

MINUTES OF THE REGULAR MEETING
OF THE BOARD OF DIRECTORS OF
COUNTY SANITATION DISTRICT NO. 18
HELD AT THE OFFICE OF THE DISTRICT
VIA TELECONFERENCE

July 23, 2025
1:30 o'clock, P.M.

The Board of Directors of County Sanitation District No. 18 of Los Angeles County met in regular session both in person and via teleconference.

There were present: Ray Dunton, Director from Bellflower
Frank Yokoyama, Director from Cerritos, via AB2449 teleconference
Hector Sosa, Director from Downey
Cory C. Moss, Director from Industry
Carol Engelhardt, Alternate Director from La Habra Heights
Rick Ramirez, Alternate Director from Norwalk
John Garcia, Director from Pico Rivera
William Rounds, Director from Santa Fe Springs
Kathryn Barger, Director from Los Angeles County
Ali Sajjad Taj, Chairperson, Director from Artesia

Absent: Ed Eng, Director from La Mirada
Joe Vinatieri, Director from Whittier

Also present: Kimberly S. Christensen, Secretary to the Board
Robert Ferrante, Chief Engineer and General Manager
Jessica Lienau, District Counsel

In response to the Secretary, Director Yokoyama stated that he was attending remotely in accordance with AB2449 – Just Cause/Travel, and no other persons were present.

RE: PUBLIC COMMENT The Chairperson announced this was the time for any questions or comments by members of the public. There were no public comments or questions to address to Board on any matters.

RE: DIRECTOR FROM CITY OF LA MIRADA A certificate from the City Clerk's Office of the City of La Mirada was presented to the Secretary stating that at a meeting of the City Council held June 10, 2025, Mr. Ed Eng was elected Mayor of the City of La Mirada, which is the designation of the presiding officer of the governing body of that city and automatically places Mr. Eng on this Board.

Upon motion of Director Barger, duly seconded and unanimously carried by a roll-call vote, the certificate was accepted and ordered filed.

RE: MINUTES Upon motion of Director Barger, duly seconded and carried by a roll-call vote, the minutes of the regular meeting held June 25, 2025, were approved.

RE: DISTRICT EXPENSES The following expenses for the month of April 2025, were presented and upon motion of Director Barger, duly seconded and unanimously carried by a roll-call vote, were approved:

Local District Expenses:	
Operations & Maintenance	\$ 17,533
Allocated Expenses:	
Operations & Maintenance	13,659,786
Capital	732,329
Total Expenses	<u>\$14,409,648</u>

RE: CLEARWATER PROJECT UPDATE
DISCUSS

The Chief Engineer and General Manager advised that he had previously sent the Directors an email regarding a recent tunnel failure related to the Clearwater Project.

He gave a PowerPoint presentation to update the Board on the recent failure of a portion of the tunnel that is under construction by Flatiron Dragados (Contractor), which occurred on Wednesday, July 9, 2025, and to review the next steps.

A slide showed the existing and new tunnel alignments and construction progress. Water treated at the A.K. Warren Water Resource Facility is conveyed to the ocean through two existing tunnels, built in 1938 and 1958. The existing tunnels have been in continuous service since 1958 and were not built to current seismic standards or to withstand a significant amount of stormwater inflow. The new 18-foot-diameter tunnel is being constructed to handle flows with greater capacity, is being reinforced through fault zones, and will allow the existing tunnels to be taken out of service. In 2021, the tunnel boring machine (TBM) started tunneling and has completed 5.9 miles of the 7-mile tunnel. The original completion date is early 2026. The new tunnel alignment is in the public right-of-way, not under homes, and is longer in comparison to the existing tunnels.

The breach occurred approximately 5 miles inside the tunnel (approximately 600 feet south of Weymouth Place along Western Avenue). The TBM was 4,107 feet past the breach.

A slide showed a chart of the approximate location, which has approximately two miles of "squeezing ground." The breach is approximately 368 feet underground, and the TBM is approximately 420 feet below ground (in the Cabrillo Fault Zone). The Districts' survey staff has continuously monitored for surface deformation along the tunnel alignment ahead of the TBM operations and after the TBM has passed. Monitoring of the location above the breach began in late September 2024 and continued through mid-April 2025, after the TBM was well past that point, and monitoring operations moved ahead of the TBM. There has been no discernible movement in the readings (to a hundredth of a foot) attributable to seasonal/temperature differences since September 2024. Up to the event, the Districts had been monitoring the centerline at 100-foot stations starting at Weymouth Place and Western Avenue, and there have been no issues. Starting today, the survey team will increase monitoring daily in the breach area. This type of failure is not surface-related.

In response to Director Barakat, City of Bradbury, the Chief Engineer and General Manager stated that there was some dirt lost, but the breached area was not completely blocked.

A public meeting is planned for residents in that area to discuss the details of the failure of the tunnel.

The details of the TBM operation and construction of the tunnel were described. A slide showed photos of tunnel lining delivery on a Multi-Service Vehicle (MSV), erection of lining segments, and completed tunnel lining. The concrete tunnel lining segments are 5 feet wide, 12 inches thick, and 18 feet in interior diameter. Each circular lining segment/ring consists of six trapezoidal precast concrete pieces. As the tunneling is progressing, the TBM pushes off, and the tunnel lining is installed 5 feet at a time. The construction progress varies from 100 feet per day to 20 to 30 feet per day. A variety of pipes within the tunnel (shown in a photo) transport energy, water, slurry, and air to/from the TBM.

