ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
ADMINISTRATION FACILITY
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
DECEMBER 4, 2024 AT 7:00 AM

COMMITTEE MEMBERS
Michael Safranski, Committee Chair
Stephen Dopudja, Committee Member
Don Chadd, Committee Member Alternate

DISTRICT STAFF
Fernando Paludi, General Manager
Michael Perea, District Secretary
Lorrie Lausten, District Engineer
Gary Kessler, Water System Superintendent
Oscar Ulloa, Wastewater Superintendent
Jason Stroud, Maintenance Superintendent

AGENDA NOTE:
Trabuco Canyon Water District (District) will make this Engineering/Operational Committee Meeting available by telephone audio as follows:

Telephone Audio: *1 (669) 900-6833* ***Access Code:*** 973-7562-7682

*Persons desiring to monitor the Committee meeting agenda items may download the agenda and documents on the internet at **www.tcwd.ca.gov**. You may submit public comments by email to the Committee at **mperea@tcwd.ca.gov**. In order to be part of the record, emailed comments on meeting agenda items must be received by the District at the referenced e-mail address not later than 7:00 a.m. (PDT) on the day of the meeting.*

CALL MEETING TO ORDER

VISITOR PARTICIPATION
*Members of the public wishing to address the Committee regarding a particular item on the agenda are requested to submit public comments by email to the Committee at **mperea@tcwd.ca.gov**. The Committee Chair will call on the visitor following the Committee's discussion about the matter. Committees do not constitute a quorum of the Board of Directors and Committee Members cannot make decisions on matters. The Committee makes recommendations only to the Board of Directors. Members of the public will be given the opportunity to speak to the Committee prior to making a recommendation on the matter. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.*

ORAL COMMUNICATION
*Members of the public who wish to make comment on matters not appearing on the agenda are requested to submit oral communication by email to the Committee at **mperea@tcwd.ca.gov**. Under the requirements of State Law, Directors cannot take action on items not identified on the agenda and will not make decisions on such matters. The Board President may direct District Staff to follow up on issues as may be deemed appropriate. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.*

COMMITTEE MEMBER COMMENTS

REPORT FROM THE GENERAL MANAGER

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | DECEMBER 4, 2024

ENGINEERING MATTERS

PRESENTER(S): FERNANDO PALUDI, GENERAL MANAGER
MICHAEL PEREA, ASSISTANT GENERAL MANAGER
LORRIE LAUSTEN, DISTRICT ENGINEER

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:
Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar).
1. November 6, 2024 Committee Meeting

ITEM 2: DOVE RECYCLED WATER PUMP STATION IMPROVEMENTS DESIGN AWARD

RECOMMENDED ACTION:
Approve and recommend the Board of Directors award a professional services agreement for the Dove Recycled Pump Station Improvements for Engineering Design to JIG Consultants in the amount of $253,450, plus a 10% contingency of $25,345, for a not-to-exceed amount of $278,795.

ITEM 3: ROBINSON RANCH WASTEWATER TREATMENT PLANT EFFLUENT RESERVOIR OUTLET GATE SYSTEM REPAIR

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

ITEM 4: ROBINSON RANCH WASTEWATER TREATMENT PLANT BLOWER MODIFICATIONS PROJECT – SOUND STUDY RESULTS

RECOMMENDED ACTION:
Committee to receive project status updates at the time of the Committee Meeting.

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Golf Club SLS Improvement Project
2. Heritage SLS Improvement Project
3. Other Projects

RECOMMENDED ACTION:
Committee to receive project status updates at the time of the Committee Meeting.

OPERATIONAL MATTERS

PRESENTER(S): GARY KESSLER, WATER SYSTEM SUPERINTENDENT
OSCAR ULLOA, WASTEWATER OPERATIONS SUPERINTENDENT
JASON STROUD, MAINTENANCE DEPARTMENT SUPERINTENDENT

ITEM 6: WATER SYSTEM UPDATES

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

ITEM 7: WASTEWATER SYSTEM UPDATES

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

REGULATORY AND OTHER MATTERS

ITEM 9: OTHER MATTERS/REPORTS

RECOMMENDED ACTION:
Hear Other Matters/Reports that may have arisen after the posting of the agenda.

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 Trabuco Canyon Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the Trabuco Canyon Water District Administrative Facility, 32003 Dove Canyon Drive, Trabuco Canyon, California (District Administrative Facility) or will be posted online on the District's website located at www.tcwd.ca.gov. If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available online at www.tcwd.ca.gov at the same time as they are distributed to the Board Members, except that, if such writings are distributed immediately prior to or during the meeting, they will be posted online on the District's website located at www.tcwd.ca.gov.

COMPLIANCE WITH THE REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTION 54954.2
In compliance with California law and the Americans with Disabilities Act, if you need special disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 858-0277, at least 48 hours in advance of the scheduled Board meeting. Notification at least 48 hours prior to the meeting will assist the District in making reasonable arrangements to accommodate your request. The Board Meeting Room is wheelchair accessible.

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

ADMINISTRATIVE MATTERS
ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:
Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar):

1. *November 6, 2024 Committee Meeting*

CONTACTS (staff responsible): PALUDI/PEREA

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | NOVEMBER 6, 2024

DIRECTORS PRESENT
Mike Safranski, Committee Chair
Stephen Dopudja, Committee Member

STAFF PRESENT
Fernando Paludi, General Manager
Michael Perea, Assistant General Manager
Lorrie Lausten, District Engineer
Gary Kessler, Water Superintendent
Oscar Ulloa, Wastewater Superintendent
Jason Stroud, Maintenance Superintendent
Roseann Lejsek, Executive Assistant

STAFF ABSENT
None

PUBLIC PRESENT
None

CALL MEETING TO ORDER
Director Safranski called the November 6, 2024 Engineering/Operational Committee Meeting to order at 7:00 a.m.

VISITOR PARTICIPATION
No comments were received.

ORAL COMMUNICATION
No comments were received.

COMMITTEE MEMBER COMMENTS
None

REPORT FROM THE GENERAL MANAGER
None

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

Mr. Paludi presented the Engineering/Operational Committee Meeting Recap for Committee review in accordance with the agenda.

RECOMMENDATION: The Committee recommended forwarding this matter to the Board of Directors (Consent Calendar).

ITEM 2: MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE AND PUBLIC OUTREACH EFFORTS

Mr. Paludi presented this matter for Committee consideration. Mr. Perea reported that the District's Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) requires periodic review and was previously updated in 2019. Mr. Perea stated that there is a public outreach component requirement, and that the District is employing various public outreach methods, including social media and the District's website, to obtain community members' input to support the preparation of the plan. Discussion occurred regarding the District's extensive outreach versus input received from the public. Mr. Perea provided the Committee with the timeline for review and completion of the plan. Mr. Perea expressed his appreciation for Ms. Lausten and Mr. David Rodriguez's input for this plan update.

RECOMMENDATION: None – Informational item only.

ITEM 3: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. **Golf Club SLS Improvements Project Construction Report**
   Ms. Lausten provided an update on this matter, and she reported that this project is scheduled to be completed in the next two weeks. Ms. Lausten provided an overview of the project, and she reported that the project had one change order that did not affect the overall budget.

2. **Heritage SLS Pump and Header Replacement Project Construction Report**
   Ms. Lausten provided an update on this matter, and she reported that this project is scheduled to be completed in the next two weeks.

3. **Dove/Rob. Ranch Recycled Water Pump Station Improvements Project – RFP Issued**
   Ms. Lausten provided an update on this matter, and she reported that changes made to the RFP resulted in a better turnout at the pre-proposal meeting. Ms. Lausten stated that staff will be receiving proposals in the next few weeks.

4. **WWTP Effluent Reservoir Outlet Gate System Replacement Project - Update**
   Ms. Lausten provided an update on this matter, and she stated that the Myers Marine (contractor) is currently replacing approximately eight stem support parts. Ms. Lausten provided an overview of the process, and she stated that the contractor will be diving for five days.

5. **Supervisory Control and Data Acquisition (SCADA) Improvements Project - Update**
   Mr. Serpas provided a brief update on the timeframe for completion of this phase of the project.

6. **Other Projects**
   None

RECOMMENDATION: None – Informational item only.

ITEM 4: WATER SYSTEM UPDATES

Mr. Kessler reviewed the projects and repairs for the prior month, and he reported that Water Operations staff had completed the following tasks:

1. Disassembled and cleaned algae from filters 1 – 3 at Dimension Water Treatment Plant (DWTP).
2. Worked with contractor to repair leak and install new isolation valve on 16" Main Transmission Line (Bike Trail).
3. Replaced fire hydrant and pad in Rancho Cielo.

4. Recoated hydrostatic tank and piping at Topanga PS.

Mr. Kessler presented the Water System Summary for Committee review. Discussion occurred regarding the water quality issues from the Baker Water Treatment Plant, the challenges with utilizing this asset to meet the District's potable water demands, and the increase in cost by purchasing treated water.

RECOMMENDATION: None – Informational item only.

ITEM 5: WASTEWATER SYSTEM UPDATES

Mr. Ulloa reviewed the projects and repairs for the prior month, and he reported that Wastewater Operations staff had completed the following tasks:

1. Replaced a 2" recycled meter at the Wastewater Treatment Plant (WWTP).
2. Assisted in the replacement and startup of a 100HP VFD at Dove Recycle Pump Station.
3. De-commissioned bypass and put Golf Club Lift Station back in service.
4. De-commissioned bypass and put Heritage Lift Station back in service.
5. Repaired manhole lid on El Toro Bike Trail.

Mr. Ulloa presented the Recycled Water System Summary for Committee review, and he reported that the Reservoir was at 1252 feet, Dove Lake had 10 feet of freeboard, and Tick Creek pulled 6.9-acre feet. Discussion occurred regarding Reservoir supply and demand reporting data in the Recycled Water System Summary report.

RECOMMENDATION: None – Informational item only.

ITEM 6: MAINTENANCE DEPARTMENT UPDATES

Mr. Stroud reviewed the projects and repairs for the prior month, and he reported that Maintenance staff completed the following tasks:

Projects and Repairs

Maintenance staff performed and/or completed the following tasks and projects:

Water Operations

1. Finish repair work at Topanga BPS booster #1.

Wastewater Operations

1. Continuing to work with Pac-Hydro at Golf Club.
2. Continuing to work with Ferreira Cont. at Heritage LS.

District Fleet Upgrades & Other Projects

1. Oil change on truck #7.
2. AQMD inspection on emergency diesel gens.
3. Completed upgrades to service truck at Deaver Spring.
4. Finish weed abatement at Porter Ranch.
5. Took Richard's truck (#4) to Specialty Equipment for repair quote due to robbery.

Discussion occurred regarding security improvements at DWTP and WWTP.

RECOMMENDATION: None – Informational item only.

ITEM 7: OTHER MATTERS/REPORTS

Mr. Paludi commended Mr. Perea and Mr. Ulloa for the odor control measures being taken in the Dove Canyon community at Bell Canyon, and their responsiveness to the community's concerns. Mr. Perea stated that he will be meeting with customers on Golf Ridge to discuss operations and their concerns.

RECOMMENDATION: None

ADJOURNMENT

Director Safranski adjourned the November 6, 2024 Engineering/Operational Committee Meeting at 7:27 a.m.

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

ENGINEERING MATTERS
ITEM 2: DOVE RECYCLED WATER PUMP STATION IMPROVEMENTS DESIGN AWARD

The Dove and Robinson Ranch Recycled Water Pump Stations (DCRRPS) provide treated effluent from the Robinson Ranch Wastewater Treatment Plant Reclaimed Water Reservoir to the Dove Canyon, Robinson Ranch, and Trabuco Highlands communities. These areas are isolated pressure zones from each other. The Dove Pump Station is inside a brick-and-mortar building, while the Robinson Ranch Pump Station is adjacent to the building but located outside. Both pump stations are critical to the delivery of non-domestic water, and the planned upgrades to the stations are necessary to continue to provide efficient services to the District customers.

