



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Board Report

Engineering Services Group

• **Engineering Services Group Monthly Activities Report for October 2025**

Summary

This monthly report provides highlights and a summary of Engineering Services Group activities for October 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
- Assistant Engineer Rotational Program (New)
- Mentoring Program Culmination & Celebration

Purpose

Informational

Attachments

Detailed Report – Engineering Services Group’s Monthly Activities for October 2025

Engineering Services' Monthly Activities for October 2025

Highlights

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

Goal: Complete Environmental Impact Report (EIR) and Planning for Board to Consider Pure Water Southern California
Outcome: Complete EIR analyses and public process
Submitted draft application to California Governor's Office of Land Use and Climate Innovation for SB 149 certification to allow streamlining of potential CEQA litigation. Received comments and submitted final application in October.
Goal: Achieve Equitable Supply Reliability for State Water Project Dependent Areas
Outcome: Execute board-approved supply reliability projects
Conducted a hydraulic test to deliver water from DVL to the San Bernardino Valley Municipal Water District (SBVMWD) using the eastern region drought projects. The test was successful and utilized the newly constructed Wadsworth Pump Station Bypass and the Badlands surge tank. All construction on the Badlands Tunnel Surge Protection contract was completed.

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 Domestic Water Treatment System** — This project upgrades the domestic water treatment systems at all five CRA pumping plants, including the replacement of the water treatment units. The contractor has installed the temporary treatment skid system at the Intake Pumping Plant. The temporary skid will remain in operation until installation, testing, and commissioning of the new system is complete. Installation of the electrical and mechanical systems to support the new equipment is underway at Intake Pump Plant. Installation of the temporary skid at Gene Pumping Plant is planned for October, followed by a 14-day water quality testing period. Construction is 52 percent complete and is scheduled to be complete in April 2027.
- **CRA New Storage Buildings** — This project furnishes and installs pre-engineered storage buildings at Hinds, Eagle Mountain, and Iron Mountain Pumping Plants and constructs associated site improvements. Construction is ongoing at all three pumping plants. The overhead rollup doors are being installed at Iron Mountain Pump Plant. Trim work for the buildings is underway at Eagle Mountain Pump Plant. The contractor is completing the electrical work for the buildings at Hinds Pump Plant. Construction is 87 percent complete and is scheduled to be complete in April 2026.
- **CRA Main Pump Transformers Procurement** — This project replaces thirty-five 230 kV and 69 kV step-down transformers that are used to operate the main pumps at all five of Metropolitan's Colorado River Aqueduct pumping plants. The Board awarded a procurement contract and authorized a consulting agreement for final design in May 2025. Submittal reviews are underway for procurement, and the design for transformer fabrication is expected to be completed by late 2026. Deliveries are scheduled to begin in late 2028 and conclude by 2030.
- **CRA Pump Plant Sumps Rehabilitation** — This project rehabilitates the sump and circulating water systems at all five CRA pumping plants. The scope of work also includes replacement of the structural support systems, piping, valves, motors, and electrical equipment. Final design is 95 percent complete and is anticipated to be complete by November 2025. Award of the construction contract is currently scheduled to be requested in the March 2026 board meeting.

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.

- **Diamond Valley Lake Secondary Inlet Valve Rehabilitation** — This project will rehabilitate the 72-inch-diameter inline sleeve valve and inlet piping and replace the instrumentation at the DVL Reservoir

secondary inlet. Metropolitan staff has completed the rehabilitation of the sleeve valve and has installed the valve and tested its operation. Flow testing of the 96-inch-diameter piping is expected to be complete in late October 2025.

- **Lake Skinner Outlet Tower Tier 5 Butterfly Valve Replacement** — This project replaces two 42-inch-diameter butterfly valves and actuators to ensure that Lake Skinner can be fully dewatered for dam safety. The replacement of the existing faulty valves is required to meet the Department of Safety of Dams requirements. The latest fabrication schedule shows valve delivery at the end of June 2026. A revised fabrication schedule is pending from the manufacturer by the end of October 2025, based on the latest feedback from Metropolitan on the valve submittals.
- **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. Award of a construction contract is planned for December 2025.
- **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. An RFQ for Phase 1 design-build services was released on September 18, 2025, and the Phase 1 contract is expected to be awarded in spring 2026. The project is anticipated to be complete by 2031.

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.

