THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Engineering Services Group

- **Engineering Services Group Monthly Activities Report for November 2025**

Summary

This monthly report provides highlights and a summary of Engineering Services Group activities for November 2025 in the following key areas:

- Colorado River Aqueduct (CRA) Program
- Dams & Reservoirs Program
- Distribution System Program
- Additional Facilities and Systems Program
- Prestressed Concrete Cylinder Pipe (PCCP) Program
- Water Treatment Plants Program
- Pure Water Southern California
- Drought Mitigation – State Water Project Dependent Areas
- Value Engineering Program
- Plant Engineer Summit at Jensen Plant
- Career Launch Program in its 14th Year
- MetWorks Event 2025

Purpose

Informational

Attachments

Detailed Report – Engineering Services Group's Monthly Activities for November 2025

Date of Report: December 8, 2025

Engineering Services' Monthly Activities for November 2025

Highlights

In the month of November, Engineering Services embarked on the following major actions in support of the General Manager's business plan for Fiscal Year 2025/2026:

Goal: Execute CAMP4W Implementation Strategy to Integrate Climate Adaptation District-Wide
Outcome: Identify climate adaptation strategies
• In late October, Engineering Services conducted a four-day workshop focused on development of a long-term energy strategy that is reliable, affordable, and sustainable. The workshop was attended by power operations, water operations, water planning, engineering, SRI Office, Legal, and Finance, with contributions from world-class power development and transmission consultants. Findings from the workshop will be published by the end of the year.
Goal: Complete EIR and Planning, for Board to Consider Pure Water Southern California
Outcome: Complete EIR analyses and public process
• Hosted tours for the Pure Water Los Angeles (PWLA) staff at the Grace F. Napolitano PWSC Innovation Center and exchanged program information. Held a focused workshop to discuss integration with PWLA planning.
Goal: Provide Organizational Stability and Deliver Operational Excellence
Outcome: Maintain excellence in daily operations and reliability
• Executing the adopted Capital Investment Plan (CIP) is key to maintaining system reliability. In November, the $94 million construction contract to rehabilitate Basins Nos. 5-8 and Filter Building No. 2 was completed. This was a significant investment to maintain the reliability of Metropolitan's oldest water treatment plant.

In support of the General Manager's Business Plan goal of providing organizational stability and delivering operational excellence, Engineering Services manages and executes projects within the adopted CIP to maintain infrastructure resiliency, ensure regulatory compliance, enhance sustainability, and provide flexibility in system operations to address uncertain water supply conditions. In addition, Engineering Services provides technical services to enhance reliable

system operation and real property planning, valuation, acquisition, and disposition services to protect Metropolitan's assets. Engineering Services empowers our staff and partners with our business partners and the communities we serve to accomplish Metropolitan's mission.

Recent key activities on CIP programs and other key engineering functions are described below.

Protect public health, the regional economy, and Metropolitan's assets

Colorado River Aqueduct (CRA) Program

The CRA program includes CIP projects to replace or refurbish facilities and components of the CRA system to reliably convey water from the Colorado River to Southern California.

- CRA Intake Transformer Bank Protection Relay Replacement — This project involves replacing the 20-year-old protection relays and associated components in Panels 1R and 3R of the Main Transformer Banks at the Gene Pumping Plant. Procurement of the new panels is currently underway, with delivery anticipated by the end of December 2025. Final design for the interconnection of the new panels is 85 percent complete and scheduled to be complete by December 2025.
- CRA Eagle and Hinds Utility Replacement — This project will replace the existing potable water, non-potable water, and sewer lines at the Eagle Mountain and Hinds pump plants house. Design is complete, and Metropolitan's Board awarded a construction contract in November 2025.
- Black Metal Mountain Electrical Upgrades — This project replaces the existing single-phase 2.4 kV power line delivering power to the Black Metal Mountain communication site with a more robust three-phase power line rated for 4.16 kV usage. The project will also enhance the main access road to the communications sites. Final design is 80 percent complete and scheduled to be complete by February 2026.
- Erosion Control Improvements — This project will install erosion control features along the CRA conveyance system at 26 conduit locations that are vulnerable to major erosion damage during storm events. Final design is 15 percent complete and is scheduled to be complete by September 2027.