Improvements to the pump station are being implemented in two phases. In Fiscal Year (FY) 2019-20, Phase 1 improvements were made at the station including relocation of the Motor Control Center to the outside of the station, replacement of the exterior suction and discharge piping, installation of one pump and installation of VFD's. The design of Phase 2 improvements will occur in FY 2024-25, with construction scheduled for FY 2025-26 and FY 2026-27 which include the following components:

- Replacement of the header piping and all valves
- Replacement of the Filters
- Installation of 3-100 HP pumps on concrete pads
- Installation of a chemical metering pump
- Installation of a flow meter

The District solicited proposals from five (8) firms for Design Engineering Services and received proposals from the following firms:

Dove Recycled Water Pump Station Improvements-Design
Ardurra
JIG Consultants

Staff have reviewed the proposals and checked references and are recommending awarding the project to JIG Consultants.

FUNDING SOURCE:
Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET):
Updated total project budget estimate for Phase 2, including construction, is $1,400,000. The previous estimate of $1,000,000 has been revised to account for cost escalation since the estimate was first developed in 2022. Phase 1 improvements were completed in August 2020 for approximately $712,000.

ENVIRONMENTAL COMPLIANCE:
Notice of Exemption

RECOMMENDED ACTION:
Approve and recommend the Board of Directors award a professional services agreement for the Dove Recycled Pump Station Improvements for Engineering Design to JIG Consultants in the amount of $253,450, plus a 10% contingency of $25,345, for a not-to-exceed amount of $278,795.

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

EXHIBIT(S):

1. Proposal Evaluation Summary

CONTACTS (staff responsible): PALUDI/LAUSTEN

PROPOSAL EVALUATION

Dove Canyon Recycled Water Pump Station Improvements-Engineering Design

Category	Weight	JIG	Ardurra
Project Approach/Scope of Services Project Approach and Understanding of the Scope of Work	25%	**8**	**8**
Qualifications and Experience Team Expertise (Qualifications, Registrations, Licenses), including subconsultants	20%	**9**	**9**
Understanding of the Project Understanding/Firms Experience on Similar Projects,	20%	**9**	**8**
Avalibility of the Team Ability to Perform the Requested Services	10%	**9**	**8**
Project Cost/Hours	15%	**9**	**6**
Proposed Schedule and Ability to Meet Deadlines	10%	**9**	**9**
Total Weighted Score:	100%	**8.8**	**8.0**

***Subconsultants**	JIG	Ardurra
Electrical	$ 29,610.00	-
Structural	$ 3,000.00	-
Survey	-	$ 17,850.00
Sound Study	$ 5,200.00	$ 4,680.00
Total:	**$ 37,810.00**	**$ 22,530.00**

Labor *	JIG	Ardurra
Task 1- Project Management	92	195
Task 2 - Preliminary Design Phase	142	390
Task 3 - Final Construction Documents	710	821
Task 4 - Construction Bidding Assistance	64	103
Task 5 - Engineering Services During Construction	240	535
Task 6 - Additional Optional Services	-	-
Total:	**1248**	**2044**

Budget	JIG	Ardurra
Task 1- Project Management	$ 18,110.00	$ 50,277.00
Task 2 - Preliminary Design Phase	$ 34,700.00	$ 102,227.00
Task 3 - Final Construction Documents	$ 142,860.00	$ 166,330.00
Task 4 - Construction Bidding Assistance	$ 12,860.00	$ 21,750.00
Task 5 - Engineering Services During Construction	$ 44,920.00	$ 102,187.00
**Task 6 - Additional Optional Services	$ -	$ 14,672.00
Total:	**$ 253,450.00**	**$ 442,771.00**
$/Manhour (not including subs)	**$ 172.79**	**$ 205.60**

** Labor hours do not include subconsultants*

Subs: Ardurra= Guida(Survey),DKN(Acoustic); JIG=Gerry Green(Electrical), Krilan(Stuctural), DKN(Acoustic)

***Task 6 is not included in total. Ardurra=Inside building survey*

Notes: Sheet #'s, JIG=23, Ardurra=36

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

ENGINEERING MATTERS

ITEM 3: ROBINSON RANCH WASTEWATER TREATMENT PLANT EFFLUENT RESERVIOR OUTLET GATE SYSTEM REPAIR

The Robinson Ranch Wastewater Treatment Plant provides treated effluent to the Dove and Robinson Ranch Recycled Water Pump Stations (DCRRPS) via a 150 AF Reclaimed Water Reservoir. The Reclaimed Water Reservoirs' slide outlet gate system needed repairs with the replacement of the stem guides/bases that support the bronze operating stem which operates the outlet gate. Staff contacted Myers Marine to provide underwater diving, removal and installation of 8 (eight) stem guides, epoxy repair of the outlet gate, and installation of zinc anodes to prevent future corrosion of the system. The dive team spent a total of 9 days between the initial inspection and testing and then the final installation of the guides/bases and anodes. The work was successful, and the gate operates as designed. The Department of Dams has been notified of this repair and will be on site next month to test the gate.

FUNDING SOURCE:
Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET):
$199,000 Budgeted
$151,280 Expended

ENVIRONMENTAL COMPLIANCE:
Not Applicable

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

EXHIBIT(S):
1. Dive Report

CONTACTS (staff responsible): PALUDI/LAUSTEN

Myers Marine Division, LLC.

September 3-9, 2024

Trabuco Canyon Upper Dam Inspection and Slide Gate Functionality Test

On September 3rd, 4th, 5th, and 9th of 2024, Myers Marine Division LLC. performed an underwater inspection and slide gate actuation test on the Upper Trabuco Dam Reservoir. The following illustrations and photographs articulate observations made during these underwater operations.

The slide gate stem was initially seized by corroded support stanchions and had to be demolished utilizing underwater exothermic cutting technology. After the seized stanchions were demolished, the valve stem was supported by temporary means (jack-stands) so the valve stem could move freely. Once supported the valve stem was actuated to exercise the slide gate for functionality observations.

Exercising the slide gate to fully open and completely closed positions was accomplished successfully. The slide gate was fully closed, and a seal was achieved. Although a seal was achieved, the downstream discharge pipe showed residual water in low volume flowing. The valve was then opened. The grating was closed, and temporary support of the valve stem was left in place before any further repairs or replacements could be determined. The support remains in place.

The inspection and exercising of the slide gate assembly took a total of four days. This work included but was not limited to: underwater inspection, jetting for sediment removal, underwater exothermic cutting techniques, and hydraulic lifting operations. Photos and videos combined with measurements were utilized to conclude all operations.

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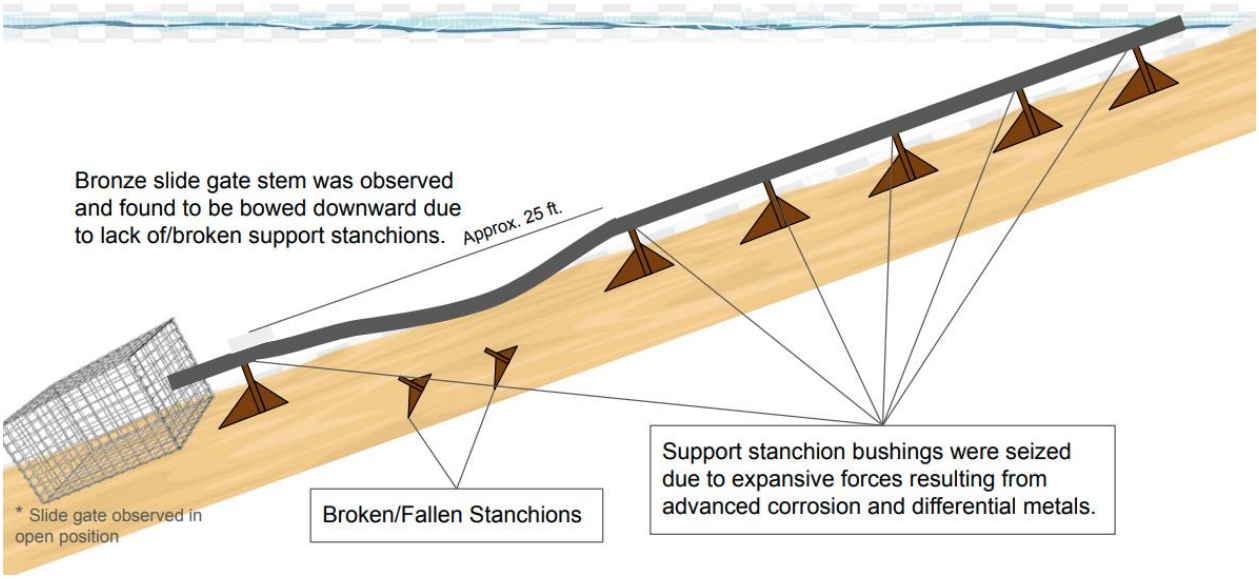
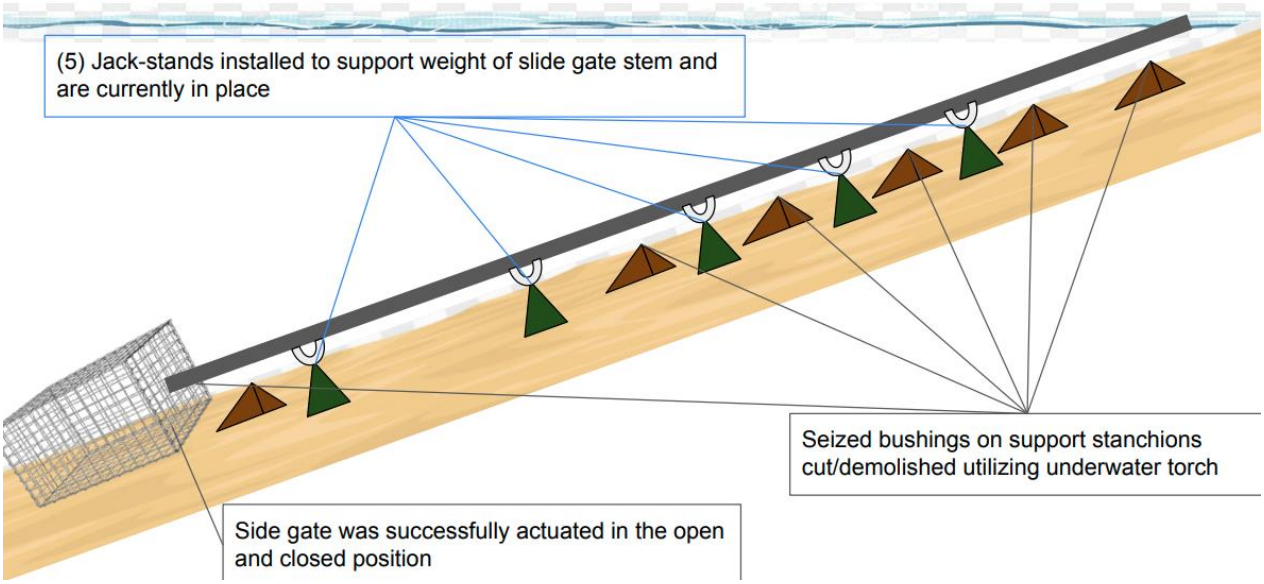
Myers Marine Division, LLC.

Initial Underwater Inspection/Structural Survey Observations



Underwater Construction/Dive Work Executed and Existing Support Added to Perform Slide Gate Functionality Test



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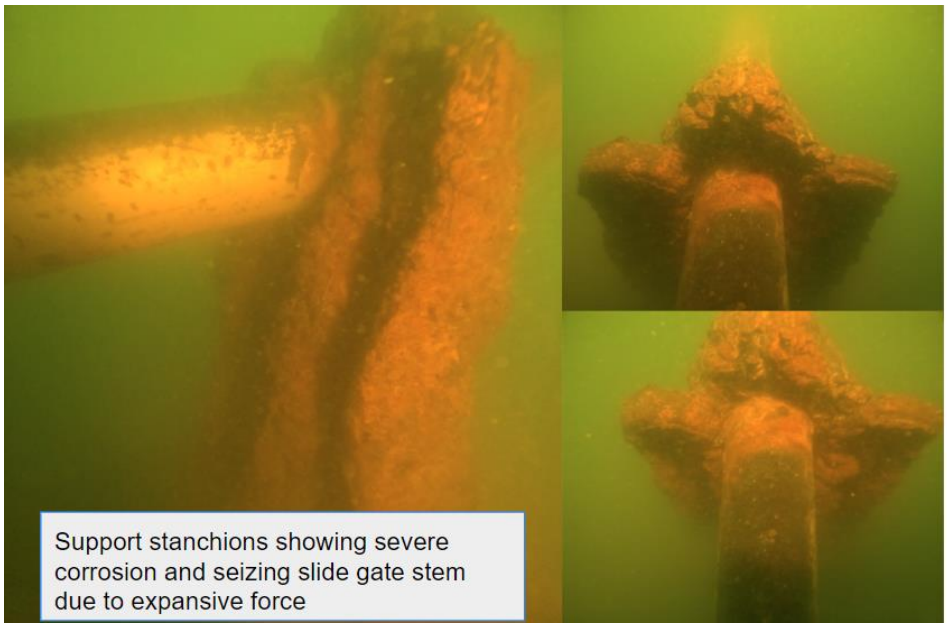

Support stanchions showing severe corrosion and seizing slide gate stem due to expansive force

Top of support stanchions and bushings were observed showing heavy scale rust and seizure due to expansive corrosion and differential metal contact with no cathodic protection.

