



# ENGINEERING AND OPERATIONS COMMITTEE MEETING

Thursday, April 7, 2022  
4:30 p.m.

1. Call meeting to order
2. Public communications to the Committee
3. Additional items arising after posting of agenda
4. Engineering
  - RZ System
    - A. General PFAS Update – Information
    - B. Vista Panorama Reservoir Replacement Project – Rejection of Bids, Contract Negotiation Authorization, and Recission of Contracts
  - WZ System – No Items
  - Sewer System
    - C. Sewer Development Permits – Information
  - Joint
    - D. SCADA System Improvement Project – Contract Award for Phase 2 to Tesco Controls
    - E. WZ Valve Replacements and RZ Connection to Los Timbres – Budget Increase, Reallocation, and Easements
5. Operations
  - RZ System
    - A. East & West Well – Pumping Level Information – Handout
    - B. RZ Water Use – Monthly Report – Handout
  - WZ System
    - C. WZ Water Use – Monthly Report – Handout
  - Sewer System
    - D. Spill Report – No sewer spills in March
6. Adjournment

**NOTE:** On March 4, 2020, California Governor Newsom declared a State of Emergency in California as a result of the COVID-19 Pandemic, for which State and Orange County Public Health Officials have continued to recommend measures to promote social distancing. Pursuant to Government Code Section 54953, and corresponding findings of the Board that currently remain in effect (1) members of the Board of Directors and public may elect to attend this Regular Meeting by telephone or video conference due to concerns relative to COVID-10 Coronavirus and avoidance of public gatherings, and (2) **THERE WILL BE NO PUBLIC LOCATION TO ATTEND THIS MEETING IN PERSON.** The public may attend either telephonically by calling into, or by videoconference by logging into, the meeting at:

**To Access the Meeting by Computer/Device:**

<https://us02web.zoom.us/j/83870448481?pwd=TINxV0FpT0JQNjNvcEtjT2ZiNXAyQT09> or via short link <https://bit.ly/3wXMJPM>

**To Access the meeting by Phone:**

Dial: (669) 900-6833

Meeting ID: 838 7044 8481 Passcode: 961694

Members of the public shall be permitted to speak live at the meeting as to both agendized and non-agendized items, as reflected in the agenda, utilizing the above-referenced internet or telephone options. Those wishing to speak may either submit a speaker request via the on-line chat feature before an item is heard, or by verbally indicating their desire to comment at the time the item is called. Additionally, members of the public may, but are not required to, e-mail comments to Sylvia Prado at [sprado@eocwd.com](mailto:sprado@eocwd.com) up to 30 minutes before the Committee meeting, and such comments shall be provided to the Committee. Members of the public wishing to attend the meeting that require other reasonable modifications or accommodation to facilitate such attendance should contact Ms. Prado at (714) 538-5815 or the e-mail provided as soon as feasible before the meeting to make such request.

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 East Orange County Water District Engineering & Operations Committee in connection with a matter subject to discussion or consideration at an open meeting of the Engineering & Operations Committee are available for public inspection in the District's office, 185 McPherson Road, Orange, 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 via phone or email request to Ms. Sylvia Prado at (714) 538-5815 or [sprado@eocwd.com](mailto:sprado@eocwd.com).

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: GENERAL PFAS UPDATE**  
**DATE: APRIL 7, 2022**

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## BACKGROUND

Staff has not received any customer inquiries or complaints regarding PFAS in the past month.

The following PFAS related events and information have been received during the past month:

- OCWD Meetings – Information disseminated at the Special PFAS and Producers meetings included:
  - OCWD PFAS Pilot Program – OCWD is currently evaluating ten PFAS removal media in their Phase II pilot program. OCWD is performing a start-stop test on a novel media, Flourosorb, to ensure no leaching of contaminants occurs during operational shutdowns. This will assist the State in considering the media for full scale applications. OCWD intends to utilize it in a treatment system at a future date. The media shows promise as it was comparable to best performing IX resin and the cost could be up to 50% less than IX. OCWD also recently added a Phase III to the pilot program to evaluate other media that have entered the market.
  - Public Outreach – The quarterly OCWD PFAS Update and OCWD Federal Legislative Priorities are attached.
  - PFAS monitoring orders – The District continues quarterly monitoring for PFOA and PFOS in accordance with the current orders.
  - Legislation/Proposed Legislation:
    - OCWD is requesting Federal and State funds for the PFAS remediation and treatment facilities. The state 2021 Budget appropriated \$30 million to address PFAS contamination and OCWD is lobbying for larger appropriations. The federal Infrastructure Investment and Jobs Act provided \$10 billion in funding over five years to address PFAS. The funding will go through the State Revolving Fund (SRF) program in the form of grants.
      - \$5 billion to the EPA under the Safe Drinking Water Act for fiscal years 2022 through 2026;
      - \$4 billion to the EPA for Drinking Water SRF capitalization grants for 2022 through 2026; and,
      - \$1 billion to the EPA for Clean Water SRF capitalization grants for 2022 through 2026.
    - HR 2467 - PFAS Action Act of 2021. This bill establishes requirements and incentives to limit the use of perfluoroalkyl and polyfluoroalkyl substances, commonly referred to as PFAS, and remediate PFAS in the environment. The bill directs the Environmental Protection Agency (EPA) to designate the PFAS perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) as a hazardous substances under CERCLA, thereby requiring

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remediation of releases of those PFAS into the environment. Within five years, the EPA must determine whether the remaining PFAS should be designated as hazardous substances. The EPA must also determine whether PFAS should be designated as toxic pollutants under the Clean Water Act. If PFAS are designated as toxic, then the EPA must establish standards to limit discharges of PFAS from industrial sources into waters of the United States. In addition, the EPA must issue a national primary drinking water regulation for PFAS that, at a minimum, includes standards for PFOA and PFOS. The Bill is in Senate Committee.

