

AGENDA

**ENGINEERING COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT**
Monday, March 31, 2025 – 11:00 a.m.
1960 La Costa Avenue, Carlsbad, CA 92009

1. **Call to Order**
Teleconference with Vice President Brown at the following location:
Moulton Nigel Water District
26161 Gordon Road
Laguna Hills, CA 92653
2. **Roll Call**
3. **Public Comment**
4. **Revision of Leucadia Wastewater District Standard Specifications and Procedures for Wastewater Facility Projects**
Adopt Resolution No. 2427 revising Leucadia Wastewater District Standard Specifications and Procedures for Wastewater Facility Projects. (Pages 2 - 6)
5. **Resolution No. 2428 Requesting LAFCO to Take Proceedings for the Miller & Hall Change of Organization**
Adopt Resolution No. 2428, Miller & Hall Annexation, as presented. (Pages 7 - 11)
6. **Leucadia Wastewater District Fiscal Year 2025 Pump Station Condition Assessment Report**
Receive and file the Leucadia Wastewater District Fiscal Year 2025 Pump Station Condition Assessment Report completed by Water Works Engineers, LLC. (Pages 12 -16)
7. **Information Items**
Batiqitos Pump Station Emergency Basin Rehabilitation Project. (Verbal)
8. **Directors' Comments**
9. **General Manager's Comments**
10. **Adjournment**

MEMORANDUM

DATE: March 27, 2025
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: **Revision of Leucadia Wastewater District Standard Specifications and Procedures for Wastewater Facility Projects**

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Adopt Resolution No. 2427 revising Leucadia Wastewater District Standard Specifications and Procedures for Wastewater Facility Projects.
2. Discuss and take other action, as appropriate.

DISCUSSION:**Tactical Goal: Services / Update Standard Specifications**

The Leucadia Wastewater District (District) adopted its current Standard Specifications and Procedures for Wastewater Facility Projects (Standard Spec) in April 2022. Originally issued in November 2006, the Standard Spec has undergone five revisions to ensure compliance with District requirements and evolving regulations. This comprehensive document establishes the administrative and technical procedures for private parties connecting to the District's public sewer system. It has been a valuable resource for both staff and developers by providing guidance on collection system procedures, planning guidelines, and design standards. Additionally, maintaining up-to-date Design and Performance Provisions is a mandated component of the Sewer System Management Plan (SSMP) under Statewide Waste Discharge Requirements (WDR).

The District Engineer, General Counsel, and District staff have conducted a thorough review and revision of the Standard Spec to reflect current industry standards, legal requirements, and best practices. The key changes are as follows:

1. Adoption of the 2024 Greenbook (Standard Specifications for Public Works Construction) as the base reference for District sewer construction.
2. Legal and procedural updates to development processing procedures, including necessary revisions to Standard Agreements and related documents in the appendices.
3. Revisions to Standard Notes and Standard Drawings to reflect current engineering and construction standards.

A summary of the principal revisions is attached for reference.

District Engineer Dexter Wilson, or a representative from his firm, will present an overview of the revised Standard Spec at the meeting.

Resolution No. 2427 is attached for your review. A copy of the Standard Spec is available upon request.

FISCAL IMPACT:

There is no direct fiscal impact associated with this recommendation. All privately constructed wastewater facilities are funded by the responsible private party.

dsw:PJB

Attachment

LWD Standard Specifications, April 2025 - Changes and Updates

Division 1 - Sewer System Procedures, Planning, and Design

- Part 1 Preparation and Processing of Wastewater Facility Projects by Developers
- 1 Minor updates to procedures to match current practices, such as electronic plan signing instead of mylar.
- Part 2 Sewer System Planning Guidelines
- 1 Updated average flow generation factor to match current District decreased flows caused by water conservation. Peaking factors were updated accordingly to ensure they captured the magnitude of recent storms.
- Part 3 Sewer System Design
- 1 Updated all rock used for pipe/lateral bedding to the same size per LWD Inspector recommendations for uniformity and ease of inspection.