- Corrosion is so severe that structures are almost unrecognizable
- It is recommended that all future underwater installations must include cathodic protection (zincs or forced current cathodic protection)
- Differential metals present were tested underwater utilizing magnetism. Findings were that the slide gate stem was constructed out of a non-magnetic material (most likely bronze or nybrol) and stanchions are constructed out of mild steel.

Base plates of mild steel stanchions showing complete structural disintegration due to lack of cathodic protection.

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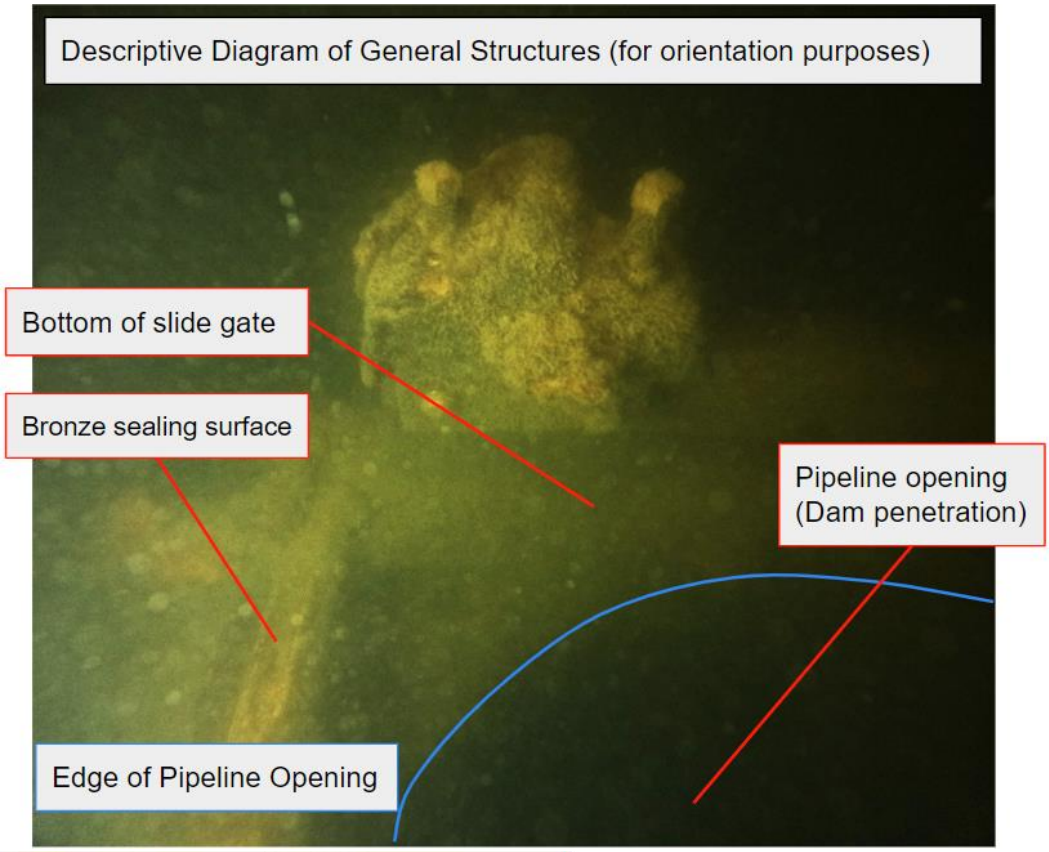

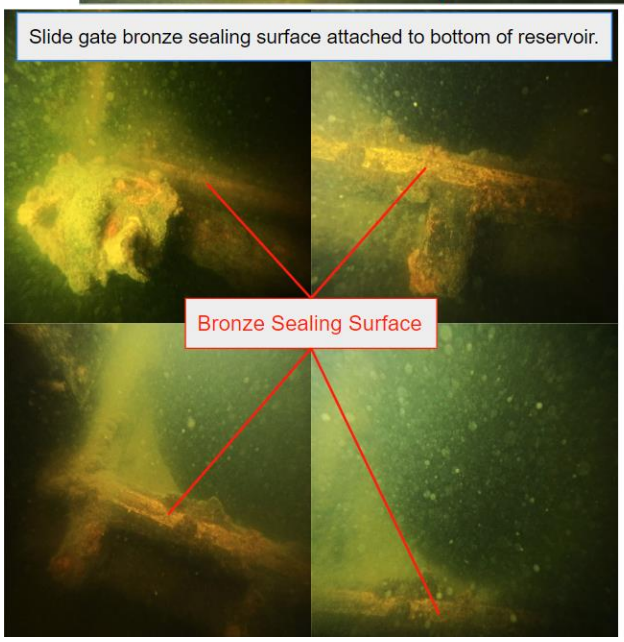

- Bronze sealing surface was observed showing severe corrosion on mild steel element of assembly. However, the bronze sealing surface appeared to be intact but showing light deterioration, wear due to age, and no cathodic protection.
- Without the presence of cathodic protection, all differential metals become highly susceptible to destructive corrosion. The observations are typical to any underwater infrastructure constructed without cathodic protection or a forced current cathodic protection system installed.
- Bronze sealing structures, however, may provide adequate seal if corrosion does not obstruct surfaces
- Further corrosion can be prevented using cathodic protection (sacrificial anodes)
- The lake opening was observed to be unobstructed
- Divers performed underwater jetting (sediment removal) to assure that the opening remained free of all obstructions.

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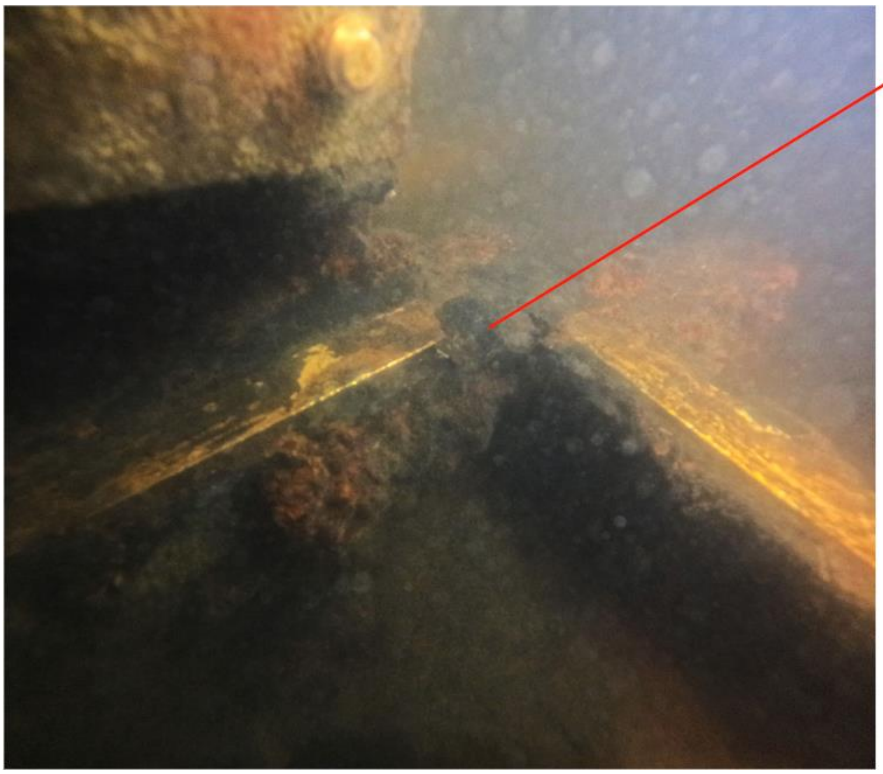
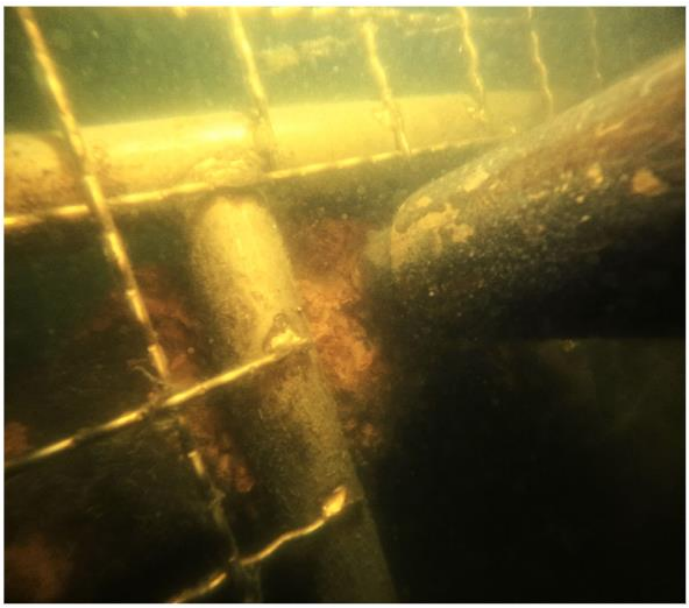


Bronze sealing surfaces show separation or material loss (possibly mild steel) underneath slide gate.

Gap is estimated to be between ¼ and ½ inch wide

- Installation of marine epoxy is recommended to fill this void and slow or stop residual leakage of slide gate



Bottom of valve stem at attachment point to top of slide gate. A stainless steel cage is in good condition and in place.

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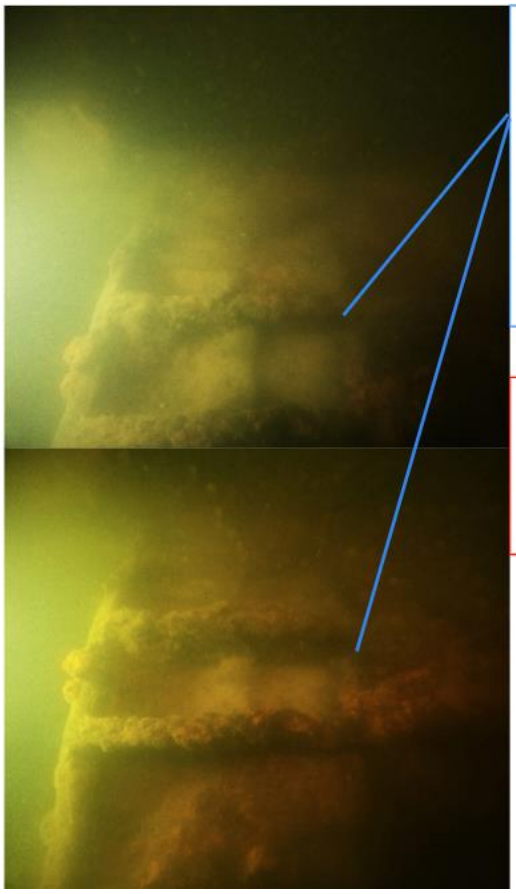
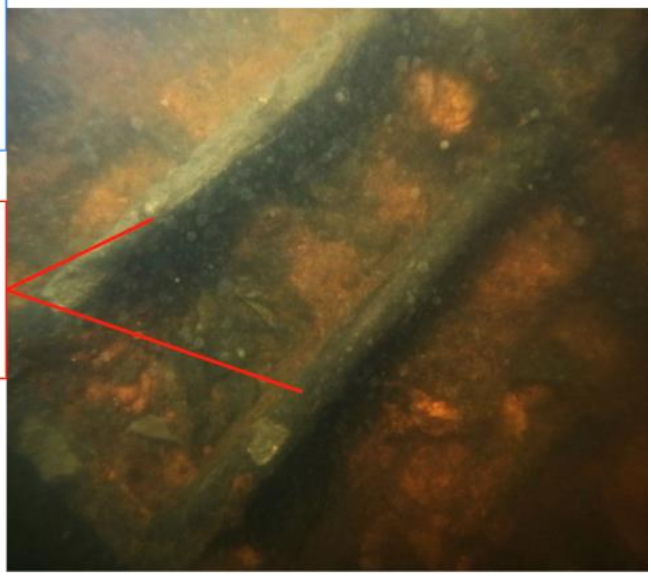


Back of slide gate showing severe corrosion but intact. “Square shapes” are sheer panelling utilized to strengthen structures.