- HR 3291 - Assistance, Quality, and Affordability Act of 2021. This Bill would amend the Safe Drinking Water Act to provide assistance for States, territories, areas affected by natural disasters, and water systems and schools affected by PFAS or lead, and to require the Environmental Protection Agency to promulgate national primary drinking water regulations for PFAS, microcystin toxin, and 1,4-dioxane, and for other purposes. The Bill is in House Committee.
  - SB 230 - State Water Resources Control Board: Constituents of Emerging Concern in Drinking Water Program. This bill would require the state board to establish, maintain, and direct a dedicated program called the Constituents of Emerging Concern in Drinking Water Program for 5 years to assess the state of information and recommend areas for further study on, among other things, the occurrence of constituents of emerging concern (CEC) in drinking water sources and treated drinking water. The bill would require the state board to convene, by an unspecified date, the Science Advisory Panel for 3 years to review and provide recommendations to the state board on CECs for further action, among other duties. The Bill is in the Assembly.
- PFAS Treatment Plant – The PFAS Treatment plant is under construction. The excavation and compaction for equipment pads is complete and the contractor, Pascal and Ludwig, is currently installing duct banks, rebar, and conduits. Staff expects the Treatment Plant to be completed in early 2023.
  - Wells – Staff is waiting for a response from the State Department of Drinking Water for a request to put the West Well in standby status due to inadvertent shutdowns during flushing. The East Well is still in active status although it will also remain off except for flushing and water quality testing so that in the event of an emergency it can be turned back on immediately.

## **FINANCIAL IMPACT**

No direct financial impact is associated with this report.

## **RECOMMENDATION**

Information Only.

## **ATTACHMENTS**

OCWD Quarterly PFAS News & Updates March 2022

OCWD Federal PFAS Priorities

# OCWD Quarterly PFAS Update



**March 2022**

The Orange County Water District (OCWD; the District) supplies clean, reliable drinking water to 2.5 million customers every day. OCWD and the local water suppliers in its service area are committed to operating in compliance with all state and federal guidelines and regulatory requirements.

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of chemicals that are used to make carpets, clothing, fabrics for furniture, food packaging, cookware, and other materials to make them non-stick and/or resistant to water, oil, and stains. They are also used in a number of industrial processes and firefighting activities.

PFAS have been detected in the Orange County Groundwater Basin. OCWD provides regular PFAS updates to community stakeholders to inform them of the proactive measures that the District and local water suppliers have taken to address PFAS in the Basin.

## REGULATORY

### Federal:

- The US Environmental Protection Agency (EPA) has convened a Science Advisory Board PFAS Review Panel to help with the development of National Primary Drinking Water Regulations (NPDWRs) for PFAS.
- EPA may issue GENX and PFBS health advisories as early as this Spring.
- In Fall of 2022, EPA expects to release a proposed regulation for PFOA and PFOS and a final regulation one year later.
- The proposed NPDWRs may take the form of enforceable maximum contaminant levels (MCLs) for PFOA and PFOS. EPA is also considering a larger grouping for PFAS MCLs as well as a treatment technique.

### State:

- California continues the process for setting Public Health Goals (PHGs) for PFOA and PFOS.

- The California EPA's Office of Environmental Health Hazard Assessment (OEHHA) is having the required scientific peer-review group to review draft PHGs and comments submitted.
- OEHHA is expected to release 2nd draft PHGs this spring and finalize PHGs by the end of 2022. Then the state Division of Drinking Water will start its MCL process which should take approximately two years.

## LEGISLATIVE

### Federal:

- The federal Infrastructure Investment and Jobs Act provided \$10 billion in funding over five years to address PFAS. Funding will go through the State Revolving Fund (SRF) program in the form of grants.
  - \$5 billion to the EPA under the Safe Drinking Water Act for fiscal years 2022 through 2026;
  - \$4 billion to the EPA for Drinking Water SRF capitalization grants for 2022 through 2026; and,
  - \$1 billion to the EPA for Clean Water SRF capitalization grants for 2022 through 2026.
- The US EPA formally submitted to the White House Office of Management and Budget (OMB) its plan to designate PFOA and PFOS as hazardous substances under the Superfund Law or CERCLA. The agency expects to issue a final rule in the summer of 2023. Any rule will be subject public comment prior to final publication.
- The US EPA also submitted its proposal to include PFAS on its Toxic Release Inventory (TRI) that the industry will need to report on.

### State:

- The state 2021 Budget appropriated \$30 million to address PFAS contamination. OCWD will continue to lobby for larger appropriations and to build a coalition of other stakeholders who support that request.
- The Governor's 2022 budget does not include any specific funding provided for PFAS or CECs but more details are possible in expected budget trailer bills.

OCWD continues to monitor PFAS legislation and encourages water agencies and stakeholders to take action by contacting your federal legislators to advocate for the following priorities:

- The "polluter pays" principle must be upheld and OCWD is advocating that all PFAS-related legislation and rulemaking must exempt water and wastewater agencies from any liability for PFAS clean-up costs.
- When setting drinking water standards for PFOA and PFOS, the USEPA should utilize the current methodology.

Please view [OCWD's Federal Legislative Priorities](#) document which contains more information on these issues and contact [OCWD Legislative Affairs Liaison Alicia Dunkin](#) to obtain draft resolutions and letters to legislators that may be used to advocate for these priorities.

## LOCAL

- OCWD continues testing local water supplier wells in compliance with the second and third PFAS monitoring orders formally issued by the state Division of Drinking Water (DDW) in 2021. The orders require a minimum of one year-long quarterly testing, with continued mandated in sources with detections.
- OCWD and its local water suppliers continue making significant headway on new groundwater treatment facilities with the goal of getting wells back online as soon as possible.
  - There are 59 impacted wells in Orange County.
  - 25 treatment facilities for these wells are in the design phase, 20 are currently being constructed and 14 are now operational.
- Save the date for OCWD's upcoming webinar, PFAS Impacts and Policy Solutions
  - Thursday, March 24 at 12 p.m.
  - Featured Speakers:
    - Stephen R. Sheldon, Board President, Orange County Water District
    - Denis Bilodeau, Director, Orange County Water District
    - Stephan Tucker, General Manager, Water Replenishment District of Southern California
    - Adam Link, Executive Director, California Association of Sanitation Agencies
    - Eric Sapirstein, ENS Resources, Inc.
- [Click here to register for the free webinar](#)
- The [University of California, Irvine \(UCI\) led PFAS study](#) is proceeding with the recruitment of a small number of adults from its existing UCI research registry. Broader recruitment, including children, is expected this spring. 1,000 adults and 300 children will be recruited for the study. As part of the study, UCI continues to work on groundwater modeling to try to recreate historical PFAS concentrations in the OC Groundwater Basin. Preliminary results are expected in early Spring.