Division 2 - Sewer System Standard Technical Specifications (Greenbook Modifications)

- Part 1 General Provisions
- 1 Updated section numbering and titles to match 2024 Greenbook.
 - 2 Clarified survey requirements after new manhole construction.
- Part 2 Construction Materials
- 1 Updated section numbering and titles to match 2024 Greenbook.
 - 2 Allowed for contractors to request manhole frames and covers from LWD in the case of material availability issues. Contractor will reimburse LWD or provide a replacement frame and cover.
- Part 3 Construction Methods
- 1 Updated section numbering and titles to match 2024 Greenbook.
- Part 4 Existing Improvements
- 1 Updated section numbering and titles to match 2024 Greenbook.
- Part 5 Pipeline System Rehabilitation
- 1 Updated section numbering and titles to match 2024 Greenbook.
- Part 8 Landscaping and Irrigation
- 1 Updated section numbering and titles to match 2024 Greenbook.

Division 3 - Standard Notes and Drawings

GN, LN, Minor updates for clarity and consistency with other Division changes.
& PN

S-6, Allowed for contractors to request manhole frames and covers from LWD in the case of
S-7, & S- material availability issues. Contractor will reimburse LWD or provide a replacement frame
28 and cover.

S-29 & S- Updated paving requirements around manhole lids to defer to local City and match current
30 inspection practices.

Appendix

A, B, C, Wording adjustments per legal counsel recommendations.

D, &H

K Updated to match current LAFCO forms.

W Updated per 2024 Greenbook.

RESOLUTION NO. 2427

**A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE LEUCADIA WASTEWATER DISTRICT
REVISING THE STANDARD SPECIFICATIONS AND PROCEDURES FOR THE
WASTEWATER FACILITY PROJECTS**

WHEREAS, the Board of Directors of the Leucadia Wastewater District (LWD) desire to provide requirements and guidelines in the form of standard specifications for the processing of wastewater facility improvement plans and for the materials and methods of construction of such facilities;

WHEREAS, it is in the public interest to provide standard requirements to provide the public and LWD with well defined, concise, and understandable procedures for the processing of sewer improvement projects which, upon approval and acceptance by LWD will be owned and operated by LWD on behalf of District customers;

WHEREAS, Leucadia Wastewater District (LWD) Resolution No. 2368, approved on April 20, 2022 adopted standard specifications for the processing of privately constructed wastewater facilities; and

WHEREAS, LWD has completed a review of its standard specifications and determined that updates and changes are required;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF LEUCADIA WASTEWATER DISTRICT AS FOLLOWS:

1. The Board of Directors of the Leucadia Wastewater District does hereby rescind Resolution No. 2368 and adopts in its place and stead the Standard Specifications for the Design and Construction of Privately Constructed Wastewater Facilities attached hereto as Exhibit A;

PASSED AND ADOPTED by the Board of Directors at a meeting of the Leucadia Wastewater District held April 9th, 2025 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Rolando Saldana, President

ATTEST:

Paul J. Bushee, Secretary/Manager
(SEAL)

MEMORANDUM

DATE: March 27, 2025
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Resolution No. 2428 Requesting LAFCO to Take Proceedings for the Miller & Hall Change of Organization

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Adopt Resolution No. 2428, Miller & Hall Annexation, as presented.
2. Discuss and take other action, as appropriate.

DISCUSSION:

The proposed Miller & Hall Annexation into the Leucadia Wastewater District (District) service area involves one parcel located at 327 North Vulcan Avenue in Encinitas. The parcel totals 0.23 acres and is located west of Interstate 5, north of Encinitas Boulevard, and east of N. Coast Highway 101.

This property lies within the District's sphere of influence and has an existing single-family residence served by a septic system. Per the City of Encinitas, the parcel is required to connect to the public sewer system to satisfy a permit condition for a proposed 798 square foot Accessory Dwelling Unit (ADU). The private sewer lateral for the parcel will connect to the existing public sewer system on North Vulcan Avenue.

Annexation into the District is necessary to provide sewer service to this parcel. Approval of Resolution No. 2428 would authorize the parcel's annexation into the District's service boundary. The District's existing wastewater collection and treatment systems have sufficient sewer capacity to accommodate both the existing single-family residence and the proposed ADU.