* Observation made before any corrosion was removed

Scale rust and corrosion was removed to expose intact steel remaining on sheer panelling of slide gate



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Myers Marine Division, LLC.

On Monday September 9th, 2024, a fire erupted at Trabuco Canyon. Though the dive inspection was completed, an evacuation order was issued, concluding all dive operations.

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Myers Marine Division, LLC.

November 4-11, 2024

Trabuco Canyon Upper Dam Repair (Based on previous inspection)

- All temporary supports previously installed were removed and replaced with marine grade stainless steel support stanchions.
- All differential metal contact points were neutralized by placing Teflon shims between differential metal surfaces.
- Additionally, sacrificial anodes were installed on all components of the structure to prevent any further corrosion from damaging existing, and new, components.
- It is recommended that the sacrificial anodes installed be inspected and replaced annually. An inspection dive should be conducted within six months of initial inspection to gauge and verify the effectiveness and corrosion level of the zinc sacrificial anodes.
- Installation of these materials is an adequate and correct application, eliminating and preventing any future destructive corrosion from occurring.
- A total of (8) support stanchions were replaced
- A performance test was executed to insure the functionality of the repair. The repair was successful, and the slide gate is now fully operational

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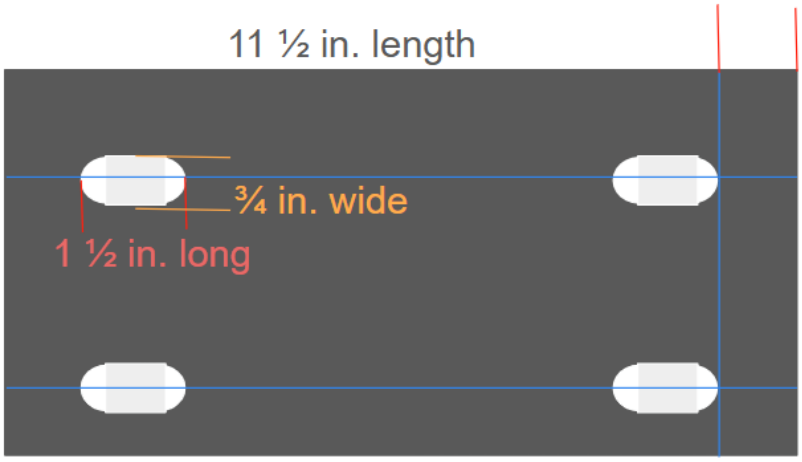
3D Model of Old Stanchion (Used as Reference)

x 8

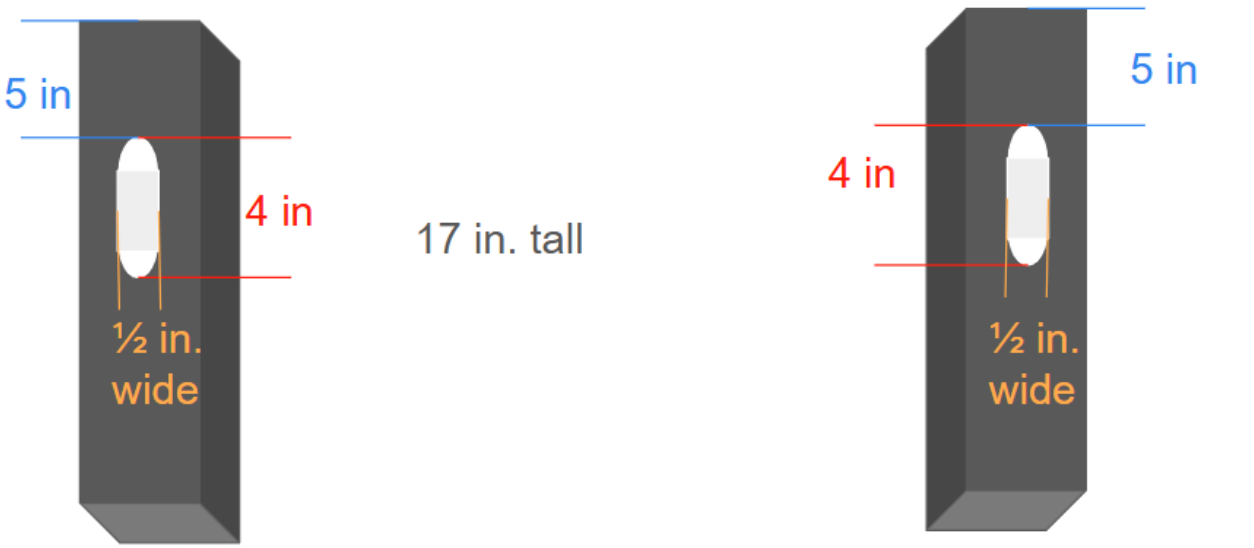


1663 Industrial Ave. #A, Norco, CA. 92860 (951) 403-5581 f:(951) 817-0527

myersmarinedivision@gmail.com

Myers Marine Division, LLC.

x 8 3 x 3 x ¼ in angle x 8



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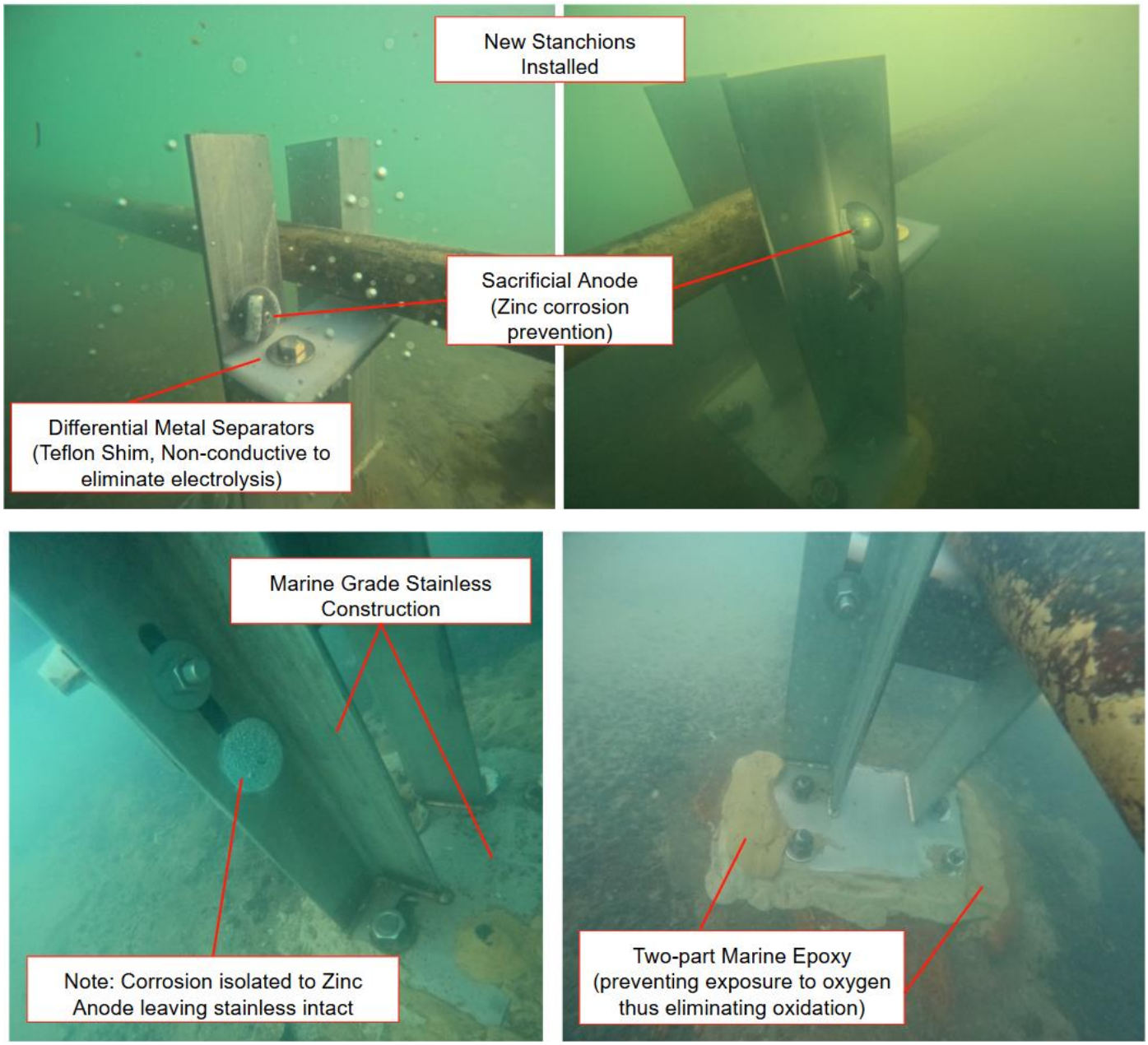

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TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

ENGINEERING MATTERS

ITEM 4: ROBINSON RANCH WASTEWATER TREATMENT PLANT BLOWER MODIFICATIONS PROJECT – SOUND STUDY RESULTS

The District's Robinson Ranch Wastewater Treatment Plant (RRWWTP) operates a blower-aeration system consisting of four (4) blower-motor configutrations. The existing Sutorbilt positive displacement blowers lack the needed capacity to effectively overcome pressure changes as a result of varying elevation within the sequencing batch reactors (SBR). Staff will be transitioning to multistage centrifugal air blowers, matching the existing Hoffman configuation, which will provide increased efficiency and redundancy. The four blowers are to be relocated outside of the existing Blower Building at the RRWWTP due to issues with heat from the blowers damaging the Motor Control Center (MCC), along with easier maintenance of the blowers. The remaining building space will be dedicated to an electrical room with the upgraded MCC currently in the design phase.

To mitigate any future noise complaints from residents living in direct sight of the treatments, Staff along with its Design Engineer, retained DHK Engineers, who specialize in performing noise studies at wastewater treatment plants and pump stations.

DHK Engineers performed two separate noise field surveys at the RRWWTP and outside of the plant at a couple of locations where the closest residential homes were only a couple of hundred yards away from the proposed location where the four blowers would be installed outdoors. The noise level for the existing residents was measured at 32 dB. DHK Engineers took the field noise data and input into their model to produce the five different scenarios listed below for various combinations of blowers being ON or OFF. This also included the design of sound walls to help reduce the noise levels with various combinations of blowers being ON or OFF. The results are below:

1	Scenario 1 – Two Blowers On w/ No Walls – 32 dB
2	Scenario 2 – Four Blowers On w/ No Walls – 35 dB
3	Scenario 3 – Two Blowers On w/ Sound Walls and Canopy – 23 dB
4	Scenario 4 – Four Blowers On with Sound Walls and Canopy – 26 dB
5	Scenario 4A – Four Blowers On with Sound Walls and Canopy with Open two 8 x 8 Doors – 30 dB

The results of the study are that, with all four blowers relocated outside, directly adjacent to the existing Blower Building, the best scenario would be Scenario 4; four blowers ON, two new sound walls, no doors, and a canopy which would produce a maximum of 26 dB. The walls are sound panels that have a STC21 rating (sound transmission coefficient reduction) which reduce the sound by 21 dB.

Staff recommends going with Scenario 4 to mitigate any potential future noise complaints from the relocation of four centrifugal blowers to outside adjunct to the existing Blower Building.