## WASTEWATER

### Statement from OC San

The Orange County Sanitation District (OC San) is an environmental agency whose mission is to protect public health and the environment by safely collecting, treating, and recycling more than 180 million gallons of wastewater that comes through two facilities every day. It is this activity that has us in partnership with the Orange County Water District (OCWD) on the Groundwater Replenishment System where nearly all of the reclaimable wastewater flows from OC San is recycled for beneficial reuse. In



addition to purified water, OC San also generates beneficial byproducts from the wastewater treatment process such as biosolids for land application and renewable energy for powering OC San facilities.

To sustain these beneficial uses of wastewater byproducts, OC San is perpetually improving its innovative and cost-effective wastewater treatment operation and collaborating with residential, commercial, and industrial partners to prevent toxic materials and contaminants of emerging concern such as PFAS from entering the sewer. OC San stands with OCWD in shared interest in and support for responsible legislation and environmental regulations that are based on sound science and technology. Specifically, it must be recognized that wastewater treatment plants such as OC San are not the creators or users of PFAS. Contaminants of emerging concern need to be controlled at the source by the manufacturers and users of these products. OC San believes that it is the responsibility of the producers to provide safer alternatives to these compounds and to provide a life-cycle-based product stewardship for existing compounds from production to destruction/disposal.

For more information about how California's wastewater industry is addressing PFAS, please visit the California Association of Sanitation Agencies (CASA) website:

[PFAS – California Association of Sanitation Agencies \(casaweb.org\)](https://casaweb.org)

## MEDIA

PFAS are not exclusive to Orange County or even California. States across the country are in the midst of tackling PFAS in consumer products, groundwater supplies and other forms of contact. OCWD continues to monitor what is happening around the country on this issue.

[DROUGHT EXPOSES 'CANARY IN THIS COAL MINE' OF PFAS IN WELL WATER](#)

[New analysis: "forever chemicals" regulation & clean-up will significantly drive 2022 state policies on toxic chemicals](#)

[ENVIRONMENTALISTS SEE PFAS CONCERNS DRIVING NEW STATE TOXICS MEASURES](#)

[ONE OF ORANGE COUNTY'S FIRST PFAS TREATMENT FACILITIES BEGINS OPERATION IN VILLA PARK](#)

[Sens. Feinstein, Shaheen, Collins, Colleagues Urge Funding for PFAS Research, Remediation in FY2023 Budget Request](#)

[OC San and 374Water Enter into an Agreement to Deploy the First Commercial-Scale AirSCWO System](#)

[DOD Funds Clarkson University Professors' Projects to Remove Toxic Chemicals From Water](#)

[Prop 65 Lists PFOA As Carcinogen](#)



[Waste companies worry PFAS research is not moving fast enough as they prepare for regulatory changes](#)

For more background information about PFAS, please see the materials below:

[Fact Sheet](#)

[FAQ](#)



**ORANGE COUNTY WATER DISTRICT**

Orange County Water District | 18700 Ward Street, Fountain Valley, CA 92708

# Federal PFAS Priorities



The Orange County Water District (OCWD) manages the Orange County Groundwater Basin that provides 77% of the water supply to 2.5 million people in north and central Orange County. PFAS have been detected in the Basin, entering primarily via the Santa Ana River whose flows infiltrate into and recharge the Basin. Although chemical manufacturers are the original source of PFAS chemicals, water agencies and ratepayers are burdened with the responsibility to monitor and treat the chemical(s) to remove it from their local water supplies.

OCWD closely monitors PFAS legislation and encourages water agencies and stakeholders to take action by contacting your legislators to advocate for the following priorities:

**Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of chemicals that are used to make carpets, clothing, fabrics for furniture, food packaging, cookware, and other materials to make them non-stick and/or resistant to water, oil, and stains. They are also used in a number of industrial processes and firefighting activities.**

## **1 All PFAS-related legislation and rulemaking must exempt water and wastewater agencies from any liability for PFAS clean-up costs.**

The “polluter pays” principle must be upheld and OCWD is strongly advocating to add an exemption for water and wastewater agencies to any future PFAS legislation or rulemaking. A water utility that complies with applicable and appropriate federal management and treatment standards must not be responsible for current and future costs associated with a PFAS cleanup.

## **2 When setting drinking water standards for PFOA and PFOS, the U.S. Environmental Protection Agency (USEPA) should utilize current methodology.**

According to the USEPA’s recently released PFAS Roadmap, Maximum Contaminant Levels (MCLs) will be set for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) in two years. OCWD urges the USEPA to rely upon the Safe Drinking Water Act’s current methodology, which includes a cost-benefit analysis as a component in the development of drinking water standards for PFOA and PFOS. This current methodology ensures that public health benefits of new drinking water standards are reasonably balanced with the compliance costs.

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: VISTA PANORAMA RESERVOIR REPLACEMENT PROJECT – REJECTION OF BIDS, CONTRACT NEGOTIATION AUTHORIZATION, AND RECISSION OF CONTRACTS**  
**DATE: APRIL 7, 2022**

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## BACKGROUND

The Vista Panorama Reservoir, hydro-pneumatic tank, and pump station provide domestic water service and storage to a separate high elevation service area in Retail Zone Pressure Zones 1 and 2. The existing 1926 concrete reservoir has reached the end of its usable life. This project has significant obstacles due to the geographic location, constrained site, overhead wires, narrow road, cellular equipment interference, budget constraints, and rock subgrade with evaluation for replacement dating as far back as 1989.