- **Wadsworth Sleeve Valve Replacement Refurbishment** — This project refurbishes seven sleeve valves at the Wadsworth Pumping Plant. A total of five units have been refurbished. The project is 70 percent complete and is scheduled to be complete in December 2025.
- **Lakeview Pipeline Procurement** — This project will procure 12,500 feet of steel liner pipe segments with diameters ranging from 114 inches to 117 inches. This initial quantity of Metropolitan-furnished pipe will allow the future Lakeview Pipeline Stage 2 project contractor to begin field installation while they are procuring the remaining pipe segments. Fabrication has been completed, and all pipe segments have been delivered and are currently stored at the Etiwanda Pressure Control Facility.
- **Hollywood Tunnel North Portal Equipment Upgrades** — The project will replace the existing worn valves with two new 24-inch-diameter sleeve valves operated by electric actuators for pressure control and two 24-inch-diameter bonneted knife gate valves for flow isolation at the Hollywood Tunnel North Portal along the Santa Monica Feeder. The valve procurement contract was awarded at the March 2025 board meeting. Final design for the valve installation is 90 percent complete and scheduled to be complete by December 2025.

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.

- **La Verne Shops Improvements** — This project will improve the La Verne Shops building and install Metropolitan-furnished shop equipment. The contractor installed the plasma cutter, roof access ladders, air compressor equipment, and a new waterjet system. Construction is approximately 97 percent complete and is scheduled to be complete by December 2025.
- **Colorado River Aqueduct District Housing Improvements** — This project will replace aging housing after decades of use in the harsh desert environment with new townhomes, implement village enhancements and amenities, and replace kitchens and lodges at the CRA pumping plants. A community vision planning effort was recently completed. The District Housing Improvements will be completed in a sequential manner over four stages. Conceptual design of an alternative housing model layout is underway at four pumping plants (Hinds, Eagle Mountain, Iron Mountain, and Gene). Conceptual design is 90 percent complete and is scheduled to be complete by November 2025.



La Verne Shops Improvements — Installing Refurbished Vertical Turning Lathe Main Assembly at Fabrication Shops

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, completed all warranty work, change orders, and punch list items on Western Avenue and the modifications to the Palos Verdes Reservoir Bypass Line.
- **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 the project was advertised on August 27, 2025. 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 19,400 linear feet 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 95 percent complete and is scheduled to be complete in February 2026.
- **Calabasas Feeder PCCP Rehabilitation** — This project will rehabilitate 9.3 miles of PCCP segments with steel liner through the city of Los Angeles. Survey and mapping of potential Pipe Access Sites is underway. Preliminary design is 75 percent complete and is scheduled to be complete by March 2026.
- **Rialto Pipeline PCCP Rehabilitation** — This project will rehabilitate a total of 16.2 miles of PCCP segments of the Rialto Pipeline. Preliminary design of Reach 1, approximately 5.5 miles of PCCP from the Indian Hills valve structure to San Dimas HEP, has been completed. Preliminary design of Reaches 2 and 3, from Rialto Valve to CB-20, is planned to begin by mid-2026.



Second Lower Feeder PCCP Rehabilitation Reach 3B — Palos Verdes Reservoir
Placing Concrete Thrust Blocks for Helopod

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 replacement of filter valves and actuators in Filter Building No. 2 and began **testing**. Construction is 99 percent complete and is scheduled to be complete in December 2025.
- **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 a board action for a contract award is planned for March 2026.
- **Diemer Filter Rehabilitation** — This project rehabilitates the 48 filters at the Diemer plant to enhance filter performance, minimize filter media loss, and rehabilitate or replace aging components. Planned

upgrades include replacing filter media, filter valve actuators, and instruments; modifying the filter upstream influent weir and surface wash laterals; and improving the coal grit removal facilities for the east and west sides of the plant. Final design is complete. The award of a construction contract has been coordinated with other CIP priorities and will be scheduled in future biennia.

- **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. Planned improvements include replacing the two existing fluorosilicic acid storage tanks which have reached the end of their service life; refurbishing and replacing chemical feed equipment and piping; improving the secondary containment layout, including relocation of controls and addition of safety features; conversion of the dry polymer tank farm into a multipurpose feed facility to serve as backup for other compatible chemicals as needed; and replacement of the facility roof structure. The Board awarded a construction contract in October 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. Planned improvements include strengthening of the existing structure to meet current seismic criteria for essential facilities; building expansion and functional layout improvements; replacement of specialized laboratory equipment; and implementation of technology upgrades to support current and future water quality regulations. Final design is approximately six percent complete and is scheduled to be complete in spring 2028.
- **Weymouth Hazardous Waste Staging and Containment Facility** — This project relocates the existing Hazardous Waste Staging and Containment Facility to the existing sulfuric acid tank farm. The project improvements enhance compliance with current codes and provide additional safety measures, including spill containment, eyewashes, and safety showers. Construction was completed in October 2025, and staff has filed the project Notice of Completion.