FUNDING SOURCE:
Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET):
$1,100,000 for Blower Design/Construction & MCC Design – FY 2024-25 CIP Budget
$945,000 for Blower Design/Construction & MCC Design – FY 2025-26 CIP Budget

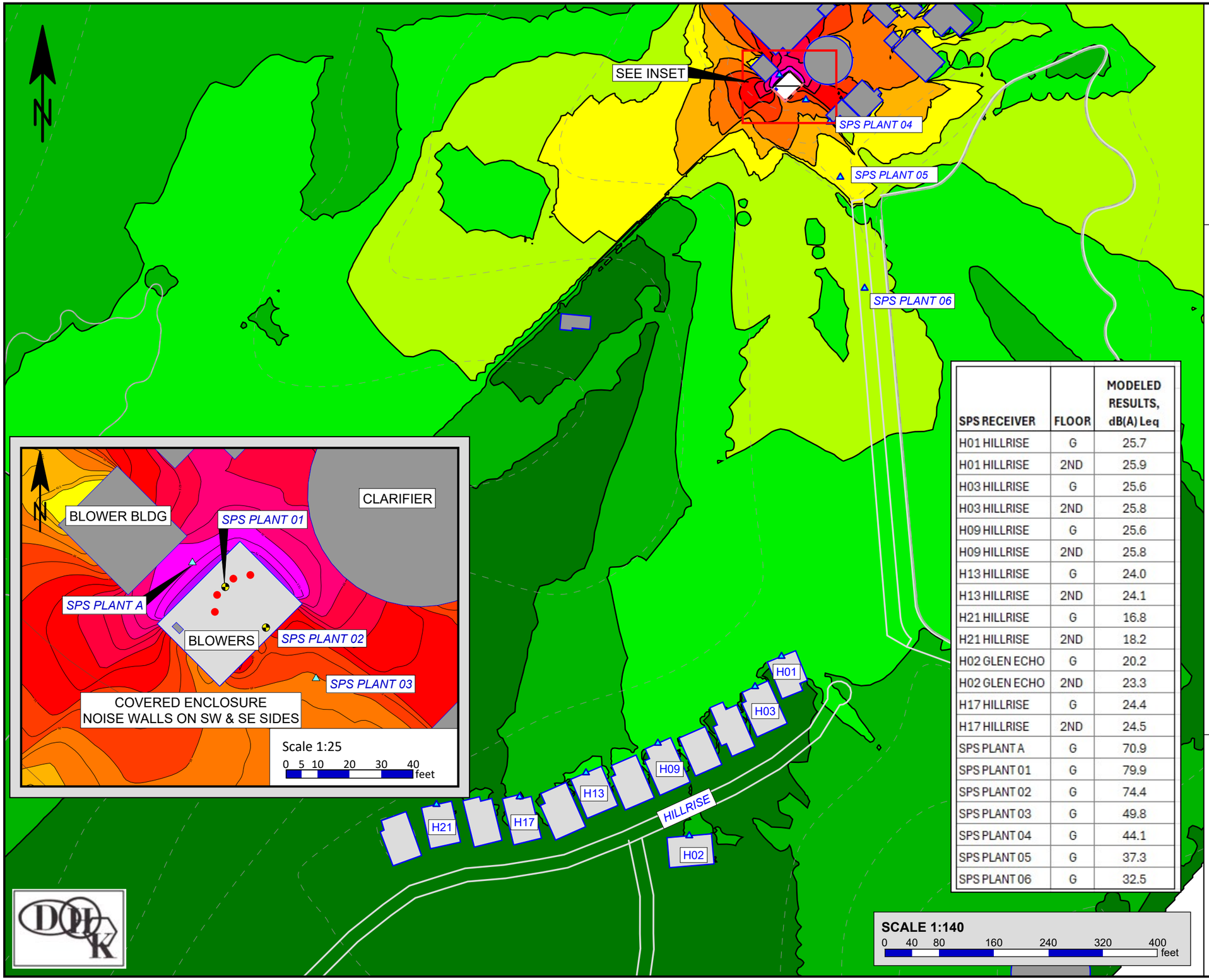
ENVIRONMENTAL COMPLIANCE:
Notice of Exemption

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

RECOMMENDED ACTION:
Committee to receive system status updates. No action required.

EXHIBIT(S):
1. Noise Isopleth Map

CONTACTS (staff responsible): PALUDI/LAUSTEN



SPS RECEIVER	FLOOR	MODELED RESULTS, dB(A) Leq
H01 HILLRISE	G	25.7
H01 HILLRISE	2ND	25.9
H03 HILLRISE	G	25.6
H03 HILLRISE	2ND	25.8
H09 HILLRISE	G	25.6
H09 HILLRISE	2ND	25.8
H13 HILLRISE	G	24.0
H13 HILLRISE	2ND	24.1
H21 HILLRISE	G	16.8
H21 HILLRISE	2ND	18.2
H02 GLEN ECHO	G	20.2
H02 GLEN ECHO	2ND	23.3
H17 HILLRISE	G	24.4
H17 HILLRISE	2ND	24.5
SPS PLANT A	G	70.9
SPS PLANT 01	G	79.9
SPS PLANT 02	G	74.4
SPS PLANT 03	G	49.8
SPS PLANT 04	G	44.1
SPS PLANT 05	G	37.3
SPS PLANT 06	G	32.5

LEGEND

- RESIDENTIAL RECEPTOR (WITH REPORT ID)
- STRUCTURE (NOT EVALUATED)
- FENCE OR WALL
- SPS RECEIVER (H## = RESIDENTIAL RECEPTOR)
- INDUSTRIAL NOISE POINT SOURCE
- ELEVATION CONTOUR
- COVERED SHADE STRUCTURE WITH NOISE WALLS

PREDICTED NOISE LEVEL, L_{eq} dB(A)

<= 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
80 - 85
> 85

NOTES:

NOISE SOURCES:
2x Blowers, 85dBA @ 3 FEET, VFD

NOISE MITIGATION:
Two ground-to-canopy panel-type noise walls on southeast & southwest sides:
Curtain S.T.O.P. BSC-25 w/2lb barrier, 2" fiberglass

Two STC 21 8'x8' rollup doors on southeast side

TRABUCO CANYON WATER DISTRICT

ROBINSON CANYON WWTP
BLOWER REPLACEMENT PROJECT

FIGURE 4
SCENARIO 4 NOISE ISOPLETH MAP
FOUR BLOWERS ON WITH NOISE WALLS

NOVEMBER 2024

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

ENGINEERING MATTERS

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Golf Club SLS Improvement Project
2. Heritage SLS Improvement Project
3. Other Projects

RECOMMENDED ACTION:

Committee to receive project status updates at the time of the Committee Meeting.

EXHIBIT(S):

1. Golf Club SLS Improvement Project Construction Report
2. Heritage SLS Improvement Project Construction Report

CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

Golf Club Sewer Lift Station Improvement Project
TCWD Project No. 2122-010

Construction Report
November 2024

I. GENERAL PROJECT INFORMATION

Contract	Golf Club Sewer Lift Station Improvement Project
Contractor	Pacific Hydrotech Corporation (PHC)
Contract Time	
Original Calendar Days:	200 Calendar Days from Notice to Proceed
Notice to Proceed:	January 29, 2024
Original Contract Completion Date:	August 16, 2024
Revised Completion Date due to Long Lead Material Deliveries	*December 13, 2024*
Weather-Related Delay Days:	5 Days
Contract Price	
Original Contract Amount:	$1,889,300.00
Approved Allowance Amount:	*$17,430.77.00*
Revised Contract Amount:	$1,889,300.00

II. CONSTRUCTION MANAGER SUMMARY

This report provides a summary of activities from October 28th through November 22nd, 2024, for the Golf Club Sewer Lift Station Project.

The Golf Club Lift Station continues to be operated by TCWD Operations, and Pacific Hydrotech Corporation (PHC) continued with civil improvements to the Lift Station particularly preparing subgrade, placing wood forms and reinforcement bars for the concrete slab area leading into the Lift Station. The concrete slab area also includes the driveway apron and the support for the new Rolling Gate. Eventually, PHC poured and finished these areas, while special material inspections were performed by GMU, and concrete samples were obtained and recorded for compressive strength testing.

PHC proceeded to perform layout of the new Bollards and their receivers around the new Bypass Wet Well. The Bollard receivers were hand excavated, then formed in preparation of the concrete pour to embed the receivers.

There was one day that impacted construction progress due to high (Santa Ana) winds, which brought significant dust, ash from the hills due to the Airport Fire Wildfire in October; and impacted visibility. As a result, PHC was granted a Rain Day towards their schedule.

PHC performed layout for the new Flow Meter, and excavation commenced along and to expose the existing 8-inch Force Main. The depth of the 8-inch Force Main was about 7 feet from the asphalt surface to the top of the pipeline. Depths of the excavation were at about 12 feet because of over-excavation and to accommodate the gravel rock layer and new concrete slab supporting the Flow Meter Vault. The excavation employed and was supported by box trenches and hydraulic speed shores with plywood sheets. The opening of the excavation pit was covered with trench plates before the end of the work day, and to allow access for TCWD Operations.

While the concrete slab of the Flow Meter Vault was being prepared, PHC assembled the Flow Meter Assembly in preparation for "cut-in" to the existing 8-inch Force Main. The "cut-in" would require an overnight shut-down of the Lift Station, drainage of residual sewage flow, and Tanker Pump Trucks to collect any existing sewage flow tributary to the Lift Station. Eventually, PHC performed the "cut-in" while all the contingencies were in place, removed an existing portion of the 8-inch Force Main, and replaced this section with the new Flow Meter Assembly.

The Flow Meter Vault was delivered and placed which housed and provided access to the new Flow Meter for future use and maintenance by TCWD Operations. At the same time, conduits and wiring were installed to accommodate the wiring from Flow Meter and terminate at the panels inside of the Lift Station by Hydrotech Electric and in preparation for a Start Up for the Flow Meter at a later date.

PHC continued to perform layout for replacement of the curb and gutter removed during the excavation of the Bypass Wet Well in March 2024 and Diversion Manhole in April 2024. Also, Techno Coatings started to place primer coat on the new mechanical piping in the Dry Pit and will be color painted.

III. CONSTRUCTION ACTIVITIES FOR THIS REPORTING PERIOD

The following work activities were performed during this reporting period:

- PHC continues to complete the civil improvements – grading, concrete paving, curb-and gutter.
- PHC formed and poured the new Bollard Receivers around the new Bypass Wet Well.
- PHC started excavation and installed shoring features to accommodate the installation of the new Flow Meter along the existing 8-inch Force Main.
- During a night-time shut down period of the Lift Station supported by TCWD Operations, PHC "cut-in" and installed the new Flow Meter Assembly.
- PHC continued to finish the Flow Meter Vault improvements, and Hydroelectric installed conduit and wiring for the Flow Meter.
- PHC started layout for the replacement of the curb and gutter affected by the excavation of the Bypass Wet Well and Diversion Manhole.
- Techno Coatings started placing primer coat on the new mechanical piping in the Dry Pit, and will continue to complete the coating with color paint.

IV. ANTICIPATED CONSTRUCTION ACTIVITIES – NEXT REPORTING PERIOD

The work activities anticipated in the next reporting period:

- PHC to complete improvements of the Flow Meter Vault.
- Hydrotech Electric and W.M Lyles to perform Start-Up of the Flow Meter.
- Techno Coatings to complete painting of the mechanical piping.
- Hemet Fencing Company to mobilize and start installation of the Fence Enclosure and Rolling Gate.
- PHC to backfill and remove shoring features for the Flow Meter Vault.
- PHC to complete and pour concrete for replacement of the curb-and-gutter and ribbon gutter, and new paved area around the Bypass Wet Well.
- PHC to grade up to base pave within the project area and where asphalt removals were performed.
- Collect Close-Out Documents – O&M Manuals and Warranty Certificates
- Project Completion is anticipated to be December 13, 2024.

V. CONTRACTOR SUBMITTALS

Through the end of the reporting period, the following submittals have been received:

	Lift Station
Prior Submittals	75
Submittals Received This Period	0
TOTAL SUBMITTALS	75

VI. CONTRACTOR REQUEST FOR INFORMATION (RFIs)

Through the end of the reporting period, the following RFIs have been received:

	Lift Station
Prior RFIs	11
RFIs Received This Period	0
TOTAL RFIs	11

VII. CHANGE ORDERS

Though no Change Order Requests were submitted by PHC, there were Owner-initiated changes made, and costs were used against the $75,000.00 Allowance Item. These Owner-initiated changes totaled to $17,430.77 and consisted of the following:

- Additional Concrete Areas – extend concrete improvements in driveway, apron area up to the new Roller Gate; and area around the new Bypass Wet Well, at a cost of $12,391.14.
- Remove and Replace Pump Motors – Owner-furnished pump motors to be removed and replaced in the existing Dry Well. Pump No. 2 pedestal required leveling and adjustment, perform concrete finish on both pedestals, and remove and restore electrical power, by electrical subcontractor, Hydrotech Electric, to both pump motors, at a cost of $5,039.63.