Staff was nearing the completion of a redesign, promulgated to mitigate the cellular equipment interference, in November of 2021 when concerned residents from the community attended the Board meeting to voice concerns. Staff has been communicating with the residents and incorporated their feedback into the bid package. Staff also engaged AT&T and T-Mobile in an effort to resolve the cellular equipment interference. Staff completed the design and advertised the project for bid on February 14 to a select list of contractors. Six contractors and one electrical sub-contractor attended the pre-bid meeting on February 22. One bid was received, in the amount of \$3,991,700, from Pacific Hydrotech at the bid opening on March 24. The bid was significantly larger than the \$1,200,600 approved budget. Staff is recommending the Board reject all bids as well recission of previous contracts.

To move forward, staff is requesting authorization for the General Manager, or his designees, to seek to negotiate for Board approval contract(s) with one or more contractors to complete the project. Staff is in the process of evaluating minimizing the project scope for tank replacement and other options including removing the tank and installing a redundant pipeline and retrofitting the existing tank.

Staff expects to have a recommended solution to present to the Board in May.

## FINANCIAL IMPACT

Funds have been budgeted in Account #7202101 for the Vista Panorama Reservoir Replacement Project.

## RECOMMENDATION

That the Committee recommend the Board (i) reject all bids for the Vista Panorama Reservoir Replacement Project; (ii) authorize the General Manager, or designees, to seek to negotiate for Board approval contract(s) with one or more contractors to complete the project; and (iii) relative to prior contracts authorized or awarded for the Vista Panorama Project, the Board authorizes the General Manager, or his designees, to rescind and/or take such other action to terminate such contracts for convenience.

**VISTA PANORAMA RESERVOIR REPLACEMENT PROJECT – REJECTION OF BIDS,  
CONTRACT NEGOTIATION AUTHORIZATION, AND RECISSION OF CONTRACTS**  
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**ATTACHMENTS**

None

# MEMO

**TO:           ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM:       GENERAL MANAGER**  
**SUBJECT:   SEWER DEVELOPMENT PERMITS**  
**DATE        APRIL 7, 2022**

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## **BACKGROUND**

Sewer Development Permit Report

## **RECOMMENDATION**

Information Only

## **ATTACHMENTS**

Sewer Development Permit Report

### March 2022 - Sewer Connection & Wholesale Connection Permits

Connection Address	Type of Development	Permit No	APN	Date Issued	Regional CFCC (OCSD) Fees	Local Capacity Chage Fees	Inspection Fees	Total Sewer	Wholesale Connection Meter Fees	Water District	Total
13391 Coral Reef Rd. Tustin, CA 92780	ADU	21-83	103-594-06	3/31/2022	\$ 2,083.82	\$ 1,133.47	\$ 800.00	\$ 4,017.29	\$ 634.00	Tustin	\$ 4,651.29
13721 Malena Dr. Tustin, CA 92780	ADU	21-98	395-273-19	3/10/2022	\$ 526.18	\$ 318.01	\$ -	\$ 844.19	\$ -	Tustin	\$ 844.19
18874 Fowler Ave. Santa Ana, CA 92705	ADU	21-116	393-301-17	3/15/2022	\$ 1,720.51	\$ 1,221.91	\$ 800.00	\$ 3,742.42	\$ -	EOCWD	\$ 3,742.42
14011 Woodlawn Ave. Tustin, CA 92780	ADU	21-114	432-052-13	2/11/2022	\$ 1,659.96	\$ 1,339.93	\$ 800.00	\$ 3,799.89	\$ 1,586.00	Tustin	\$ 5,385.89
12592 Singing Wood Dr. Santa Ana, CA 92705	SFR	21-123	103-353-05	3/18/2022	\$ 2,084.00	\$ -	\$ -	\$ 2,084.00	\$ -	Tustin	\$ 2,084.00
12012 S. E. Skyline Dr. Santa Ana, CA 92705	SFR	22-005	502-322-23	3/17/2022	\$ -	\$ -	\$ -	\$ -	\$ -	Tustin	\$ -
310 S. Myrtle Ave. Tustin, CA 92780	ADU	22-007	501-081-06	3/23/2022	\$ 1,355.11	\$ 1,768.55	\$ 800.00	\$ 3,923.66	\$ -	Tustin	\$ 3,923.66
12231 Country Ln, Santa Ana, CA 92705	SFR	22-011	502-291-13	3/30/2022	\$ -	\$ -	\$ -	\$ -	\$ -	Tustin	\$ -
1901 Park Skyline Dr. Santa Ana, CA 92705	SFR	22-014	502-071-12	3/3/2022	\$ -	\$ -	\$ -	\$ -	\$ -	GSWC	\$ -
1872 Jan Marie Place, Tustin, CA 92780	ADU	22-019	500-072-06	3/3/2022	\$ 2,501.42	\$ 2,112.76	\$ 800.00	\$ 5,414.18	\$ 2,221.00	GSWC	\$ 7,635.18
14022 Brennan Way, Santa Ana, CA 92705	SFR	22-021	401-061-03	3/11/2022	\$ -	\$ -	\$ -	\$ -	\$ -	Tustin	\$ -
13782 Carlsbad Dr. Santa Ana, CA 92705	SFR	22-023	395-384-05	3/9/2022	\$ -	\$ -	\$ -	\$ -	\$ -	Tustin	\$ -
1322 Arroyo Lindo Dr. Santa Ana, CA 92705	SFR	22-027	502-154-19	3/25/2022	\$ -	\$ -	\$ -	\$ -	\$ -	Tustin	\$ -
<b>Totals</b>					<b>\$ 11,931.00</b>	<b>\$ 7,894.63</b>	<b>\$ 4,000.00</b>	<b>\$ 23,825.63</b>	<b>\$ 4,441.00</b>		<b>\$ 28,266.63</b>