Dams & Reservoirs Program

The Dams & Reservoirs Program includes CIP projects to upgrade or refurbish Metropolitan's dams, reservoirs, and appurtenant facilities to reliably meet water storage needs and regulatory compliance.

- Copper Basin Discharge Valve Replacement — This project installs a new 54-inch fixed cone valve and actuator at the base of the dam, refurbishes a slide gate and the existing valve house, and upgrades all associated electrical systems, the access road, and access ladders at the Copper Basin Reservoir. This project will also include the replacement of access ladders at the Gene Wash Dam. Final design

is complete, and acquisition of environmental permits is in progress. Award of a construction contract is planned for Spring 2026.

- Garvey Reservoir Rehabilitation — This project will replace the aging reservoir floating cover and liner; strengthen the structure of the reservoir outlet tower to reduce the risk of damage following a major seismic event; and upgrade the reservoir's rainwater collection, pumping, and subdrain systems. Final design is complete, and the project was advertised for bids in August 2025. Board award of a construction contract is planned for December 2025. Construction is scheduled to be complete by Spring 2028.
- Lake Mathews Pressure Control Structure (PCS) and Electrical System Upgrades — This project will replace the aging Lake Mathews discharge facility and electrical system. The project includes the construction of a new PCS with a bypass pipeline alongside the existing forebay, a new chlorination facility, and upgrading the electrical system to accommodate future power needs. This project utilizes a progressive design-build project delivery method. A request-for-qualifications (RFQ) for Phase 1 design-build services was released in September 2025. Six statements of qualification were received in November 2025, and a board action to authorize the Phase 1 agreement is planned for June 2026. The project is anticipated to be complete by 2032.

Distribution System Program

The Distribution System Program includes CIP projects to replace, upgrade, or refurbish existing facilities within Metropolitan's distribution system, including PCSs, hydroelectric power plants, and pipelines, to reliably meet water demands.

- Auld Valley Pressure and Red Mountain Control Structure (PCS) Valve Replacement — This project will rehabilitate one 42-inch sleeve valve and procure one 42-inch sleeve valve for the Red Mountain Pressure Control Structure and rehabilitate two 42-inch sleeve valves for the Auld Valley Pressure Control Structure. One valve at the Auld Valley PCS has been rehabilitated, and the second one is currently being rehabilitated by Metropolitan forces. Both valves will be installed during a future shutdown. Metropolitan is currently reviewing the submittals provided by the vendor to procure the new 42-inch sleeve valve for Red Mountain, which is planned to be installed in the fall of 2026.
- Service Connection LA-17 Venturi Flow Meter Replacement — This project will replace two venturi flow meters in the LA-17 service connection that serves the Los Angeles Department of Water and Power at the end of the Eagle Rock Lateral. One flow meter, LA-17A, is 24 inches in size, and the other, LA-17C, is 84 inches in size. Both flow meters will be replaced by Metropolitan forces during a shutdown tentatively scheduled for November 2026. Final Design has been completed. Board award of a procurement contract for the two meters is planned for December 2025.
- Service Connection B-01 Rehabilitation — This project will replace the venturi flowmeter, one 18-inch-diameter conical plug valve, and one 18-inch-diameter check valve at the B-01 service connection that serves treated water from the Weymouth Water Treatment Plant to the City of Burbank. A board action for the award of the conical plug valve procurement contract is scheduled for December 2025. Final Design is expected to be completed by April 2026.

Additional Facilities and Systems Program

The Additional Facilities and Systems Program includes CIP projects to refurbish, replace, upgrade, or provide new facilities and systems that support Metropolitan's business and district-wide operations.

