

AGENDA

**ENGINEERING COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT**
Wednesday, October 7, 2026 – 3:45 p.m.
1960 La Costa Avenue, Carlsbad, CA 92009

Join Meeting

Meeting ID: 284 987 517 991 55

Passcode: zm2Cg3sS

1. Call to Order

Teleconference with President Brown at the following location:
Moulton Niguel Water District
26161 Gordon Road
Laguna Hills, CA 92653

Teleconference with Director Roesink at the following location:
7509 Solano Street
Carlsbad, CA 92009

2. Roll Call

3. Public Comment

4. Update of the District's Hazard Preparedness and Mitigation Plan

Receive and file the 2026 Update of the Hazard Preparedness and Mitigation Plan completed by Titan Engineering & Consulting, LLC. (Pages 2-6)

5. Information Items

A. Diana Pump Station Upgrade Project (verbal).

B. La Costa Pump Station Replacement Project (verbal).

6. Directors' Comments

7. General Manager's Comments

8. Adjournment

MEMORANDUM

Ref: 27-9674

DATE: October 1, 2026
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Update of the District's Hazard Preparedness and Mitigation Plan

RECOMMENDATION:

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

1. Receive and file the 2026 Update of the Hazard Preparedness and Mitigation Plan completed by Titan Engineering & Consulting, LLC.
2. Discuss and provide direction as appropriate.

BACKGROUND:

Tactical Goal: Infrastructure & Technology / Hazard Preparedness & Mitigation Plan Update

Leucadia Wastewater District (District) first implemented its Hazard Preparedness & Mitigation Plan (HMP) in 2015 and it was subsequently updated in 2021. The HMP serves as the District's strategic framework for identifying natural hazard risks, evaluating asset vulnerabilities, and implementing proactive measures to safeguard public health and critical wastewater infrastructure.

The HMP addresses acute hazards like earthquakes, wildfires, and tsunamis which occur with little or no warning and long-term stressors such as sea-level rise which can progressively increase the vulnerability of low-lying coastal infrastructure over time. Maintaining an active, updated HMP enables the District to identify high risk assets, such as coastal pump stations, and implement mitigation strategies before a disaster strikes. Ultimately, keeping this plan current ensures the District can proactively protect its infrastructure, maintain uninterrupted service, and build long term operational resilience.

DISCUSSION:

To update the District's HMP, staff retained Kristin Norton with Titan Engineering & Consulting, LLC. Ms. Norton developed both the 2015 and 2021 updates.

As part of this update, Ms. Norton collaborated with District staff to incorporate updated baseline environmental and hazard data, reassess current asset vulnerabilities across District facilities, and develop recommended mitigation strategies for future implementation.

The Executive Summary of the updated HMP is attached for your review, and the full report is available upon request. Ms. Norton will present an overview of the HMP update at the upcoming meeting.

ier:PJB

Attachment

1. EXECUTIVE SUMMARY

The Leucadia Wastewater District (District) originally developed a Hazard Preparedness and Mitigation Plan in 2015 in order to identify potential natural hazard vulnerabilities and prioritize hazard mitigation action items on a hazard-level, vulnerability and probability basis. The overall goal of the plan is to reduce the potential for damage to District assets from natural hazards, which provides protection for the environment and public health due to wastewater discharges. The plan was last updated in 2021.

Hazard mitigation planning is a dynamic process built on realistic assessments of past and present information that enables the District to anticipate future hazards and provide mitigation strategies to address possible impacts and identified needs. The overall approach to the Hazard Preparedness and Mitigation Plan included developing a baseline understanding of the natural hazards to the District, determining ways to reduce those risks, and prioritizing mitigation recommendations for implementation.

Since the 2015 plan development, mapping for sea level rise has improved as data has become more readily available. This plan update incorporates this new data, as well as the most recent GIS data for natural hazards from the San Diego Geographic Information Source (SanGIS).

Hazard Identification and Risk Assessment

Located in a Southern California coastal community, the District is vulnerable to a wide range of natural hazards. In order to conduct a risk assessment, the following steps were followed:

1. Identifying Hazards – Reviewing past natural hazard incidents, available disaster archives, technical studies, etc. to determine which hazards pose a threat to the service area.
2. Profiling Hazards – Mapping identified hazards and their geographic extent.
3. Identifying Vulnerable Assets – Identifying District facilities that are located within identified hazard vulnerability zones.

Hazard Vulnerability Analysis

Vulnerability describes how exposed or susceptible to damage a facility is, and is dependent upon the facility construction, location, and the percentage of service area served. The vulnerability analysis predicts the extent of damage and environmental impact that may result from a hazard event of a given intensity in a given area on the existing District facilities. Each facility located within an area vulnerable to natural hazards was evaluated to determine the potential impact to the facility (e.g., inundation can damage facility electrical and controls, earthquake can cause physical damage and/or collapse, loss of function can result in environmental sewer system overflow, etc) and the environmental impact in terms of fines.

The table on the following page provides an overview of the District facilities and the associated vulnerability to natural hazards.

Leucadia Wastewater District

Facility	Earthquake	Liquefaction	Wildfire	Tsunami	Severe Storm / Flood	Sea Level Rise	Dam Failure	Rain Induced Landslide
Avocado Pump Station	X							
Batiquitos Pump Station	X	X		X		X		
Diana Pump Station	X							
Encinitas Estates Pump Station	X		X					
La Costa Pump Station	X	X						
Leucadia Pump Station	X		X					
Rancho Verde Pump Station	X							
Saxony Pump Station	X		X			X		
Village Park 5 Pump Station	X		X					
Village Park 7 Pump Station	X							
Piping / Force Mains	X	X						X

Mitigation Strategies

Mitigation strategies are administrative and engineering project recommendations to reduce the vulnerability to the identified hazards and/or reduce the damage and environmental impact of the hazard. It was imperative to have engineers and vital District employees involved in this phase of the plan in order to develop strategies and projects that will mitigate the hazard and solve the problem cost-effectively, as well as ensure consistency with the District's mitigation goals and capital improvements. The potential mitigation projects were reviewed in a team-setting to ensure the projects are aligned with District objectives.

The implementation of the mitigation recommendations is aligned with the scheduled pump station improvement projects. Additionally, mitigation projects associated with the slow developing sea level rise can be implemented as the hazard approaches a vulnerable height.

The table below provides a list of mitigation projects for consideration:

Mitigation Recommendations			
Facilities Protected	Hazard Mitigated	Recommendations	Trigger
Batiquitos	Tsunami, Sea Level Rise	With next improvement project, perform a study to plan for a future site raised above projected sea level rise. Relocate generator to raised location based on study.	Design in FY2028
		Based on previously performed study, raise site with a retaining wall including operations building.	Before 2.5 feet of Sea level rise (Currently estimated in 2060 per "High Scenario")
Saxony	Sea Level Rise	With next improvement project, perform a study to plan for a future site raised above projected sea level rise. Perform needed improvements with future site in consideration.	TBD Based on next AMP
		Based on previously performed study, raise site with a retaining wall including operations building.	Before 4.1 feet of sea level rise (Currently estimated in 2080 per "High Scenario")

*Sea level rise defined based on median values for California Sea Level Scenarios relative to a 2000 baseline. The status of sea level rise will be evaluated with each update to this report (approximately 6 year cycles) and if any trigger is within one foot or five years of predicted occurrence, planning will begin for the appropriate project.