epperson, P.E.
Project Manager
Water, Environment & Infrastructure

TE/te
P:\35-09368-16001\ProjMgmt\Correspondence\Drafts\Construction Support Services Proposal.doc
Attachment

Irvine Ranch Water District
Dyer Road Well Field Surge Tanks Project
Construction Phase Services
Fee Proposal

Task Description	Personnel						Fees		TOTALS
	Senior Project Manager	Project Engineer	Designer / CADD	Construction Observer	WP	Total Hours	Labor	Sub-Contractors Re-Imbursables	
Construction Phase Services									
Project Management (14 months)	8	0	0	0	0	8	\$2,584	\$16	\$2,600
Project Meetings (20)	0	40	0	0	0	40	\$6,600	\$300	\$6,900
Request for Information (40/10)	0	60	40	40	0	140	\$19,700	\$0	\$19,700
Minor Plan Revisions (60 hours)	0	8	0	52	0	60	\$7,976	\$24	\$8,000
Site Visits (10)	0	20	0	0	0	20	\$3,300	\$200	\$3,500
Shop Drawing Submittals (100/50)	16	150	280	34	8	488	\$67,942	\$58	\$68,000
Record Drawings	0	2	10	84	2	98	\$12,480	\$4,820	\$17,300
Budget Request	24	280	330	210	10	854	\$120,582	\$5,418	\$126,000
TOTAL	24	280	330	210	10	854	\$120,582	\$5,418	\$126,000