A copy of Resolution No. 2428 is attached for your review.

ier:PJB

Attachment

RESOLUTION NO. 2428

**A RESOLUTION OF APPLICATION BY THE
BOARD OF DIRECTORS OF LEUCADIA WASTEWATER DISTRICT
REQUESTING THE LOCAL AGENCY FORMATION COMMISSION
TO TAKE PROCEEDINGS FOR THE PROPOSED
MILLER & HALL CHANGE OF ORGANIZATION**

RESOLVED, by the Board of Directors of the Leucadia Wastewater District, that

WHEREAS, the Board of Directors of the LEUCADIA WASTEWATER DISTRICT (LWD), San Diego County, State of California, desires to initiate proceedings pursuant to the Cortese/Knox/Hertzberg Local Government Reorganization Act of 2000, Division 3, commencing with Section 56000 of the California Government Code for the proposed Miller & Hall Change of Organization; and

WHEREAS, the proposed Miller & Hall Change of Organization includes annexation of the Miller & Hall territory (*APN 256-300-40-00*) to the LWD; and

WHEREAS, the reasons for this proposed Change of Organization are as follows:

1. LWD is empowered to and is engaged in the collection, treatment, and disposal of wastewater and has existing facilities to provide wastewater service to the territory proposed to be annexed.
2. The owners of the territory desire to utilize the LWD facilities.
3. The territory to be annexed is within LWD's Sphere of Influence.

WHEREAS, the territory subject to the proposed Change of Organization is inhabited, and a description of the external boundary of the territory is set forth in Exhibit "A" and a map thereof is set forth in Exhibit "B", both attached hereto and by this reference incorporated herein; and

WHEREAS, LWD requests that the proposed Change of Organization be subject to the following terms and conditions:

1. The annexed property is thereafter subject to capacity fees, sewer service fees, and all other district-wide Ordinances and Resolutions of LWD.

WHEREAS, LAFCO is authorized to approve this proposed Change of Organization without notice or hearing and without an election. If no express effective date is indicated, the effective date of the Change of Organization shall be the date of recordation of the Certificate of Completion and Resolution ordering the change of organization by the County Recorder.

WHEREAS, the staff of LWD has reviewed this proposed Change of Organization under the California Environmental Quality Act (CEQA) and has found it to be categorically exempt from CEQA pursuant to Section 15319 (a) of the California Environmental Quality Act.

NOW, THEREFORE, this Resolution of Application is hereby approved and adopted by the Board of Directors of the LEUCADIA WASTEWATER DISTRICT. The Local Agency Formation Commission of San Diego County is hereby requested to take proceedings for the proposed Change of Organization that includes the territory as described in Exhibit "A" and shown in Exhibit "B", according to the terms and conditions stated above and in a manner provided by the Cortese/Knox/Hertzberg Local Government Reorganization Act of 2000.

PASSED AND ADOPTED at a Regular meeting of the Board of Directors held on April 9th, 2025 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Rolando Saldana, President

ATTEST:

Paul J. Bushee, General Manager
(SEAL)

EXHIBIT "A"
MILLER EXHIBIT
ANNEXATION TO LEUCADIA WASTEWATER DISTRICT
GEOGRAPHIC DESCRIPTION

THE NORTHWESTERLY 50 FEET OF LOT 6, BLOCK "U" OF SEASIDE GARDENS ANNEX, IN THE CITY OF ENCINITAS, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 1801, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, AUGUST 6, 1924, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 6;

THENCE (1) N61°26'30"E 200.00 FEET TO THE NORTHEAST CORNER OF SAID LOT 6;

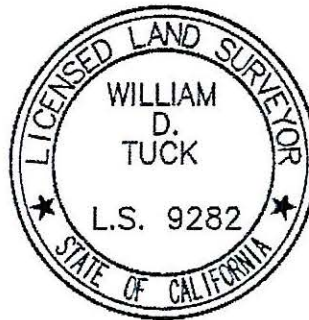
THENCE (2) ALONG THE NORTHEAST LINE OF SAID LOT 6 S28°33'30"E 50.00 FEET TO A POINT ON THE NORTHEAST LINE OF SAID LOT 6;

THENCE (3) LEAVING SAID NORTHEAST LINE OF LOT 6 S61°26'30"W 200.00 FEET TO A POINT ON THE SOUTHWEST LINE OF SAID LOT 6, SAID POINT LYING S28°33'30"W 50.00 FEET FROM THE POINT OF BEGINNING;

THENCE (4) ALONG THE SOUTHWEST LINE OF SAID LOT 6 N28°33'30"W 50.00 FEET TO THE POINT OF BEGINNING.