VIII. SCHEDULE

The Notice to Proceed (NTP) is based on January 29, 2024, with an immediate need to start and install the Surge Tank directed by TCWD. The Contract Duration is 200 Calendar Days, and this results in a Contract Completion on August 16, 2024.

It was discussed at the Pre-Construction Meeting that because of the immediate need to start the Surge Tank, the sum of the materials being procured and delivered for the Temporary Bypass System and stainless steel, Air Release Valves, will arrive at a later date, and it is anticipated that the Contract Completion will be extended.

As such, an updated Progress Schedule prepared by PHC reflects a Contract Completion of December 13, 2024. This will result in an anticipated non-compensable, time extension under a separate Change Order to be issued to Pacific Hydrotech Corporation.

IX. PHOTOS

Construction photos documenting PHC's activities and progress during this reporting period are provided in Appendix A.

APPENDIX A

Construction Photos

Pour & Finish Driveway Apron & Roller Gate Track

Concrete Curing for Driveway Apron & Roller Gate Track

Excavating Bollard Receivers Around Bypass Wet Well

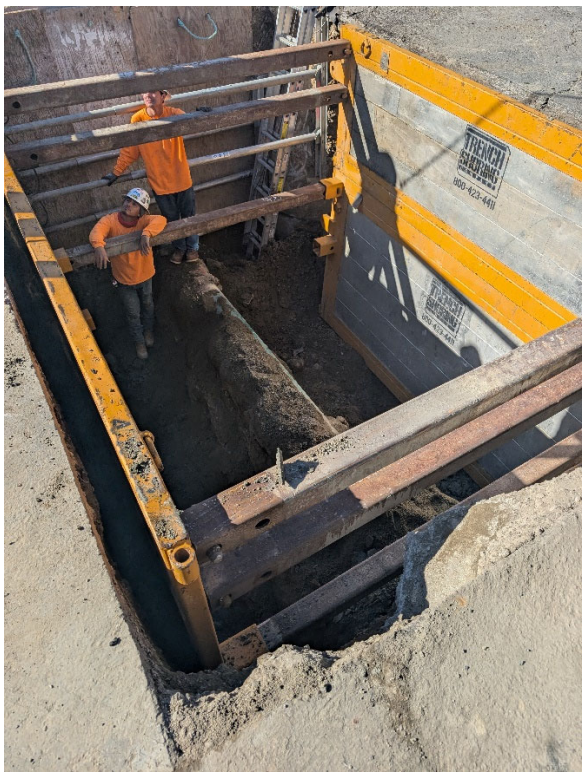
Formed and Poured Concrete for Bollard Receivers Around Bypass Wet Well

Started Excavation of Flow Meter Vault

Exposed Epoxy Coated Ductile Iron Pipe of Existing 8-inch Force Main

Flow Meter Assembly

Box Shoring & Hydraulic Speed Shore Delivery Along with Additional Trench Plates

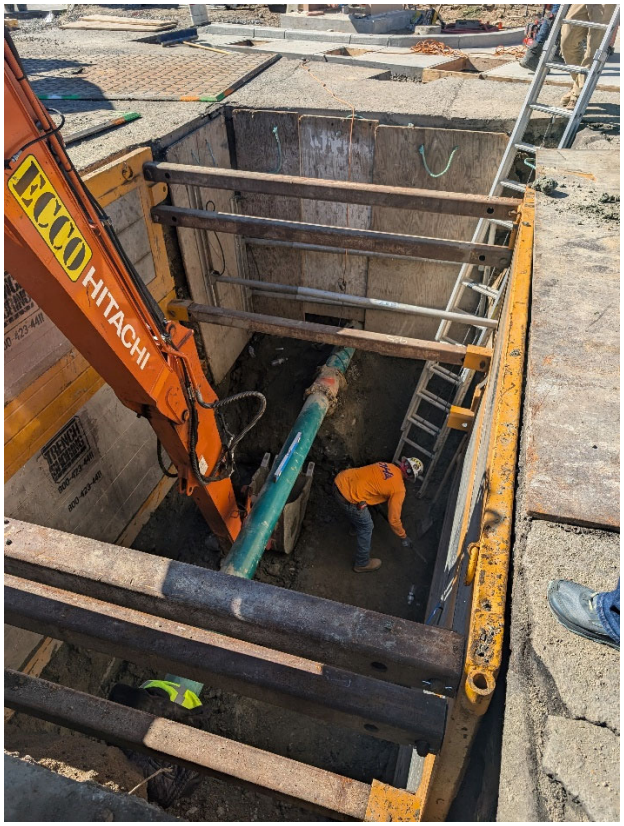


Box Shoring In-Place, and Exposed Existing 8-inch Force Main

Box Shoring In-Place, and Exposed Existing 8-inch Force Main

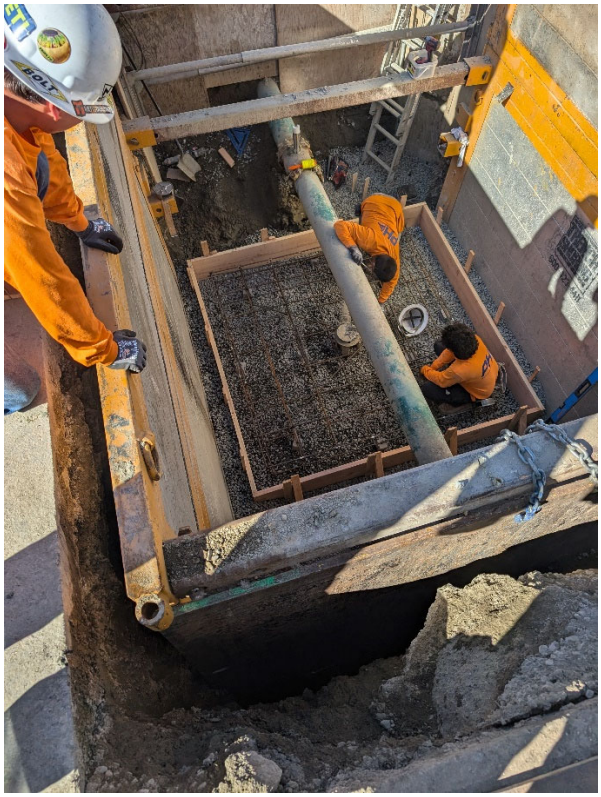
Trench Plates In-Place After Each Work Day

Continue Flow Meter Vault Excavation

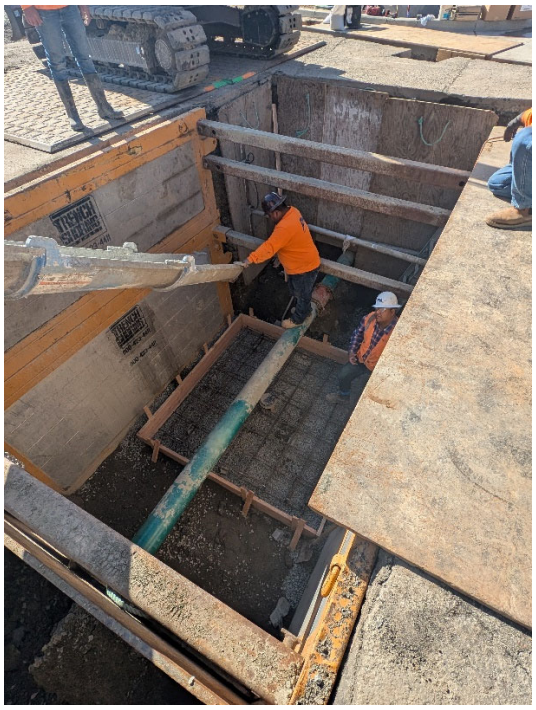


Continue Flow Meter Vault Excavation

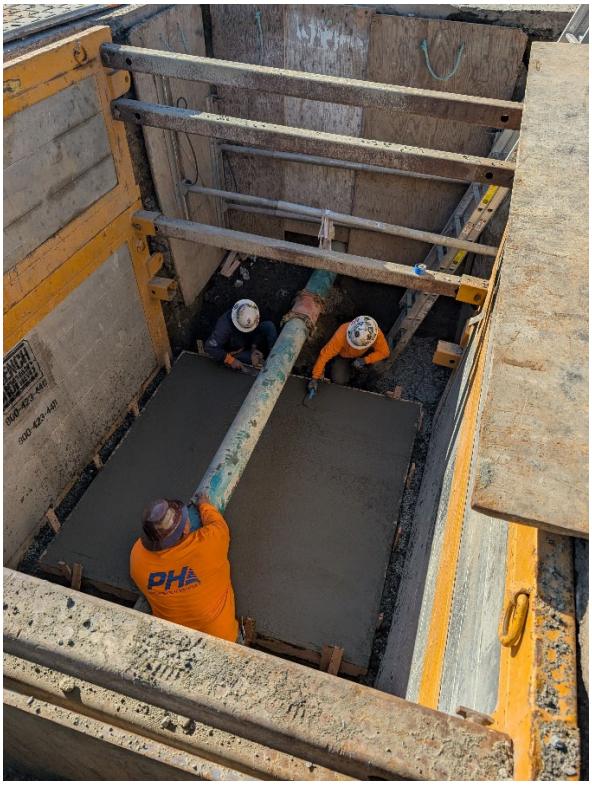
Penetrate Existing Sewer Manhole for Drain Under Flow Meter Vault



Placing Forms and Rebar for Concrete Base of Flow Meter Vault; Along with Extending Drainage Pipe