- Diamond Valley Lake (DVL) Wave Attenuator Replacement — This project adds a second attenuator to the existing wave attenuating system at the East Marina in Diamond Valley Lake. As part of the improvements, the existing floating wave attenuator (FWA) will be relocated to a new location, and the new attenuator will be installed in its place. The contractor completed the installation of the safety ladders and life rings on the existing FWA; continued fabrication of the new North FWA modules; continued assembly and fit-up of the new North FWA modules; and began installation of the solar navigation lights on the new and existing FWA. Construction is 93 percent complete and is scheduled to be complete in January 2026.
- Lake Mathews Diesel Storage Tank Replacement — This project will procure and install a new 6,000-gallon above-ground diesel fuel tank at Lake Mathews. A fuel dispensing system will also be installed, as well as control systems for the fuel tank, electrical connections, and employee safety features. Final design is complete, and a board action for award of a construction contract is scheduled for February 2026.
- New La Verne Warehouse Improvements — The new La Verne Warehouse project involves the demolition of existing warehouse buildings 30 and 31, and construction of a new 60,000 square-foot reinforced concrete tilt-up warehouse with a new loading dock, and an additional 30,000 square feet of outdoor canopy storage space. The new warehouse building will include the Central Stores Warehouse and Investment Recovery Teams. The building will include conference rooms, offices, a breakroom, public counters for each team, and storage facilities. Preliminary design is underway, and a draft Preliminary Design Report is expected by January 2026.
- CRA Aircraft Facilities Improvements Stage 1 — This project will refurbish the pavement and access roads, and upgrade the lighting at the Gene, Iron Mountain, Eagle Mountain, and Hinds Pumping Plants' aircraft runways. In addition, new weather stations will be installed at the Eagle Mountain and Hinds Pumping Plants. Preliminary design is 10 percent complete and is scheduled to be complete by April 2026.
- CRA Aircraft Facilities Improvement Stage 2 — This project will install a new aircraft hangar at the Gene runway facility that will provide indoor parking for Metropolitan's caravan aircraft. The study phase is complete, and staff is preparing to begin preliminary design.

DVL FWA Replacement — Installation of Signage on North FWA

Prestressed Concrete Cylinder Pipe (PCCP) Program

The PCCP Program includes CIP projects to refurbish or upgrade Metropolitan's PCCP feeders to maintain water deliveries without unplanned shutdowns.

- Second Lower Feeder PCCP Rehabilitation Reach 3B — This project installed 3.7 miles of steel lining and three conical plug valves along a portion of the Second Lower Feeder that traverses the cities of Lomita, Los Angeles, and Torrance. Construction is complete, the contractor demobilized from the laydown and storage site, change orders, and punch list items on Western Avenue and the modifications to the Palos Verdes Reservoir Bypass Line. Meter warranty work will be completed during the 2026/2027 shutdown season.
- Sepulveda Feeder PCCP Rehabilitation Reach 2 — This project installs steel lining along 3.8 miles of PCCP through several cities, including the cities of Torrance and Los Angeles. Final design is complete, and a board action for a contract award is planned for January 2026. The project is expected to be complete by mid-2027.
- Sepulveda Feeder PCCP Rehabilitation Reach 9 — This project will rehabilitate approximately 3.7 miles of 120-inch to 96-inch diameter PCCP with a combination of solid steel and coiled steel liner systems. Reach 9 is located on Hayvenhurst Avenue from near State Route 118 to just north of the Van Nuys Airport in Los Angeles. Additionally, a new 54-inch sectionalizing valve and valve structure will be installed on the Sepulveda Feeder near the intersection of Hayvenhurst and Chatsworth Street. Final design for Reach 9 is 98 percent complete and is scheduled to be complete by February 2026.

- Foothill Feeder Acoustic Fiber Optic (AFO) Installation — This project will install an acoustic fiber optic monitoring system within the 201-inch diameter Foothill Feeder to allow continuous monitoring of the 6.5 miles of PCCP portions, minimizing the need for expensive, prolonged shutdowns. The project team is evaluating options for dewatering the pipeline now that quagga muscles have been discovered in the West Branch of the State Water Project. Installation of the AFO system is currently scheduled during the Foothill Feeder shutdown in January 2027.

Palos Verdes Helopod Operational Testing

Water Treatment Plants Program

The Water Treatment Plants Program includes CIP projects to replace or refurbish facilities and components at Metropolitan's five water treatment plants to continue to reliably meet treated water demands.