CONTAINS 0.23 ACRES OF LAND, MORE OR LESS.


Digitally signed by William D Tuck
DN: C=US,
E=wbiltuck71@gmail.com,
O=Sphere Surveying and Mapping,
Inc., OU=LS 9282, CN=William D
Tuck
Date: 2025.03.13 08:13:16-07'00'

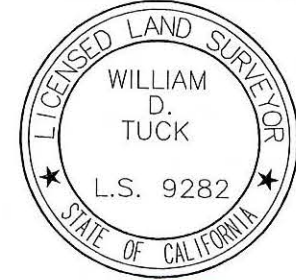


WILLIAM D. TUCK, PLS 9282

EXHIBIT "B"
ANNEXATION PLAT

POR LOT 5

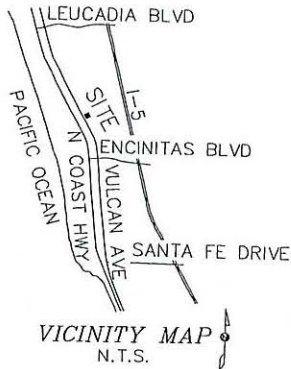
A.P.N. 256-300-19



A.P.N. 256-300-18

POR LOT 5

Digitally signed by William D Tuck
DN: c=US,
E=willtuck71@gmail.com,
O="Sphere Surveying and
Mapping, Inc.", OU=LS 9282,
CN=William D Tuck
Date: 2025.03.13 08:17:12-0700

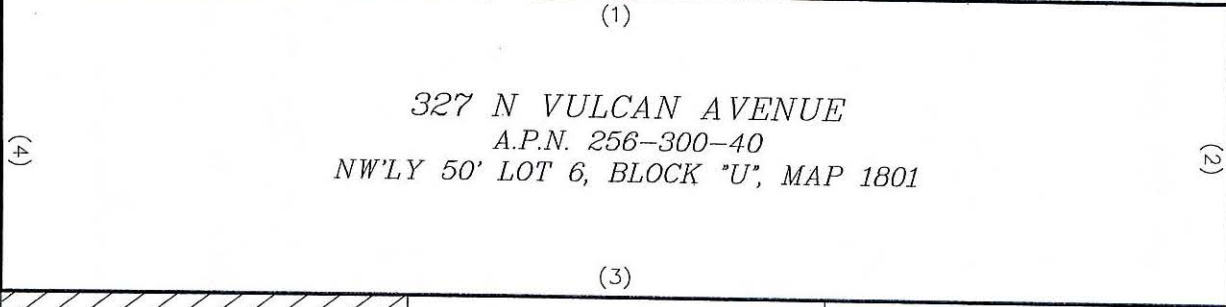


VICINITY MAP
N.T.S.

N.C.T.D. RIGHT-OF-WAY

VULCAN AVENUE

POINT OF BEGINNING



327 N VULCAN AVENUE
A.P.N. 256-300-40
NWLY 50' LOT 6, BLOCK "U", MAP 1801

A.P.N. 256-300-16

POR LOT 6

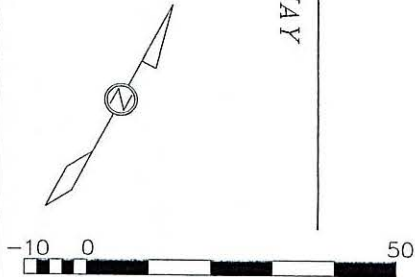
A.P.N. 256-300-15

POR LOT 6

A.P.N. 256-300-14

POR LOT 6

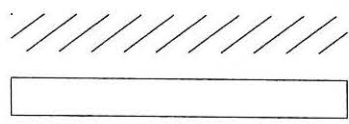
BEARINGS AND DISTANCES SHOWN HEREON ARE PER
MAP 1801, FILED IN THE OFFICE OF THE COUNTY
RECORDER OF SAN DIEGO COUNTY AUGUST 6, 1924.