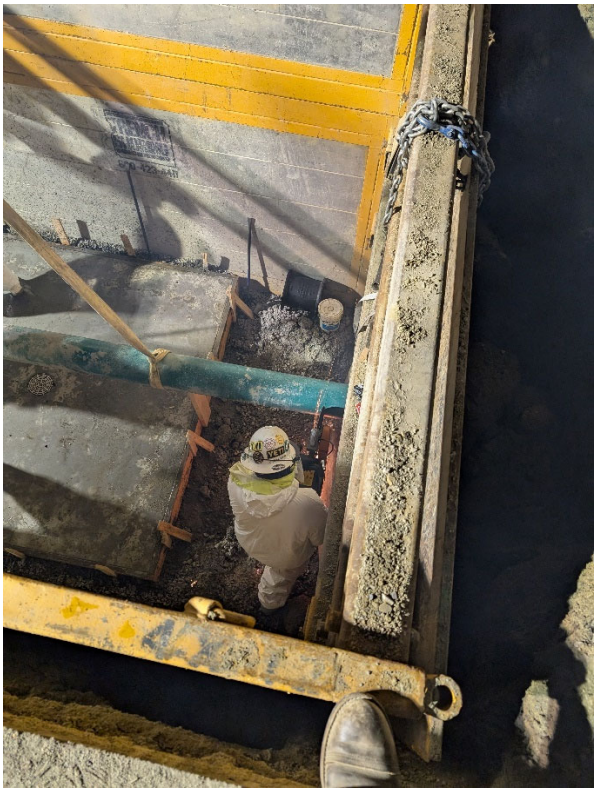


Pour Concrete for Concrete Base of Flow Meter Vault

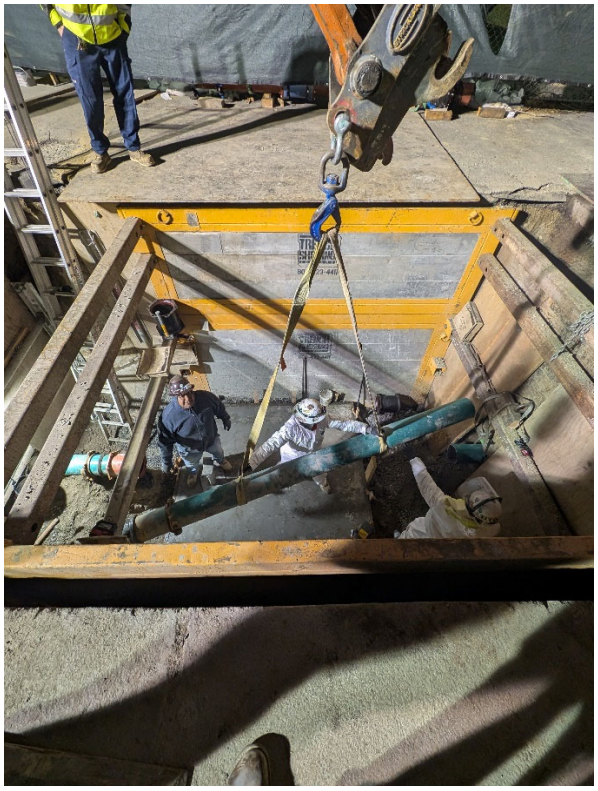


Pour and Finish Concrete Base for Flow Meter Vault

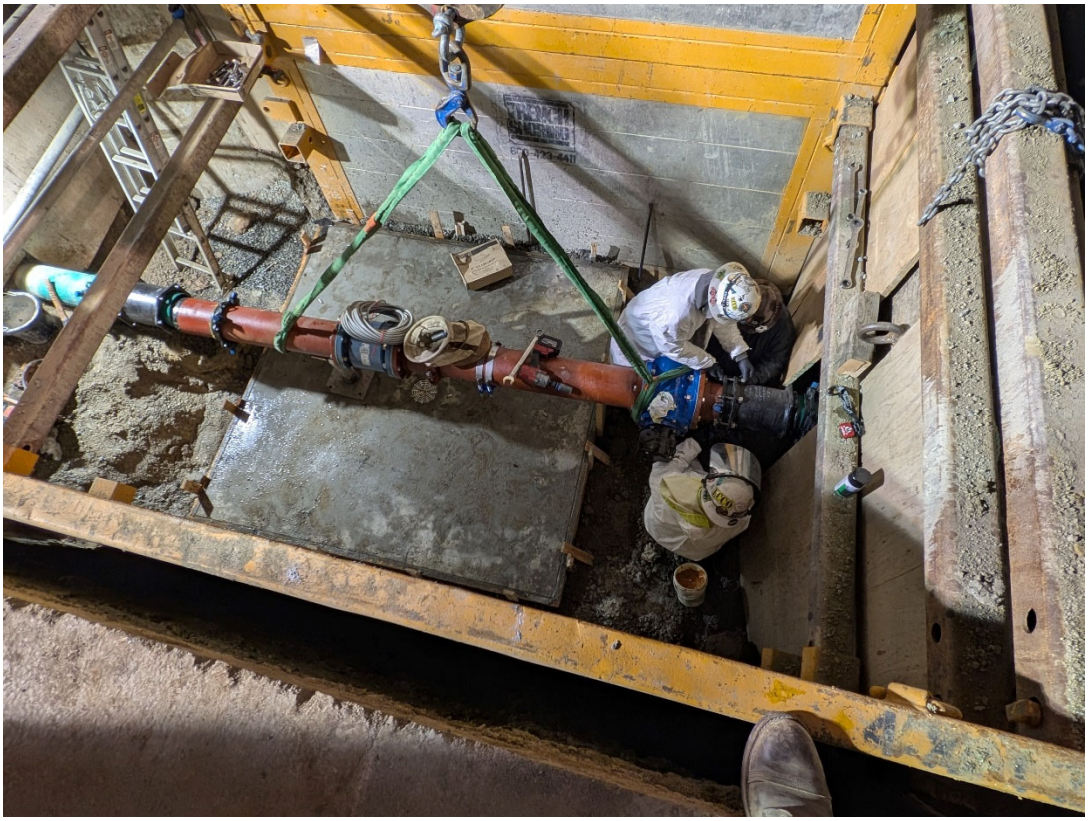
United Pumping Tanker Pumper Trucks In-Place to Collect Sewage Flow During Lift Station Shut Down



Force Main Drained, and "Cut-In" of 8-inch Force Main



Removal of Section of 8-inch Force Main



Placement and Connection of New Flow Meter Assembly

Delivery of Flow Meter Vault

Installation of Flow Meter Vault

Installation of Flow Meter Vault

Inside of Flow Meter Vault

Flow Meter Conduits

Mechanical Piping Coating with Primer

Heritage Sewer Lift Station
Dry Pit Improvements Project
TCWD Project No. 2224-104

Construction Report
November 2024

I. GENERAL PROJECT INFORMATION

Contract	Heritage Sewer Lift Station Dry Pit Improvements Project
Contractor	Ferreira Construction (FERREIRA)
Contract Time	
Original Calendar Days:	45 Calendar Days from Notice to Proceed
Notice to Proceed:	October 16, 2024
Original Contract Completion Date:	November 30, 2024
Weather-Related Delay Days:	0
Contract Price	
Original Contract Amount:	$173,201.00
Approved Change Order Amount:	$0.00
Revised Contract Amount:	$173,201.00

II. CONSTRUCTION MANAGER SUMMARY

This report provides a summary of activities from October 16th, 2024, for the Heritage Sewer Lift Station Dry Pit Improvements Project.

Ferreira Construction (FERREIRA) continued work while the scaffolding and mechanical piping materials were set-up and moved into the Dry Pit. FERREIRA installed and completed the Discharge Manifold Piping.

FERREIRA continued to backfill and compact the subgrade in preparation the Tee Assembly Trench to receive the asphalt mix to be placed and matched at existing grade. In addition, the pre-existing Air-Vac Vault that was backfilled up to be base pave level received asphalt mix.

FERREIRA installed new conduit and wiring terminating at the existing motor control center panel and led to Pump No. 1. It is expected that TCWD Operations will be delivering and installing the motor to Pump No. 1, at a later date.

A new Pipe Stand configuration is in the process of being fabricated, and this will be installed at the Reducing Bend of Pump No. 1.

At the moment, Anchor Bolt design for Pump No. 1 is pending, and awaiting formal Shop Drawing from the manufacturer, Cornell Pump, based on the orientation of the Suction Discharge of the Pump.

III. CONSTRUCTION ACTIVITIES FOR THIS REPORTING PERIOD

The following work activities were performed during this reporting period:

- FERREIRA completed installation of the Discharge Manifold piping in the Dry Pit.
- FERREIRA installed new conduit and prepared wiring for Pump No. 1.
- FERREIRA base- and asphalt-paved the new Tee Assembly Trench and the pre-existing Air Vac Vault.
- A new Pipe Stand configuration is being fabricated and to be delivered for installation at the Reducing Bend at Pump No. 1.
- The Anchor Bolt design is being prepared under a new Shop Drawing by the manufacturer based on the orientation of the Suction Discharge of Pump No. 1.

IV. ANTICIPATED CONSTRUCTION ACTIVITIES – NEXT REPORTING PERIOD

The work activities anticipated in the next reporting period:

- Under an accepted Anchor Bolt design and structural analysis, FERREIRA will install and secure Pump No. 1.
- TCWD Operations to deliver and install the motor for Pump No. 1.
- FERREIRA will complete the electrical connections and termination of Pump No. 1 motor and into the Motor Control Center.
- Start-Up and perform Demonstration Testing of Pump No. 1 will commence and TCWD Operations to observe and monitor towards acceptance.
- Paint and coat Discharge Manifold and associated mechanical piping.
- Collect Close-Out Documents – O&M Manuals and Warranty Certificates
- Project Completion is anticipated to be mid-December.

V. CONTRACTOR SUBMITTALS

Through the end of the reporting period, the following submittals have been received:

	Lift Station
Prior Submittals	18
Submittals Received This Period	1
TOTAL SUBMITTALS	19

VI. CONTRACTOR REQUEST FOR INFORMATION (RFIs)

Through the end of the reporting period, the following RFIs have been received:

	Lift Station
Prior RFIs	2
RFIs Received This Period	1
TOTAL RFIs	3

VII. CHANGE ORDERS

No Change Order Requests were submitted by FERREIRA.

VIII. SCHEDULE

The last Look Ahead Schedule indicates a completion of November 8, 2024.

IX. PHOTOS

Construction photos documenting FERREIRA's activities and progress during this reporting period are provided in Appendix A.

APPENDIX A

Construction Photos

Discharge Manifold Installation and On Pump No. 1

Discharge Manifold Installation

Discharge Manifold Installation

Awaiting Pump No. 1 Install by TCWD Operations

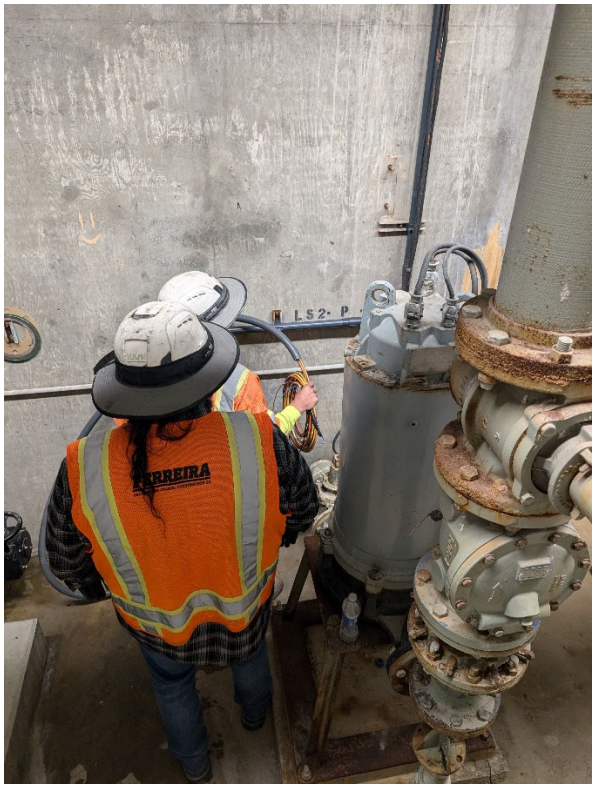
Base Pave Tee Assembly Trench

Installed Discharge Manifold Support

Asphalt Paved Tee Assembly Trench & Air Vac Vault

Place Wiring at Motor Control Center

Conduits Installed for Wiring between Pump No. 1 and Motor Control Center



Conduits and Wiring from Upper Level of Dry Pit and Extending into Lower Level of Dry Pit for Pump No. 1

Measurement for New Pipe Support Configuration

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

OPERATIONAL MATTERS
ITEM 6: WATER SYSTEM UPDATES

The following is a brief report of the water system through **November 2024**.

Projects and Repairs

Water Operations staff performed and/or completed the following tasks and projects:

1. Responded to and worked with contractor to repair 10" main break on Live Oak Canyon Road.
2. Reassembled filters 1 – 3 at Dimension Water Treatment Plant (DWTP) in an effort to get the plant back in service.
3. Responded again to major line break on 16" main transmission line leaving DWTP.