### March 2022 - In the Pipeline

Connection Address	Type of Development	Permit No	APN	Water District	Permit Status
9922 Newport Blvd, Santa Ana, 92705	New Construction - 16 SFRs	21-56 to 21-71	VTM No. 18062	GSWC	Pending resolution of design
9801 Brier Lane, Santa Ana, 92705	New Construction - 5 SFRs	21-72 to 21-75	503-321-01, 503-321-02	GSWC	Pending customer payment and signature
9751 Brier Lane, Santa Ana, 92705	Septic Conversion	21-77	503-321-16	GSWC	Pending resolution of design
9761 Brier Lane, Santa Ana, 92705	Septic Conversion	21-78	503-321-14	GSWC	Pending resolution of design
13391 Coral Reef Rd. Tustin, CA 92780	ADU	21-83	103-594-06	Tustin	Pending City of Tustin's Approval
1941 El Camino Real, Tustin, CA 92780	MFR	21-99	500-712-12	Tustin	Pending submittal
18874 Fowler Ave. Santa Ana, CA 92705	ADU	21-116	393-301-17	EOCWD	Pending customer response
685 W. Main St. Tustin, CA 92780	ADU	21-120	401-552-11	Tustitn	Pending revised plans
17802 Irvine Blvd. Tustin, CA 92780	Commercial	21-124	401-414-13	Tustin	Under Review
14352 Holt Ave. Tustin, CA 92780	ADU	21-125	401-122-12	Tustin	Pending customer response
S. Crawford Canyon Rd. & Newport Ave.	Park	N/A	503-382-04	EOCWD	Pending revised plans
1100 E. Valencia Dr. and 1101 Bell Ave. Tustin, CA	Commerical	22-018	430-241-07	Tustin	Pending customer response
17245 Seventeenth St. Tustin, CA 92780	Commerical	22-020	395-142-08	Tustin	Pending customer payment and signature

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: SCADA SYSTEM IMPROVEMENT PROJECT – CONTRACT AWARD FOR PHASE 2 TO TESCO CONTROLS, INC.**  
**DATE: MARCH 7, 2022**

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## BACKGROUND

The District's entire Supervisory Control and Data Acquisition (SCADA) system was installed by TESCO Controls, Inc. (TESCO) in the year 1998. It has served the District well for over 20 years and is in need of replacement due to obsolete components, lack of replacement parts, and to implement security improvements. In August of 2021, Phase 1 of the SCADA System Improvement Project (Project) was awarded by the Board to TESCO to replace and upgrade the SCADA servers and software.

Phase 1 of the Project is nearing completion and staff expects the new servers will be installed and operational by the end of the month. TESCO also completed a radio survey to evaluate radio communication paths between the field sites and the Administration Office. The radio communication will replace the existing phone lines making the communication more secure and robust. Phase 2 of the Project will replace and upgrade the SCADA software, hardware, and communication equipment at eight existing reservoir, pump station and PRV field sites. In the future, a final planned Phase 3 will install controls at other field sites that currently only transfer data.

TESCO is uniquely qualified to implement Phase 2 of the Project having installed the entire original SCADA system including the field site equipment. In addition, TESCO has provided good performance on Phase 1 and has been responsive to the District's needs. Staff is recommending awarding Phase 2 of the SCADA replacement project to TESCO in the amount of \$428,900 to replace the SCADA software, hardware, and communication equipment at the field sites per the attached scope of work. Staff is also requesting the inclusion of a \$25,000 contingency to address any unanticipated items that may arise for a total budget of \$453,900. TESCO expects the work to take 10-months with expected completion in early 2023.

TESCO provides control, programming, panel building, and communication services. Electrical construction is not included in their scope of work. TESCO will provide a scope of work for the electrical construction, removing the old panels and installing the new enclosures, and assist staff with requesting estimates for the work. Staff anticipates the electrical construction will be under \$100,000 based on a budgetary estimate provided by TESCO.

Finally, radio communication will require a repeater at a City of Orange reservoir site. Staff contacted Orange of Orange Water Utility staff and they are amenable to the installation. With the approval of Phase 2, staff will begin the agreement approval process for the repeater. Installation of the equipment, furnished by TESCO, will be included in the electrical construction.



## **SCADA SYSTEM IMPROVEMENT PROJECT – CONTRACT AWARD FOR PHASE 2 TO TESCO CONTROLS, INC.**

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### **FINANCIAL IMPACT**

Funds have been budgeted in Account #7202145 for SCADA System Improvements.

### **RECOMMENDATION**

That the Committee recommend the Board award a contract to TESCO Controls, Inc. in the amount of \$428,900 for the SCADA field site replacements and authorize and approve the General Manager a \$25,000 contingency to address any unanticipated items that may arise for a total budget of \$453,900 for TESCO's work related to Phase 2 of the SCADA System Improvements project.

### **ATTACHMENTS**

TESCO's Proposal

To: East Orange County Water District  
Attn: Jerry Mendzer  
Re: East Orange County Water District  
PLC Control Panel Upgrades

Quote Date: 3/31/2022  
Quote No.: 21H213Q04

Dear Jerry:

Thank you for your continued interest in TESCO products, services, and solutions. We are pleased to quote the following scope of work pertaining to the above-referenced project.

## Project Background

Tesco Controls, Inc. provided automated control of East Orange County Water District's water distribution system utilizing Tesco L2000 programmable logic controllers (PLCs) under Tesco job number T-21062. These PLC control panels were installed in 1998 and the District has requested a quotation from Tesco to upgrade them. This quotation will include upgrading the control panels of the existing sites: RTU 1 – OC-70 Pump Station, RTU 2 – Ethelbee PRV, RTU 3 – Stoller Reservoir, RTU 4 – 6 MG Reservoir, RTU 5 – 11.5 MG Reservoir, RTU 6 – 1 MG Reservoir, RTU 7 – Vista Panorama Reservoir, and RTU 8 – McPherson Wells.

The District recently hired West Yost to evaluate the existing system and create a preliminary design report (PDR). This PDR specifies Allen Bradley PLCs. Tesco will standardize on Allen Bradley CompactLogix PLCs for this project.