LEGEND:

- PROPOSED ANNEXATION BOUNDARY
- EXISTING LEUCADIA WASTEWATER DISTRICT BOUNDARY
- PROPOSED ANNEXATION REGION


WITHIN LWD SPHERE OF
INFLUENCE & OUTSIDE LWD



ASSESSOR'S PARCEL NO. 256-300-40-00	LAFCO RESOLUTION NO.	ACREAGE 0.23	DATE 3/13/25	SCALE 1"=30'
LWD ANNEXATION NO. _____ BEING A PORTION OF LOT 6, BLOCK "U", MAP 1801.		SPHERE SURVEYING AND MAPPING, INC. 603 SEAGAZE DR. #1086 OCEANSIDE, CA. 92054 (760)803-9107		

MEMORANDUM

Ref: 25-9088

DATE: March 27, 2025
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Leucadia Wastewater District (LWD) Fiscal Year 2025 Pump Station Condition Assessment Report (FY25 Assessment)

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Receive and file the FY25 Assessment completed by Water Works Engineers, LLC.
2. Discuss and take other action, as appropriate.

DISCUSSION:

Tactical Goal: Infrastructure and Technology / Pump Station Condition Assessment

The 2023 Asset Management Plan (AMP) recommended that LWD conduct a Pump Station Condition Assessment during FY25. The goal of this effort is to prioritize and plan future pump station rehabilitation efforts. The FY25 Assessment's purpose is to document the current condition of the La Costa and Batiquitos Pump Stations and provide recommended improvements, associated cost estimates, and implementation timelines. Additionally, the FY25 Assessment incorporates recommendations from the LWD's 2021 Hazard Mitigation Plan, which identifies potential natural hazard vulnerabilities and prioritizes hazard mitigation action items. This proactive approach ensures continued operational reliability and efficient allocation of LWD resources.

The AMP recommended the evaluation of the above referenced pump stations as well as the Saxony, Avocado, and Village Park 5 Pump Stations. However, LWD postponed the assessments for Saxony, Avocado, and Village Park 5 Pump Stations due to recent upgrades or a determination that an assessment was not required at this time.

The FY25 Assessment's executive summary is attached for review. The full assessment report, including detailed findings and recommendations, is available upon request. LWD staff and Water Works will present an overview of the assessment at the meeting.

FISCAL IMPACT:

There is no direct fiscal impact associated with this recommendation.

ier:PJB

Attachment

1 Executive Summary

Water Works Engineers (Water Works) serves as the as-needed civil engineering for Leucadia Wastewater District (LWD; District). In this FY 2025 Pump Station Condition Assessment Report, Water Works conducts a condition assessment of the LWD Batiquitos Pump Station and La Costa Pump Station. The primary goal of the effort is to document the condition of major site civil, structural, mechanical, electrical, instrumentation, and controls facilities for the individual pump stations and to recommend improvements, cost estimates, and timelines for implementing said improvements. The secondary goal of the effort is to incorporate District Staff comments and anecdotes and coordinate with and comment on recommendations made in the existing District planning documents 2021 Hazard Mitigation Plan (2021 HMP) and the 2023 Asset Management Plan (2023 AMP).

1.1 Batiquitos Pump Station

Background

Batiquitos Pump Station is one of LWD's largest and most important wastewater assets with a peak capacity of just under 20-million-gallons-per-day (mgd) when two pumps are on and two forcemains are open. It is located next to a beach and Batiquitos Lagoon off Carlsbad Blvd (Continuation of Hwy 101). The pump station collects flow from the entire District and pumps it to Encina Wastewater Pollution Control Facility. It was constructed in 1972 and has undergone many repair, rehabilitation, and upgrade projects, with one as recently as February 2025. Most major structural improvements are from 1972, 1986, and 2001. Most mechanical improvements are from 2001, 2006, and 2013. Most electrical, instrumentation, and controls improvements are from 2001. This is documented in Appendix A.