Monthly Water System Operations Summary

The Monthly Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

1. Monthly Water System Operations Summary

CONTACTS (staff responsible): PEREA/KESSLER

TRABUCO CANYON WATER DISTRICT

MONTHLY WATER SYSTEM OPERATIONS SUMMARY - 2024

SYSTEM PRODUCTION/SUPPLIES	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	*TOTAL*
Number of Days	31	28	31	30	31	30	31	31	30	31	30	31	*365*
Dimension WTP	8%	17%	25%	33%	42%	50%	58%	67%	75%	83%	92%	100%	
SAC Pipeline Meter	0.0	61.3	52.5	0.0	0.0	0.0	0.0	51.7	0.0	0.0			165.5
Backwash, AF	0.0	2.2	1.6	0.0	0.0	0.0	1.2	2.4	0.0	0.0			7.4
Flushwater, AF	0.0	3.7	1.8	0.0	0.0	0.0	1.9	1.8	0.0	0.0			9.2
DWTP Effluent (1)	0.0	65.0	49.3	0.0	0.0	0.0	26.9	52.0	0.0	0.0			193.2
Groundwater, AF													
Trabuco Creek GWTF	0.0	0.0	32.6	98.1	115.2	111.7	91.2	0.0	0.0	0.0			448.8
U.S. Well AF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
Total Groundwater (2)	0.0	0.0	32.6	98.1	115.2	111.7	91.2	0.0	0.0	0.0			448.8
Water Purchases, AF													
SMWD Treated Interconnection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	1.0	1.3			13.3
IRWD Treated Interconnections	96.1	17.0	9.6	0.0	34.2	71.2	92.3	159.0	207.1	178.7			865.2
IRWD Irvine Lake	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
Total Purchases (3)	96.1	17.0	9.6	0.0	34.2	71.2	92.3	170.0	208.1	180.0			878.5
Total Supply													
Total Supply AF (1,2,3)	**96.1**	**82.0**	**91.5**	**98.1**	**149.4**	**182.9**	**210.4**	**222.0**	**208.1**	**180.0**			1,520.5
% Year - Peak Prod. - 2,449 AF (2018)	4%	7%	11%	15%	21%	29%	37%	46%	55%	62%			62%
AF/Day	3.1	2.8	3.0	3.3	4.8	6.1	6.8	7.2	6.9	5.8			5.0
CFS/Day, Avg.	1.5	1.4	1.5	1.6	2.4	3.0	3.4	3.6	3.5	2.9			2.5
Reservoir Storage													
Monthly Average, MG	9.1	9.1	9.0	9.0	9.1	9.0	9.0	9.1	9.1	9.1			9.1
Monthly Average, AF	27.9	27.9	27.0	27.0	27.9	27.0	27.0	27.9	27.9	27.9			27.5
Days of Storage	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0			4.0
SYSTEM DEMANDS													
District Operations, AF (1)													
Dimension WTP	0.00	0.00	0.12	0.00	0.00	0.00	1.90	1.91	0.00	0.01			3.94
Robinson Ranch WWTP	0.004	0.004	0.004	0.004	0.004	0.004	0.020	0.020	0.020	0.020			0.104
Supplemental Domestic to RW Res.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.00
Subtotal	0.004	0.004	0.124	0.004	0.004	0.004	1.920	1.930	0.020	0.030			4.04
System Losses, AF (2)													
Flushing	0.00	3.00	3.00	2.80	3.00	3.00	1.50	1.50	3.50	3.0			24.30
Sewer Cleaning	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02			0.20
Line Breaks	0.00	0.00	0.23	0.00	0.27	0.02	0.01	1.00	1.50	0.0			3.03
Subtotal	0.02	3.02	3.25	2.82	3.29	3.04	1.53	2.52	5.02	3.02			27.53
Zone Demands, AF (3)													
Topanga Canyon	Inop.	Inop.	Inop.	Inop.	Inop.	Inop.	Inop.	0.4	3.1	1.2			4.72
Falcon Estates	0.13	0.1	0.1	0.0	0.1	0.8	0.9	0.6	0.9	0.9			4.56
Rose PRV/The Oaks	1.5	2.5	1.4	1.04	1.9	3.4	3.0	5.0	2.1	1.5			23.35
Canyon Creek	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.3			2.46
Rose Pump Station	0.5	1.5	0.4	0.8	0.7	0.3	0.2	0.8	1.6	0.8			7.64
Robinson Ranch	21.1	12.4	6.1	19.2	39.2	41.9	56.9	60.6	55.6	51.7			364.66
Dove Canyon	45.2	37.5	36.1	43.3	63.5	77.7	84.7	91.2	86.4	76.2			641.85
Subtotal	68.6	54.1	44.3	64.6	105.6	124.4	146.0	159.4	150.1	132.7			1,049.64
Total System Demand (1,2,3)	**68.6**	**57.1**	**47.7**	**67.4**	**108.9**	**127.4**	**149.5**	**163.8**	**155.1**	**135.7**			1,081.21

TRABUCO CANYON WATER DISTRICT

MONTHLY WATER SYSTEM OPERATIONS SUMMARY - 2024

System Demands													
AF/Day	3.1	2.8	3.0	3.3	4.8	6.1	6.8	7.2	6.9	5.8			4.9
Daily Average, CFS	1.5	1.4	1.5	1.6	2.4	3.0	3.4	3.6	3.5	2.9			2.4
Other Water Deliveries/Purchases													
Ridgeline (DWTP Delivery)	0.0	51.5	43.4	0.0	0.0	0.0	26.9	48.0	0.0	0.0			169.8
El Toro (Interconnection Purchase)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
Baker WTP (CSC Delivery)	89.1	89.7	106.2	106.3	115.6	119.4	104.9	90.6	85.8	89.7			997.3
Portola Hills (Wholesale Purchase)	8.5	7.5	7.0	7.2	7.5	11.0	11.0	13.0	14.4	11.5			98.6
Skyridge (Wholesale Purchase)	1.7	1.5	1.5	1.5	1.6	2.0	1.9	2.3	2.6	2.1			18.7

** Usage estimated* *** Excludes Operational use, losses, and supplement to Recycled Water Reservoir (RW)*

TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | DECEMBER 4, 2024

OPERATIONAL MATTERS
ITEM 7: WASTEWATER SYSTEM UPDATES

The following is a brief report of the wastewater system through **November 2024.**

Projects and Repairs

Wastewater Operations staff performed and/or completed the following tasks and projects:

1. Repaired a 3" air vent for WWTP Reservoir valve
2. Assisted divers in the repairs and operation of the sluice gate at the WWTP Reservoir
3. Made repairs and cleaning of polymer pump for the belt press at the WWTP
4. Bypassed Golf Club Lift Station and assisted with the installation of a flowmeter assembly on the force main

Sewer System Management Plan (SSMP) Report

The purpose of the program is to communicate on a regular basis with the public on the development, implementation, and performance of TCWD's SSMP. Status updates on the work and type of work performed on the sewer system will be provided, including sewer line and manhole cleaning, system repairs, lift station cleaning, and updates from satellite facilities:

Sewer System Management Plan (SSMP) Monthly Update	
Total Sewer Line, Feet*	212,045
Total Sewer Line Cleaned (Ft) – Month	**57,000**
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	199,817
Cleaning Cycle Period (Mos.) [Start date: 1/1/24]	11
Total Sewer Line Cleaned, %	**94%**
The Oaks at Trabuco – Pumping Frequency for the Month	14
O'Neill Park Sewer System Status	Ok
O'Neill Park Sewer System Repairs	None
SSMP Quarterly Report – *Next Quarterly Report*	3Q 2024
SSMP Program Audit – *Next Audit Report***	February 2025

**This amount includes the OC Parks-owned O'Neill Park sewer system the District is contracted to clean.*
***Periodic internal audits shall be conducted, at a minimum every two years, with reports kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and TCWD's compliance with the mandatory elements of TCWD's SSMP:*

Monthly Recycled Water System Operations Summary

The Monthly Recycled Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

1. Monthly Recycled Water System Operations Summary

CONTACTS (staff responsible): PEREA/ULLOA

TRABUCO CANYON WATER DISTRICT | RECYCLED WATER SYSTEM SUMMARY - 2024

RECYCLED WATER SUPPLY	MAX	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	39.4	40.0	42.4	42.1	41.7	39.1	39.1	40.3	36.6	35.6			396.4	517.2
Reclaimed Reservoir Level, FT	1274.5	1,272.8	1,273.0	1,273.5	1,273.5	1,271.0	1,266.0	1,250.5	1,247.0	1,257.2	1,252.0			-	-
Reclaimed Reservoir Free Board, FT	25.5	1.7	1.5	1.0	1.0	3.5	8.5	24.0	27.5	17.3	22.5			-	-
Reclaimed Reservoir Storage, AF	145.5	134.3	135.7	137.5	137.5	126.8	96.4	37.1	28.6	58.8	41.1			-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	5.2

RECYCLED WATER SYSTEM DEMAND															
NON DOMESTIC WATER USER	ALLOC. AF	8% JAN	17% FEB	25% MAR	33% APR	42% MAY	50% JUN	58% JUL	67% AUG	75% SEP	83% OCT	92% NOV	100% DEC	TOTAL	ALLOC. %
Dahlia Court	8.2	0.00	0.1	0.1	0.2	0.2	0.2	0.4	0.5	1.0	0.4			3.04	37.0%
Dove Canyon Golf Course	106.7	0.54	1.1	0.4	8.5	29.7	38.8	49.3	60.4	97.1	30.1			315.97	296.2%
Dove Canyon Master Association	279.3	0.90	1.2	3.0	4.6	23.2	24.5	28.9	30.8	52.5	20.7			190.24	68.1%
Robinson Ranch	80.2	0.78	1.1	0.3	0.4	2.2	3.0	4.1	5.4	8.6	3.9			29.71	37.1%
Trabuco Highlands	159.7	1.97	2.0	0.2	1.7	6.8	5.9	7.7	10.2	16.9	8.6			62.05	38.9%
City of RSM	0.1	0.03	0.00	0.00	0.01	0.04	0.03	0.06	0.03	0.07	0.00			0.26	200.8%
Construction Water	N/A	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.00	N/A
Sakaida Nursery	1.1	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.00	0.0%
SMWD	N/A	-	-	-	0.0	2.4	5.1	7.7	6.1	6.1	0.0			27.32	N/A
TY Nursery	17.9	0.00	0.00	0.0	0.0	0.0	0.0	11.5	7.2	7.2	0.0			25.99	145.3%
TOTAL, AF	**653.2**	**4.2**	**5.5**	**4.0**	**15.4**	**64.5**	**77.5**	**109.6**	**120.6**	**189.4**	**63.7**			**654.58**	**100.2%**
PERCENTAGE OF NDW ALLOCATION/YEAR		**0.6%**	**1.5%**	**2.1%**	**4.5%**	**14.3%**	**26.2%**	**43.0%**	**61.5%**	**90.5%**	**100.2%**				
TOTAL ANNUAL AVG. NDW AVAILABLE**	**774.36**														

URBAN RUNOFF CAPTURE AND REUSE															
DISTRICT FACILITY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
Shadow Rock Detention Basin Production		0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02			0.16	14.2
Dove | Tick Creek Production*	*Dry Season*	4.9	0.0	0.0	0.0	0.0	0.0	0.0	4.9	4.9	6.9			21.6	43.5
	TCWD Portion	4.9	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	3.5			13.3	-
	SMWD Portion	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	3.5			8.3	-
Dove Lake Water Pumped		0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.1	60.9	1.7			128.7	183.0
Dove Lake Free Board, Ft		0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.0	7.8	9.7			-	-
Dove Lake Storage, AF		331.0	331.0	331.0	331.0	331.0	331.0	328.2	308.9	186.2	136.0			-	-
Total Rainfall, In.		4.7	11.0	4.5	1.6	0.4	0.0	0.0	0.0	0.0	0.0			22.3	14.7

**** SMWD share of Dove/Tick Pump Station Dry Season Water is 50% of production.***

***** Based on 5-Year Average Reclaimed Water Reservoir Base Supply & Recycled Water Production***

TRABUCO CANYON WATER DISTRICT
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OPERATIONAL MATTERS
ITEM 8: MAINTENANCE DEPARTMENT UPDATES

The following is a brief report of work completed by Maintenance staff through **November 2024**

Projects and Repairs

Maintenance staff performed and/or completed the following tasks and projects:

Water Operations

1. High wind event 4th-7th. Setup mobile emergency gen at Field Office/Booster 1
2. PM's on DWTP electric motors, grease zerk fitting, replace small ROTRON blower
3. PM's on Ridgeline BPS electric motors, grease zerk fittings
4. Electrical Manual Transfer Switch installed at Falcon BPS with Hydrotech
5. Meeting with OCPW, Department of Health and WEROC at the GWTF to discuss flooding and debris flow strategies

Wastewater Operations

1. Divers at WWTP reclaim res

District Fleet Upgrades & Other Projects

1. ARC flash re-labeling with P@2S
2. PM's on brush/weed abatement equipment
3. Attended the WEROC Water Distribution Emergency Meeting at the EOC
4. Attended the Quarterly WEROC meeting at MWDOC

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

None

CONTACTS (staff responsible): PEREA/STROUD

TRABUCO CANYON WATER DISTRICT
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REGULATORY AND OTHER MATTERS
ITEM 9: OTHER MATTERS/REPORTS

Other Matters/Reports from the General Manager and/or District staff may be provided at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:
Hear Other Matters/Reports that may have arisen after the posting of the agenda.

EXHIBITS
None

CONTACTS (staff responsible): PALUDI/PEREA