- Weymouth Basins 5–8 and Filter Building No. 2 Rehabilitation — This project rehabilitates major mechanical and structural components of Basins 5–8 and Filter Building No. 2 at the Weymouth plant, including the flocculation/sedimentation equipment, sludge pumps, baffle boards, walls, launders, and outlet drop gates. The project also includes seismic upgrades of basin walls and inlet channel, hazardous material abatement, and replacement of inlet gates in Basins 1-4 and filter valves and actuators in Filter Building No. 2. Rehabilitation work and equipment testing for the basins is complete. The contractor completed the testing of filter valves and actuators in Filter Building No. 2. Construction is complete.
- Weymouth Administration Building Upgrades — This project upgrades the Weymouth Administration Building to withstand a significant earthquake. The planned upgrades include structural strengthening consistent with current seismic standards for essential facilities, accessibility, and fire/life safety improvements, architectural modifications near the areas of structural upgrades, and improvements

associated with the preservation of historic architectural features. Final design is complete, and the project will be ready for advertisement for construction bids in January 2026.

- Diemer Chemical Feed Facility Improvements — This project rehabilitates the Diemer plant's chemical feed facility to maintain operational reliability, meet Metropolitan's current chemical safety standards, and enhance worker safety. The Board awarded a construction contract in October, and the Notice to Proceed was issued to the contractor in November 2025.
- Water Quality Lab Building Upgrades — This project upgrades the Michael J. McGuire Water Quality Laboratory in La Verne to increase its seismic resiliency and to efficiently address new and evolving water quality issues and regulations. Final design is approximately six percent complete and is scheduled to be complete in Spring 2028.

Weymouth Basins 5–8 and Filter Building No. 2 Rehabilitation — Valve and Actuator Display, South of Moreno Ave. Entrance

Adapt to changing climate and water resources

Pure Water Southern California

Pure Water Southern California (Pure Water) is a large regional recycled water program that will provide a new local source of safe and reliable drinking water for Southern California. Pure Water currently focuses on five areas: program management, environmental planning, advanced water purification facility (AWPF) planning, demonstration testing, and preliminary design of initial pipeline reaches. Pure Water will produce up to

150 million gallons per day of purified water from the AWPF in Carson for indirect potable reuse (IPR) and direct potable reuse (DPR) applications.

- Program Management — Program management activities include project controls, scheduling, budget development, risk management, coordination with program partners and stakeholders, grants and funding, and preparation of various plans and studies. The Pure Water Program Management team was engaged in the following activities during this reporting period:
    - Presented program updates and community benefits to the Board in October 2025.
    - Continued coordination and grant reporting efforts with the United States Bureau of Reclamation for the $125,472,855 Large-Scale Water Recycling Program grant and the $5 million WaterSmart grant. Metropolitan has received a total of approximately $25.5 million to date.
    - Updated the CAMP4W preliminary assessments for 45-, 75-, and 150-mgd scenarios.
    - Submitted the final SB149 application for streamlining potential CEQA litigation. Certification is anticipated in December or January.
    - Met with Long Beach Utilities, West Basin Municipal Water District and Water Replenishment District to confirm their potential demands for purified water.
- Environmental Planning — The draft EIR was published in May 2025, and the 60-day public review period has closed. Staff is reviewing comments received and preparing responses. A board action to consider certification of the final EIR is anticipated in early 2026.
- Advanced Water Purification Facility — The AWPF will purify treated wastewater from the Los Angeles Sanitation District's (LACSD) A.K. Warren Water Resource Facility using membrane bioreactors (MBRs), reverse osmosis (RO), and ultraviolet/advanced oxidation. With its expertise in biological wastewater treatment, LACSD will be responsible for implementing the AWPF pretreatment, including the MBR facilities. A final draft of conceptual facilities report has been prepared. This document records key assumptions of AWPF components and would be used for the upcoming RFQs for the progressive design-build contracts to design and construct the full-scale AWPF.
- Demonstration Testing — Operational improvements have been made at the Napolitano Innovation Center for the continued testing of the IPR processes, including the installation of a RO concentrate pilot testing system and more MBR cassettes. Planning of pilot-scale and demonstration-scale testing of DPR processes is in progress. Key testing equipment will be procured in 2026 to facilitate the design of the DPR testing facility.
- Conveyance System — The PWSC conveyance system consists of the backbone pipeline that extends 39 miles from the AWPF, repurposing an existing pipeline owned by the San Gabriel Valley Municipal Water District, and constructing a new DPR pipeline to convey water from the backbone eastward for raw water augmentation at Metropolitan's Weymouth plant. The Conceptual Design Report for the entire conveyance system has been completed. Preliminary design of the first two pipeline reaches across the cities of Carson, Long Beach and Lakewood is in progress. The RFQ for the CM/GC contract(s) for these two reaches is also being prepared.