A slide showed photos of the liner installation at Ring 5380 (R5380) on February 19, 2025 (installation on January 13, 2025); May 9, 2025; and May 12, 2025. The segments were installed between January 29 and 31, 2025. On February 13, 2025, a crack developed. The location of the crack was marked, and horizontal compression was recognized. On March 20, 2025, an engineer from Sener, the Contractor's designer of the precast concrete tunnel liner system, determined that the issue was stabilized and proposed continuous monitoring and installation of steel plates, if necessary, to provide extra strength. The installation of the steel plates was meant to be a temporary correction until a permanent repair could be performed (after the TBM comes back through). On May 9, 2025, the issue with R5380 progressively worsened with water leaking and spalling, as was shown in a photo. The photo of May 12th showed the installation of steel plates, as recommended by Sener. On June 24, 2025, it appeared that the steel plates looked stable.

Once the area of damage was identified, the Contractor began a survey monitoring program (Laser Distance Monitoring and Prism Monitoring with Total Station) to document the liner damage/deformation and observe movement. The Contractor identified that "ovalization" was occurring using Laser Distance Monitoring. The Contractor's expert (Sener) stated that the degree of ovalization was less than the recommended limit, and additional in-tunnel support was not required at the time. In late June, the Districts received communication from the Contractor advising that everything appeared to be fine. The breach occurred shortly thereafter on July 9.

A slide showed the breached area in the tunnel. It is difficult to identify how many tunnel segments failed. It is believed that between 20 to 40 feet of linear pipe was compromised. The breach was discovered when the MSV operator left the TBM to return to the main shaft to reload materials. Upon arriving at the location of approximately R5380 at 7:42 p.m., the MSV operator observed that he could not pass due to the breach. The MSV operator returned to collect the crew from the TBM and to evacuate the tunnel.

A slide showed photos of workers exiting the TBM onto the MSV to evacuate the tunnel. The TBM had lighting, although there was no lighting in the section of the tunnel between it and the area of the breach. All workers safely exited the tunnel and were medically evaluated at the surface by the Los Angeles Fire Department. There were no injuries.

A slide showed the Contractor's first steps. On July 10, CalOSHA "red-tagged" the tunnel, prohibiting entry beyond Ring 47 or the first 235 feet from the tunnel shaft. A proposed "access plan" for entry beyond Ring 47 was submitted to CalOSHA on Friday, July 11, 2025. Districts' staff met with CalOSHA the following Monday to answer questions related to the project from the owner's perspective. The Contractor must re-establish the tunnel ventilation and electrical system, then access the tunnel, remove the debris, and assess it to the failure point.

A slide showed the Contractor's Preliminary Recovery Plan (Plan). The Plan is to secure the area of the breach with an in-tunnel recovery shield, as was shown in a photo. The Contractor will inspect the stability/integrity of the entire tunnel. The Contractor will then prepare/implement a TBM Recovery Plan to include re-establishing ventilation to the TBM, recovering the MSV, examining the TBM and electrical systems, making all necessary repairs, and relaunching the TBM. The timetable is unknown.

The Districts' plan for evaluation of the failure and future repairs was discussed. The Districts will continue to work with the existing consultants, Parsons, the tunnel's designer, and Mott MacDonald, the construction inspector. The Districts will contract with additional engineering consulting firm(s) with expertise on tunnel design and construction to provide an independent review and added expertise to help determine the cause of the breach, provide recommendations for a long-term fix and ensure a safe work environment so that the final construction will not incur failures.

A slide showed the communication plan. The Districts will provide updates as critical steps are accomplished for access to inspect the tunnel, a detailed inspection is performed of the collapsed portion, potential causes of the failure are identified, and a repair plan is developed. Updates are posted on the Districts' web page at www.lacsd.org/clearwatertunnel and www.clearwater.lacsd.org and social media. For further questions, contact Michael Chee, the Districts' Public Information Officer, via email at michaelchee@lacsd.org or phone (562) 908-4288 Ext. 2302 or (562) 325-7329.

There is no definitive cause of the breach at this time. Data leading to the incident has been collected. The Districts' Construction Inspector and FlatironDragados are familiar with the area of the breach.

Director McOsker, City of Los Angeles, advised that the community meeting has been confirmed for Saturday, August 9, 2025, at 10:00 a.m. His office and Supervisor Hahn's office have received information from residents reporting land depression. He asked about the rate of dewatering.

In response to Director McOsker, the Chief Engineer and General Manager advised that dewatering has been ongoing during drilling and at the current time. At the time of the failure, staff suspected that there was a backup of water that could have contributed to the breach.

In response to Director Barakat, Mr. Espinoza and the Chief Engineer and General Manager discussed details of the actual diameter that the TBM excavates and process of setting the tunnel liners.

Upon motion of Director Barger, duly seconded and unanimously carried, the meeting was adjourned.

ALI SAJJAD TAJ
Chairperson

ATTEST:

KIMBERLY S. CHRISTENSEN
Secretary

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