## Scope of Work

Tesco Controls, Inc. will provide the District with new control panels for each of the sites. The existing panels are aging and very shallow in depth. New panels will allow for plenty of space for the new PLC components. Best practices and standards have changed within the last thirty years as well and building new panels will allow for UL certification and updated standards.

Tesco will design the panels to be similar in size as the existing, however, they will be built with more depth to accommodate the equipment within. Each panel will house an Allen Bradley CompactLogix PLC with required I/O modules. The Design drawings of the panels will be submitted to the District for approval prior to component procurement and manufacturing.

The District's new SCADA system will be running an Inductive Automation Ignition application. Because of this Tesco will provide an Ignition Edge Panel for each PLC to function as the local operator interface terminal (OIT). The Ignition Edge Panels will be programmed with the same site screens used at SCADA. This will allow for each site to have a similar look and feel to that as the SCADA application.

RTU 4 – 6MG Reservoir is located within a metered panel. This panel has sufficient depth for new equipment. Because of this, Tesco will design and provide a new backpan and door preassembled with the PLC, Ignition Edge Panel, and other components required for automation.

Tesco provided a Radio survey for the District to determine the needs criteria for a radio telemetry system to be implemented within this project. During the survey, it was found that unlicensed 900MHz radios will suffice for the majority of the sites. However, 11.5 MG Reservoir and 1 MG Reservoir will require licensed 150MHz radios for reliable communication.

A radio repeater panel will be required for the radio system. This repeater panel will be designed and provided by Tesco and it will house both 900MHz and 150MHz radios. This panel is to be located at Orange Tank.

A Tesco Networking and Telemetry Engineer will configure the new radio telemetry system. Each radio will be configured for communication back to SCADA.

Antennas and antenna cables will be supplied by Tesco within this project. Antenna masts and installation of the antennas and cables to be provided by others.

All of the instrumentation within the system are either existing or will be upgraded/installed by the District. No new instrumentation is included within this quotation.

A Tesco PLC Programming Engineer will program each of the new PLCs. Tesco will utilize standard programming blocks (per Project P1-2 in the PDR) to streamline programming. The control strategy of each site will remain the same, no changes in control are included within this quotation. However, it is understood that discharge pressure transmitters will be added to each site that does not currently have them, Tesco will program these into the new PLCs.

Tesco will manufacture the control panels and backpan at our headquarters in Sacramento, CA. Tesco will assemble and wire all of the components listed in the Scope of Supply below. Once the panels are built, Tesco will perform factory testing of the new panels. District personnel is welcome to witness the factory testing if they so choose. Upon successful testing, the panels will be shipped to the District for installation. Installation to be provided by the District or others.

Prior to the installation of the panels, Tesco will conduct a workshop with the District and the District's electrical contractor. This workshop will be a discussion of how the cutover from the old equipment to the new will take place. This will ensure everyone is on the same page and has the same understanding of the plan to install and cut over the new equipment.

11.5 MG tank and Newport Reservoir currently have trailers onsite that house chlorinator equipment. This equipment is controlled by a PLC within the trailer. The District will have ethernet cable pulled from the trailer to the new control panels. With the ethernet connectivity, Tesco will program the chlorinator PLCs into SCADA.

Tesco is currently contracted with the District to provide an upgraded SCADA system. This SCADA system will be installed prior to the new PLC control panels. Therefore, Tesco will perform the required SCADA programming to bring the new PLCs onto the new SCADA system.

Once the control panels are installed, Tesco will perform onsite startup. At startup, a Tesco Field Service Engineer will ensure proper installation, power up, perform function checks, test, and commission the panels. RF telemetry back to SCADA will be tested for proper communication. SCADA will be tested for visibility and operability of the new PLCs. Upon successful startup, Tesco will perform two days of training to available District personnel. O&M manuals will be provided for all Tesco supplied equipment.

## Scope of Supply

Item	Qty	Description
<b>RTU 1, 2, 3, 5, 6, 7, 8</b>		
1	7	<p><b>Control Panels to Include:</b></p> <ul style="list-style-type: none"> <li>▪ NEMA 3R Enclosure – Strut Mounted</li> <li>▪ Main Disconnect</li> <li>▪ Power Distribution Breakers as Required</li> <li>▪ Power Supply</li> <li>▪ CompactLogix PLC Equipment to Include: <ul style="list-style-type: none"> <li>▪ CPU Card</li> <li>▪ 16 Channel Digital Input Module</li> <li>▪ 16 Channel Digital Output Module</li> <li>▪ 8 Channel Analog Input Module</li> <li>▪ Screw Terminals as Required</li> <li>▪ Prosoft Module</li> </ul> </li> <li>▪ 15" Ignition Edge Panel</li> <li>▪ Ethernet Switch</li> <li>▪ Radio</li> <li>▪ Lightning Arrestor</li> <li>▪ Backup Battery</li> <li>▪ Duplex Receptacle</li> <li>▪ Heater with Thermostat</li> <li>▪ Fan with Filter</li> <li>▪ Door Contact for Intrusion Alarm</li> <li>▪ Din Rails, Wireways, Wires, Labels, Ground Bus Bar, Terminal Blocks, Circuit Breakers, and Fused Disconnects as Required.</li> </ul> <p><b>Items Shipped Separately:</b></p> <ul style="list-style-type: none"> <li>▪ Antenna</li> <li>▪ Antenna Cable</li> </ul>

