Ref: 27-9635

AGENDA

ENGINEERING COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT
Tuesday, August 4, 2026 – 1:30 p.m.
1960 La Costa Avenue, Carlsbad, CA 92009

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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. **Batiquitos Pump Station (B3) Force Main Condition Assessment – Award of Sole Source Contract**
   Authorize the General Manager to execute a sole source contract with CPM Pipelines for condition assessment services for the Batiquitos Pump Station (B3) Force Main in an amount not to exceed $77,450. (Pages 2-7)

5. **Information Items**
   None.

6. **Directors' Comments**

7. **General Manager's Comments**

8. **Adjournment**

Ref: 27-9627

MEMORANDUM

DATE: July 30, 2026

TO: Engineering Committee

FROM: Paul J. Bushee, General Manager

SUBJECT: **Batiquitos Pump Station (B3) Force Main Condition Assessment – Award of Sole Source Contract**

RECOMMENDATION:

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

1. Authorize the General Manager to execute a sole source contract with CPM Pipelines for condition assessment services for the Batiquitos Pump Station (B3) Force Main in an amount not to exceed $77,450.

2. Discuss and take other action as appropriate.

BACKGROUND:

Tactical Goal: Infrastructure & Technology / Batiquitos Pump Station (B3) Force Main Condition Assessment

The Leucadia Wastewater District's (District) 2023 Asset Management Plan (AMP) included a recommendation to perform a condition assessment of the Batiquitos Pump Station (B3) force main, a ductile iron pipe installed in 1988. The B3 force main is one of two force mains used by the Batiquitos Pump Station that conveys approximately 4.5 million gallons of wastewater per day to the Encina Wastewater Authority.

Last fiscal year, the District initially planned a conventional condition assessment for the Leucadia Pump Station (L1) force main by removing two coupon samples at selected high points. However, because the District received high cost estimates for this work, staff explored alternative condition assessment methods and selected the INGU Piper Smartball inspection tool (Smartball). The Smartball provided a successful, cost-effective alternative that assessed the entire length of the force main while detecting any leaks, metal loss (corrosion), air/gas pockets, internal buildup, and hydraulic grade line conditions.

DISCUSSION:

Based on the Smartball's successful performance during the L1 force main condition assessment inspection, the District recommends the use of the Smartball technology for the B3 force main.

CPM Pipelines is the sole authorized service provider for the Smartball and submitted a proposal in the amount of $77,450 for the condition assessment services. A copy of the proposal is attached for review. Since this service is of a unique, proprietary, or technical nature that is only provided by a single vendor, the recommended contract award is consistent with the sole source provisions of the District's Procurement Policy.

FISCAL IMPACT:

Staff appropriated $100k in the FY27 Capital Budget for this project. Therefore, the budget contains sufficient funds to complete this contract.

ier:PJB

Attachment

July 22, 2025

Ian Riffel
Capital Project Manager
Leucadia Wastewater District
1960 La Costa Avenue, Carlsbad, CA 92009

RE: INGU Pipers® Inspection of 2 Miles of the B3 24-inch Force Main

Dear Ian,

CPM Pipelines (CPM) would like to thank you for the opportunity to submit a proposal outlining an INGU Pipers® inspection of the 24-inch B3 force main which runs approximately 2 miles along Carlsbad Blvd.

The INGU Pipers® are used extensively in the oil and gas industry for inspecting steel pipelines where there is a "no leak, no failure" absolute requirement. The technology provides identification of potential issues such as leaks, deposits, and changes in wall thickness and is suitable for all pipeline diameters and material. The cost of this method and the ease of deployment through any 3-inch opening in the pipeline allows for frequent inspections and has helped the industry determine where upgrades are needed to operate reliably, efficiently, and safely.

We believe the INGU Pipers® will provide similar benefits and further insight as to the condition of the 24-inch force main and help you make informed decisions about this critical infrastructure.

As outlined in this proposal, CPM is dedicated to providing proven solutions to pipeline assessment, inspection and rehabilitation needs. If you have any questions, please do not hesitate to call me at 623-200-3014.

Kindest Regards,

David Snow, P.E.
Project Manager

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INGU Pipers®

Free Floating Inspection Technology

INGU Pipers® is a multi-sensor system that uses AI-powered data analytics and GIS to identify and locate pipeline issues such as leaks, build-up, or changes in the pipeline wall. The baseball-sized, free floating sensors work for all pipelines, independent of diameter and material, and can be used while the pipeline is in operation.

The equipment is deployed through a minimum 3-inch outlet or by removing and replacing a flange to insert the inspection ball for data collection. This is commonly achieved through the isolation and removal of check valve cover flanges, isolation and removal of air valves, or other flange access points in and around the pump station exposed piping. Once the capture point is verified two live spheres are typically launched depending on job specific conditions within 15 minutes of each other (if possible) to collect live operation data on the pipeline. The spheres are free floating and do not require surface tracking during deployment. All location data and coordinates are picked up during post processing through time-of-flight measurements and the on-board accelerometer, magnetometer, inertial measurement, and temperature and pressure gauges for final reporting. The primary data collected will be acoustic in nature and include leak noises and air pocket locations.