Drought Mitigation — State Water Project Dependent Areas

The Drought Mitigation—State Water Project Dependent Areas Program includes CIP projects to replace, refurbish, upgrade, or construct new facilities, which are identified to mitigate the vulnerability experienced by specific member agencies that are affected during shortages of State Water Project supplies.

- Wadsworth Bypass Pipeline — This project installs a bypass pipeline and an isolation valve to interconnect the Wadsworth Pumping Plant with the Eastside Pipeline. This project is one of the four Rialto Pipeline service area supply reliability improvement projects. The contractor is currently installing owner-furnished control components. Construction is 99 percent complete and is scheduled to be completed in February 2026.
- Inland Feeder-Rialto Pipeline Intertie — This project installs an interconnection pipeline and isolation valve structure between the Inland Feeder and Rialto Pipeline so that water can be delivered from DVL to the Rialto Pipeline. This project is one of the four Rialto Pipeline service area supply reliability improvement projects. The contractor is currently performing electrical work in preparation for the MCC electrical equipment delivery in early 2026. Also, the contractor is coordinating with SCE for future energization of the equipment. Construction is 91 percent complete and is scheduled to be completed in August 2026.

Sustain Metropolitan's mission with a strengthened business model

Value Engineering Program

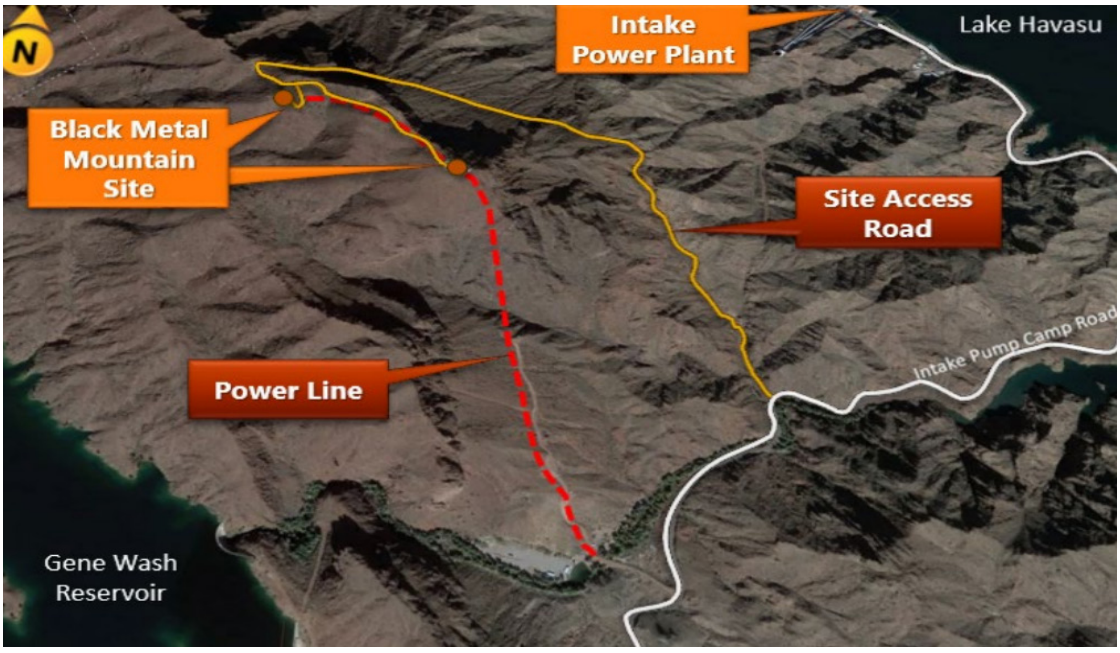
Engineering Services conducts a Value Engineering (VE) program to review capital projects and identify opportunities and alternatives to enhance project performance, optimize funding for CIP projects, and demonstrate responsible use of public funds. The objective of the VE program is to improve the overall value of CIP projects by applying an industry-accepted assessment methodology to examine a project's function, design, equipment, material selections, and contracting approach. This comprehensive assessment is conducted at strategic stages in a project's life cycle.