The pump station is exposed to several hazards that are primarily from flooding (e.g., tsunami, sea level rise, internal pump station flooding, etc.) and the 2021 HMP recommended strategies to mitigate external flooding risks. The 2023 AMP recommended an upgrade project in FY2025 that adopted some of the 2021 HMP recommendations and tackled pump replacement, generator replacement, and placement of new emergency basin pumps.

Recommendations

Water Works conducted a condition assessment of major site civil, structural, mechanical, electrical, instrumentation, and controls facilities and documented them in Appendix B and Appendix C and has made recommendations (action items) in coordination with District feedback and the 2021 HMP and 2023 AMP. The cost estimate for these improvements is detailed in Appendix D and is summarized in the table below.

Table 1: Batiqitos Pump Station Estimated Project Costs

Opinion of Probable Construction Cost (OPCC) (1,2)		\$ 6,239,000
Mobilization, Demobilization, Special Constraints & General Requirements <i>(For Single Major Upgrade Project)</i>		\$ 2,212,000
High Priority Improvements		\$ 3,541,637
Medium Priority Improvements		\$ 280,140
Low Priority Improvements		\$ 205,100
Typical Soft Costs		\$ 1,498,000
Design (10% OPCC)		\$ 623,900
Construction Management & Inspection (7% OPCC)		\$ 436,730
Engineering Services During Construction (3% OPCC)		\$ 124,780
Administration (1.5% OPCC)		\$ 187,170
Environmental Services Placeholder (2% OPCC) - Assumes NOE, Biological Tech Study, Coordination w/ CCC & Other Agencies, Revegetation Plan & Bird Watching		\$ 124,780
Total Estimated Project Cost (OPCC + Soft Costs)		\$ 7,737,000
(1) Rounded up to nearest \$1000 (CY2025 Dollars)		
(2) Includes 10% Construction Contingency		

The action items have been further separated into high, medium, and low priority improvements (See Appendix D). In general, a “high priority” improvement is needed, at a minimum, for facilities required for the continued primary operation of the pump station and are primarily structural, mechanical, and electrical, or where the consequence of failure (operational risk) is high. Alternatively, “medium priority” and “low priority” improvements are for lower priority systems that are primarily site civil or access related and are needed for the secondary operation of the pump station and where the consequence of failure is low.

Water Works generally recommends a single, efficient, large-scale upgrade project. If budget constraints dictate sequencing improvements into multiple, smaller phases of work constructed by different contractors over a longer period, this would likely increase the cost overall cost of the improvements. All actions requiring a complete shutdown of the pump station (and temporary bypass pumping) should be bundled together and limited to a single project, given the very high cost of temporary bypass pumping (\$8.4K+/- a day, or \$1.5M+/- for a 6 months). Most improvements that are recommended could likely be pushed back 3-5 years if District staff concur and can safely maintain and operate said unimproved existing facilities.

If the District elects to not conduct a single, major upgrade project in 2026, then it is recommended that at a minimum, the following action items be acted upon in 2026:

- 1) **Action Item A5.** Knocking back vegetated undergrowth (if permissible) and soil around the overflow weir curb and knocking out a section of curb to reduce risk of flooding to the switchgear / service entrance or monitor it closely and sandbag as necessary.
- 2) **Action Item 15A,16A,17A,18A.** Additional condition assessment of Wet Wells No 1 and 2.
- 3) **Action Item P17 and P18.** Additional condition assessment of the surge tank.

- 4) **Action Item P5.** Additional condition assessment (ultrasonic wall testing) of the 52-year old ductile iron pipe discharge header (See Action Item P5).
- 5) **Action Item P6 and P7.** Repairing the 39 year old Pump #1 assembly which has a slow leaking check valve. Monitor pump closely for performance issues.
- 6) **Action Item P22.** Repairing the pump room damaged wall/alcove/beam.