The retrieval of the Pipers® can be achieved with a variety of methods. In water transmission applications, for example, Pipers® can be retrieved by momentarily isolating a hydrant or other valves with a minimum 3-inch opening. Known flow velocities and distances provide the information required for opening the retrieval points thereby minimizing potable water loss. For wastewater applications, Pipers can be retrieved at manholes or bar screens.

In order for leaks to be detected, the pipeline must be pressurized above 15-30 psi. The greater the pressure, the more clearly leaks can be identified. However, leaks as low as 0.18 gallons (0.7 liters) per minute have been detected by CPM in low pressure applications. Leaks of even smaller magnitude can be detected if the line is sufficiently pressurized.

Low cost and client controlled Pipers® are the most efficient and economic pipeline inspection solution for all pipelines without shut downs.

DELIVERABLES AVAILABLE

Leak Detection

Pipers® flow freely through pipelines listening for leaks with ultra sensitivity due to minimal background noise.

Hydraulic Grade Line

With 100 pressure measurements per second, i.e. every 2.5 cm (1 inch) at a 2m/s (6.5 ft/s) flow speed, Pipers® provides a detailed pressure profile over the full length of the pipeline.

Air / Gas Pocket Detection

Pipers® detect air/gas pockets with high sensitivity while free floating through pipelines, minimizing background noise.

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Buildup

The detailed pressure profile of the full length of the pipeline provides information valuable to determining buildup or debris in wastewater force mains and raw water mains that can limit the pipeline's capacity and be a risk for the pipeline's integrity. Pipers® detect buildup and provide the location, so owners are able to better focus maintenance plans and scheduling.

Geometrics

Bends, weld patterns, and spool lengths are detected which are then overlayed onto the client provided pipeline path creating a visualization in the pipeline viewer of everything detected.

Magnetics

Pipers® continuously measure the pipeline's magnetic flux. Using this information, a spool-based metal loss analysis can be performed. Spools are categorized as no or minimal, medium, and severe metal loss, and a confidence level will be assigned.

INGU's Pipers® solution pairs a baseball-sized, free-floating, multi-sensor system with AI powered data analytics and a GIS Pipeline viewer. The Pipers® solution accurately identifies and locates potential issues such as leaks, build up, or changes in the pipeline wall without the need for external reference devices. Pipers® are suitable for all pipelines, independent of pipeline diameter and material, and can be used while the pipeline is in service. The information provided allows you to prioritize when and where action is needed to keep your pipelines operating safely and reliably.

INGU Pipeline Viewer

Inspection deliverables are provided through INGU's Pipeline Viewer. The viewer is an interactive geographic information system (GIS) environment that illustrates the inspection results on an interactive satellite map.

The pipeline path including the launch and retrieve locations are marked in the viewer. Depending on the inspection service selected, joints, bends, leaks, air pockets, metal loss, hot taps, etc. will also be marked. Clicking on a marker will provide specific information for that location.

Scope of Work

CPM Pipelines

- Launch and retrieval will be performed by launching in any opening in the system that is 3-inch diameter or greater.
- Project planning including scheduling, identification, and selection of necessary equipment, determination of launch/retrieval points.
- Shipping and staging of all necessary safety and launch/retrieval equipment
- Mobilization of inspection team.
- Supply INGU Pipers® with electromagnetic inspection tool on board.
- Perform the launch and retrieval of the INGU Pipers.®
- Production of inspection report – typically provided 3 weeks after inspection but can be expedited upon request.

Client to Provide:

- GIS or KMZ file of the pipe alignment delineating the exact start and stop location.
- A 3-inch minimum outlet at the lift station on the header. Example: Air valve with isolation valve that can be used to remove the air valve and attach a launch tube or the removal of check valve covers at the lift station.
- Flow rate and pressure, pipe ID, OD and wall thickness.
- Photos of the bar screen or manhole where the Pipers are to be retrieved.

Fee Structure

INGU PIPERS®

Inspection of 2 miles of the B3 24-inch Force Main

Description	Price
Project Planning	$5,000
Mobilization	$10,000
Field Service	$30,000
Leak Detection, Deposit Inspection, Air Pocket Detection, Magnetic Inspection, **Viewer, Proving Piper, Digitization to KML, Freight**	$27,450
Report & Review	$5,000
Total	**$77,450**

*Permitting and traffic control not included in pricing. Pricing is valid for inspections up to three miles.

The scope of work and corresponding costs outlined in this proposal are subject to the accuracy and completeness of the alignment records, condition reports, pipeline feature inventories, and any other pertinent documentation furnished to CPM Pipelines. Any undisclosed or unknown site or pipeline conditions, which were not made available to CPM Pipelines prior to the submission of this proposal, may necessitate reimbursement for agreed upon out-of-scope expenditures in terms of time, labor, and materials for the project's completion.

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