Item	Qty	Description
<b>RTU 4</b>		
2	1	<p><b>Backpan to Include:</b></p> <ul style="list-style-type: none"> <li>▪ Custom Backpan for Existing Enclosure</li> <li>▪ Main Disconnect</li> <li>▪ Power Distribution Breakers as Required</li> <li>▪ Power Supply</li> <li>▪ CompactLogix PLC Equipment to Include: <ul style="list-style-type: none"> <li>▪ CPU Card</li> <li>▪ 16 Channel Digital Input Module</li> <li>▪ 16 Channel Digital Output Module</li> <li>▪ 8 Channel Analog Input Module</li> <li>▪ Screw Terminals as Required</li> <li>▪ Prosoft Module</li> </ul> </li> <li>▪ Ethernet Switch</li> <li>▪ Radio</li> <li>▪ Lightning Arrestor</li> <li>▪ Backup Battery</li> <li>▪ Duplex Receptacle</li> <li>▪ Heater with Thermostat</li> <li>▪ Fan with Filter</li> <li>▪ Contact for Door Intrusion Alarm</li> <li>▪ Din Rails, Wireways, Wires, Labels, Ground Bus Bar, Terminal Blocks, Circuit Breakers, and Fused Disconnects as Required.</li> </ul> <p><b>Deadfront Door to Include:</b></p> <ul style="list-style-type: none"> <li>▪ Custom Deadfront Door</li> <li>▪ 15" Ignition Edge Panel</li> </ul> <p><b>Items Shipped Separately:</b></p> <ul style="list-style-type: none"> <li>▪ Antenna</li> <li>▪ Antenna Cable</li> </ul>
<b>Repeater Panel</b>		
3	1	<p><b>Control Panel to Include</b></p> <ul style="list-style-type: none"> <li>▪ NEMA 3R Enclosure – Strut Mounted</li> <li>▪ Main Disconnect</li> <li>▪ Breakers and Fused Disconnects as Required</li> <li>▪ Power Supply</li> <li>▪ 900MHz Radio</li> <li>▪ 150MHz Radio</li> <li>▪ Gateway</li> <li>▪ Backup Battery</li> <li>▪ Ethernet Switch</li> <li>▪ Lightning Arrestor</li> <li>▪ Din Rails, Wireways, Wires, Labels, Ground Bus Bar, Terminal Blocks, and Nameplates as Required.</li> </ul> <p><b>Items Shipped Separately:</b></p> <ul style="list-style-type: none"> <li>▪ 900MHz Antenna</li> <li>▪ 150MHz Antenna</li> <li>▪ Qty. of Two (2): Antenna Cable</li> </ul>

Item	Qty	Description
4	Lot	<b>Professional Services:</b> <ul style="list-style-type: none"> <li>▪ Project Management</li> <li>▪ Engineering <ul style="list-style-type: none"> <li>▪ Engineered shop drawings</li> <li>▪ Equipment schematics</li> <li>▪ Engineered submittals</li> <li>▪ Technical data</li> <li>▪ As-built documentation</li> <li>▪ Project records</li> <li>▪ Prepare Scope of Work for Electrical Installation</li> </ul> </li> <li>▪ Manufacturing Services <ul style="list-style-type: none"> <li>▪ Fabrication</li> <li>▪ Manufacturing</li> <li>▪ Assembly</li> <li>▪ Equipment wiring</li> <li>▪ Factory testing</li> </ul> </li> <li>▪ PLC Programming <ul style="list-style-type: none"> <li>▪ Qty. of Eight (8): PLCs</li> </ul> </li> <li>▪ OIT Programming <ul style="list-style-type: none"> <li>▪ Qty. of Eight (8): Ignition Edge Panels</li> </ul> </li> <li>▪ SCADA Programming <ul style="list-style-type: none"> <li>▪ Qty. of Eight (8): New PLCs into SCADA</li> <li>▪ Qty. of Two (2): Chlorine PLCs into SCADA</li> <li>▪ Update Alarms for new PLCs</li> <li>▪ Update Reports for new PLCs</li> <li>▪ Update Trends for new PLCs</li> </ul> </li> <li>▪ Networking/Communications/Telemetry <ul style="list-style-type: none"> <li>▪ Configuration of new telemetry system</li> <li>▪ Configuration of nine (9) radios</li> </ul> </li> <li>▪ Product Startup Services <ul style="list-style-type: none"> <li>▪ Product quality review</li> <li>▪ Verification of product installation</li> <li>▪ Product parameter adjustments</li> <li>▪ Product programming</li> <li>▪ Software upload/download as required</li> <li>▪ Instrument/ device signal spanning</li> <li>▪ Product/equipment reconfiguration as required</li> <li>▪ Product function checks</li> <li>▪ Product startup.</li> </ul> </li> <li>▪ Onsite Training <ul style="list-style-type: none"> <li>▪ Sixteen (16) hours</li> <li>▪ Familiarization and Overview of New Equipment</li> <li>▪ Safety Precautions</li> <li>▪ Site and OIT Operations</li> <li>▪ Basic Troubleshooting and Maintenance</li> <li>▪ PLC Overview</li> <li>▪ O&amp;M Manual Review</li> </ul> </li> <li>▪ O&amp;M Manuals <ul style="list-style-type: none"> <li>▪ Qty. of Three (3): Hard Copies</li> <li>▪ Digital Copy</li> </ul> </li> </ul>

Item	Qty	Description
		<b>TOTAL (including applicable sales tax):</b>
		<b>\$427,400.00</b>

### Optional Adder: FCC License Coordination

Item	Qty	Description
5	1	<b>Professional Services:</b> ▪ FCC Radio Frequency Licensing Coordination for 150MHz Radios
		<b>\$1,500.00</b>

### Project Clarifications

- Unless otherwise indicated by the Scope of Work above, quote is to **furnish only** and does not include any trade labor, trade work, construction work, site improvement, contractor services, or any trade installation services. Any trade labor and/or related trade work shall be performed by others/contractor.
- Unless otherwise indicated by the Scope of Work above, the following is **not** included within this quotation:
  - Conduit, field wire, tubing, or basic trade installation materials (brackets, screws, bolts, j-box, stanchions, pull-box, etc.)
  - Instrumentation mounting components, brackets, stanchions, sunshields, etc.
  - Local control stations and/or field mounted disconnects.
  - Instrumentation, devices, components, or equipment not specifically identified in the above quotation.
  - Fiber optic patch panels, cable, splicing or terminations.
  - Networking infrastructure or architecture modifications to existing facilities.
  - Any 3<sup>rd</sup> party testing, harmonic testing/analysis, protective device coordination study, short-circuit analysis, or Arc-Flash Risk Assessment (AFRA) services.
  - Electrical interconnection diagrams for equipment not furnished by TESCO
  - ISA process control loop diagrams.
  - Signal loop diagrams for equipment not furnished by TESCO.