Black Metal Mountain Electrical Power Upgrade

Engineering performed a Constructability Review (CR) for the Black Metal Mountain 2.4 kV Electrical Power Upgrade project. This project will construct a new electrical powerline to serve the telecommunications facilities at the peak of Black Metal Mountain, which is located between Gene Wash Reservoir and the Colorado River. The new powerline will increase reliability and accommodate electrical load growth for Metropolitan's critical communications systems as well as systems leased to other public agencies and private firms. The construction project will also make improvements to the single road to the mountain peak. The existing road is steep, rugged, and susceptible to rockfalls. The project will improve safety for staff and other entities who access the site.

The CR Team, consisting of Project Management, Design, Construction Management, Operations and other Metropolitan staff, outside Subject Matter Experts, and a consultant Certified Value Specialist to lead the workshop, met virtually in early November. The workshop examined plans and specifications, reviewed construction sequencing options, evaluated constructability and biddability issues, and identified construction-related risks and mitigation actions.

Black Metal Mountain Communications Site



Black Metal Mountain Site Access/Location

Empower the workforce

Plant Engineer Summit at Jensen Plant

Plant and field engineers meet three times a year to share experiences and challenges of the role of the plant engineer. This summit enhances cross-training and provides an opportunity for the participants to identify key areas of needed operation support on engineering-related projects. During the last summit that took place on October 29 at the Jensen plant, plant engineers discussed the importance of a strong safety culture and the plant engineer's role in upholding this culture at all Metropolitan's sites. The plant engineers also visited the Jensen construction sites including the washwater reclamation plant rehabilitation, and exchanged ideas about enhancing the strategy to implement projects to rehabilitate aging infrastructure, and how the master schedules per region might be used to prioritize these projects. The next summit is planned to take place in Spring 2026 at the Weymouth plant.

Plant Engineers meet at the Jensen Plant for their Summit

Career Launch Program in its 14th Year

In November, Engineering Services kicked off the 14th year of its Career Launch Program, a workforce development initiative designed to support new staff during the onboarding process. The program helps participants adapt more quickly to their roles by reinforcing Metropolitan's mission and Engineering Services'

role in achieving it. It also focuses on building relationships, clarifying expectations, and inspiring continued professional growth and leadership.

At the kickoff event, 18 participants were introduced to John Shamma, Interim Assistant Group Manager of Engineering Services, and Francisco Becerra, Program Management Section Manager, who provided an overview of the program and outlined expectations for this cohort.

The Career Launch Program is a cornerstone of Engineering Services' workforce development efforts. It consists of six modules over six months, including one session featuring a tour of a Metropolitan facility.

Engineering's New Hires Attend the Career Launch Kickoff Meeting

Interim Assistant Group Manager John Shamma Welcomes New Staff

Section Manager Francisco Becerra Shares Expectations and Experiences with New Staff

Partner with interested parties and the communities we serve

MetWorks Event 2025

The annual MetWorks conference serves as a signature event and platform to connect construction and consulting suppliers with Metropolitan, the member agencies, and other public agencies. This event offers a deeper understanding of how to conduct business with Metropolitan and highlights the resources available to support participation in public contracting. This year, Metropolitan hosted the event on October 23, 2025, at Pacific Palms in the City of Industry.

Six member agencies provided updates to participants on their respective Capital Improvement Projects and shared future contracting opportunities, offering local businesses direct insight into upcoming opportunities to bid on public works projects. This includes: City of Glendale, City of Santa Monica, City of Pasadena, Inland Empire Utility Agency, Los Angeles Department of Water & Power, West Basin Municipal Water District and San Diego County Water Authority (Exhibitor only).

This year, we are proud to announce that Metropolitan achieved a new milestone, with over 600 attendees joining us at the in-person event. This record-breaking number of attendees came together in a dynamic environment, exchanging ideas and connecting with a wide range of opportunities to bid on upcoming infrastructure projects. Heartfelt thanks to Chair Ortega and Director Erdman for their attendance and leadership.

Chair Ortega Addressing the Crowd at MetWorks

A Sampling of 600 Attendees that Participated at MetWorks

Chair Ortega Speaking to a MetWorks Attendee

Metropolitan's Staff at MetWorks