Remaining action items recommended to be acted upon in the next 3-5 (2028 to 2030) years consist of:

- 1) **A-1 through A-28 (Above Ground Improvements).** A sample of the major improvements include but are not limited to:
 - o Replace and relocate carbon scrubber tank and blower due to age
 - o Fill in air-plenum / air-well and create secondary emergency egress from pump room to mitigate flooding hazards and access risks
 - o Raise and replace SDGE service entrance, switchgear, and meter due to age and to mitigate flooding hazard
- 2) **P-1 through P-22 (Pump Room Improvements).** A sample of the major improvements include but are not limited to:
 - o Relocate and replace standby diesel generator and power distribution to electrical room due to age and to mitigate internal flooding hazards
 - o Replace pumps with submersibles and electrical distribution to pumps to age and to mitigate internal flooding hazards
 - o Replace pump discharge headers, inlets, discharge piping, valves, and appurtenances due to age
 - o Replace or rehabilitate surge tank system due to age
- 3) **E-1 through E-16 (Electrical Room Improvements).** A sample of the major improvements include but are not limited to:
 - o Replace or rehabilitate major electrical panels (i.e., VFDs, MCC, DSB, ATS, MTS, MSB, etc.) due to age and to accommodate new pumps and power distribution to/from pumps and standby generator

1.2 La Costa Pump Station

Background

La Costa Pump Station is a unique wastewater asset as it is the last package “Smith and Loveless” pump station left in the District’s pump station inventory that has not been replaced yet. It uses an unconventional 32-foot deep “metal can” dry pit connected to a precast concrete wet well. It is located in Omni La Costa Resort and Spa next to center court, and has a 3.17 mgd peak capacity (1 pump, 1 forcemain).

The station was constructed in the 1964 and has undergone many repair, rehabilitation, and upgrade projects, with one as recently as 2020. The “metal can” dry pit is original, from 1964. Other major

structural improvements are from 1997, and 2013. Most mechanical improvements are from 2013. Most electrical, instrumentation, and controls improvements are from 1997 and 2013. The 2023 AMP recommended a major replace-in-place or relocation project in FY2028.

Recommendations

Water Works conducted a condition assessment and identified that major mechanical, structural, and electrical facilities have no remaining useful lifespan. The condition of the pump station is poor and District is at high operational risk due to the advanced corrosion and leaking, and risk of flooding, that is occurring in the original 1964 steel dry pit. Consequently, Water Works recommends the District start the pump station replacement project this year (2025) as the planning, design, and construction of the project will likely take 3 years in total.

Replacing the Pump Station in Place Conceptual Design

Replacing and installing the pump station back where it is currently is not preferred by the District (and potentially by other stakeholders) given its central location within the resort, and close proximity to center court, and other resort operations, amenities, and features. The District requires an expanded footprint, additional permanent easement, and permanent maintenance access with large vehicles to accommodate a District standard pump station facility. It is unknown if a station is compatible with the resort's planned improvements for the area, and this is the driving factor on why relocation of the pump station to the parking lot is preferred from the District's perspective. The cost of a new district pump station replaced in place is approximately \$3.0M to \$4.0M over 18 months. It will be impactful to resort operations

Replacing and Relocating the Pump Station Conceptual Design

Replacing and relocating the pump station to the parking lot is preferred as it will allow the pump station to be more readily accessible off of Costa Del Mar Road. Most the above ground facilities will be screened and close to existing walls and should not negatively impact sight lines. It is expected that the new facilities will substantially reduce District vehicular presence in the vicinity of the existing pump station and will allow the Resort to more readily alter the finished grade in the vicinity of the existing pump station. Increased fill material over existing gravity sewer pipelines would need to be checked by the District to make sure the pipelines could handle the long term dead and live loads, and sewer manholes could be replaced and raised in place relatively cost effectively.

The location of the valve vault and wet well would be inside the 100 year flood plain, but this could be readily mitigated with a subgrade floodproofed structure and raising the structure. Electrical infrastructure would be elevated, and outside the 100 year flood plain and located up against the existing wall closer to Costa Del Mar Road. The valve vault and wet well could also be located closer to the road, but this would add an additional \$100,000 to \$200,000 as it would require a new deep excavation.

The cost of a new district pump station replaced in a relocated location is approximately \$4.0M to \$5.0M over 18 months. It is approximately \$1M-\$1.5M costlier than replacing in place due to the trenchless crossing, added forcemain length, and increased abandonment activities required to accommodate the relocation.