### Clauses, Terms and Conditions

- Quote is firm for 30 days unless otherwise stated.
- Intellectual Property and Confidentiality Notice: The scope of work and price quotation shall not be construed as a formal design or recommendations on design for the related project. All content contained within this quotation is the intellectual property under the proprietorship of Tesco Controls, Inc. and is subject to applicable copyright laws. Such intellectual property shall not be duplicated, replicated, copied, or shared without explicit written consent from Tesco Controls, Inc., as it contains confidential information and work product developed exclusively for use by Tesco Controls, Inc.
- Submittals: to be provided approximately **16-20** weeks after receipt of purchase order or written notice of intent; **however, generation of submittal(s) will be contingent on supply-chain availability and variability for material components which may impact material item selections affecting submittal lead-times, therefore lead-times are subject to change without notice.**
- Delivery: to be scheduled approximately **20-24** weeks minimum after submittal approval; **however, delivery schedule(s) will be contingent on supply-chain availability and variability for material components, therefore, lead-times are subject to change without notice.**
- **Lead-Time & Supply Chain Impacts: Due to the supply chain impacts imposed by the pandemic, all quoted lead-times are subject to change without notice.**
- Unless otherwise stated above, price does not include any sales tax, use tax, or applicable fees; please apply any taxes and/or fees as appropriate. Please note that all invoices will include sales tax where applicable.
- TESCO price is FOB factory, full freight allowed.



- TESCO warranties against defect in design, workmanship, and materials for a period of one year from date of installation; and does not exceed 18 months from the date of shipment from the factory.
- TESCO carries liability insurance, with full workman's compensation coverage.
- Terms are net 30 days on approved credit accounts.
- Interest will be applied to all past due invoices.
- All merchandise sold is subject to lien laws.
- Final retention to be paid within 10 days after the project notice of completion.

Please feel free to contact us at (916) 395-8800 to discuss any questions or comments you may have regarding this quotation.

Sincerely,

TESCO CONTROLS, INC.

A handwritten signature in black ink, appearing to read 'Caleb Ernst', with a stylized, flowing script.

Caleb Ernst  
Technical Sales Estimator  
cernst@tescocontrols.com

# MEMO

**TO: ENGINEERING AND OPERATIONS COMMITTEE**  
**FROM: GENERAL MANAGER**  
**SUBJECT: WZ VALVE REPLACEMENT AND RZ CONNECTION TO LOS TIMBRES –  
BUDGET INCREASE, REALLOCATION, AND EASEMENTS**  
**DATE: APRIL 7, 2022**

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## BACKGROUND

Projects were included in the FY2021-22 capital budget in the amount of \$75,000 to replace valves in the Wholesale Zone (WZ) and \$60,000 to install a pipeline to connect the Retail Zone (RZ) Stonehenge Community pipelines to the Los Timbres development.

The WZ Valve Replacement project will replace 4 valves, remove one abandoned valve, and install one air/vac. Staff is requesting a budget increase, in the amount of \$10,000, to the WZ Valve Replacement project #7102102, from WZ reserve funds, to cover increases in material costs and also provide a contingency for unforeseen conditions.

The RZ Connection to Los Timbres project will replace and upsize 110 linear feet of 4-inch pipeline to 8-inch and replace an existing 4" wharf head hydrant with a standard 6" hydrant in the Stonehenge community. An additional 106 linear feet of 8-inch pipeline, as shown on the attached Exhibit, will be added to the pipeline to connect the Stonehenge community to S. Los Mesquites Street eliminating a dead end at Stonehenge and providing a secondary feed to the Los Timbres development creating a looped system. Construction, materials, and engineering costs were significantly higher than expected. The construction cost is \$75,000, materials are \$40,000, and engineering, including survey, was \$21,000. Staff is requesting reallocation of unused funds in the amount of \$75,000 from RZ Account #7202103 Allowance for System Relocations / Pipeline Replacement to fund the construction and \$20,000 from RZ Account #7202111 Brae Glen Pressurized CIPP for contingency for unforeseen conditions. Staff is also in the process of establishing easements for the pipeline and is recommending acceptance by the Board.

## FINANCIAL IMPACT

Funds have been budgeted in WZ Account #7102102 in the amount of \$75,000 for Valve Replacement. Funds in the amount of \$10,000 would be transferred from WZ reserves to increase the budget in Account #7102102 to \$85,000.

Funds have been budgeted in RZ Account #7202227 in the amount of \$60,000 for the Connection to Los Timbres pipeline. Funds in the amounts of \$75,000 and \$20,000 would be reallocated from RZ Accounts #7202103 Allowance for System Relocations / Pipeline Replacement and #7202111 Brae Glen Pressurized CIPP respectively to increase the budget in Account #7202227 to \$155,000.

## **WZ VALVE REPLACEMENT AND RZ CONNECTION TO LOS TIMBRES – BUDGET INCREASE, REALLOCATION, AND EASEMENTS**

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### **RECOMMENDATION**

That the Committee recommend the Board; (i) approve the transfer of \$10,000 from WZ reserve funds to the FY2021-22 WZ Capital Improvement Budget Account #7102102 and amend the budget; (ii) approve the reallocation of \$75,000 from RZ Account #7202103 Allowance for System Relocations / Pipeline Replacement and \$20,000 from Account #7202111 Brae Glen Pressurized CIPP to Account #7202227 Connection to Los Timbres; and (iii) consent to the acceptance of the Easements, and delegate authority to the General Manager, or his designee, to execute a Certificate of Acceptance and record the easements.

### **ATTACHMENTS**

Stonehenge Water Line Improvements



EXHIBIT  
1

DATE: 02-28-22