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 updated program cost estimate, schedules, and cashflow projections to the Board in September 2025.
- Continued coordination and grant reporting efforts with the United States Bureau of Reclamation (USBR) for the \$125,472,855 Large-Scale Water Recycling Program grant. Metropolitan has received approximately \$17.4 million to date. Additional reimbursements are anticipated in October.
- Completed the CAMP4W preliminary assessments for 45-, 75-, and 150-mgd scenarios.
- Submitted the SB149 application for streamlining potential CEQA litigation.
- Met with the San Gabriel Valley Municipal Water District for use of their Azusa pipeline to convey water to the Weymouth Plant for DPR, and their potential investment in Pure 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 Districts' (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.

- **Foothill Pump Station Intertie** — This project will connect Metropolitan’s Inland Feeder to the SBVMWD Foothill Pump Station. The project is one of four Rialto Pipeline service area supply reliability improvement projects. Foothill Pump Station will provide the hydraulic lift for direct water delivery from Diamond Valley Lake to the Rialto Pipeline. The project will install supply and discharge bypass pipelines, isolation valves and their vault, and a surge protection system. Final design is planned to be completed by Fall 2025; however, the project requires permits from CA Fish and Wildlife and US Fish and Wildlife (USFWS) to address impacts on an endangered species found at the project site. The project will receive a \$5M USBR grant, and USBR will assist Metropolitan with permit consultation with USFWS. USBR has officially begun USFWS consultation as of July 22, 2025.
- **Inland Feeder-Badlands Tunnel Surge Protection** — This project installs a new open-to-atmosphere surge tank at the south portal of the Badlands Tunnel, which will protect the Inland Feeder from hydraulic transients when pumping water from Diamond Valley Lake to the Rialto Pipeline. This project is one of the four Rialto Pipeline service area supply reliability improvement projects. The contractor has completed the improvements, and the Notice of Completion has been filed.
- **Sepulveda Feeder Pump Stations** — This project installs new pump stations at the existing Venice and Sepulveda Canyon pressure control facilities, providing the ability to reverse flow in the Sepulveda Feeder and deliver 30 cubic feet per second from the Central Pool to portions of the western State Water Project exclusive area. This project plans to utilize the progressive design-build (PDB) project delivery method. The PDB entity has mobilized and began construction activities for the Venice Pump Station.



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.

Hollywood Tunnel Equipment Upgrades

In October, Engineering conducted a Constructability Review (CR) workshop for the Hollywood Tunnel Equipment Upgrades project. This project aims to replace and update the antiquated system at this control structure, built in 1941, to provide remote SCADA control and indication capabilities. The current system requires frequent maintenance and calibration by Operations staff. Replacement parts are no longer commercially available and must be specially fabricated. Using the value methodology, the team reviewed the critical tasks to occur during the limited shutdowns, discussed construction sequencing, identified risks,

generated and evaluated alternatives, and developed high-value recommendations for the project team's consideration. The workshop team included staff from Project Management, Design, Construction Management, Construction Contracts, Conveyance and Distribution (C&D), Integrated Operations, Planning and Support Services (IOPSS), External Affairs, and Environmental Planning, as well as consultant Subject Matter Experts.



Hollywood Tunnel North Portal Control Structure



Empower the workforce

Assistant Engineer Rotational Program (New)

This month, Engineering Services launched a pilot workforce development program for a recently-hired cohort of eleven Assistant Engineers. The Assistant Engineer Rotational Program (AERo) will enable participants to select two six-month rotations in engineering-focused teams within Engineering Services. Participants will have the opportunity to meet and work with people across Engineering Services, experience different aspects of the organization, develop new skills and cross-train, stay engaged and interested in the work of Engineering Services, and gain meaningful early-career engineering design and field experience to support Professional Engineer licensure. The AERo Program will enhance near-term and long-term resource planning efforts and

aligns seamlessly with Engineering Services' current workforce development programs - Mentoring Program and Career Launch Program.



AERo Program Kickoff Meeting

Mentoring Program Culmination & Celebration

Engineering Services mentors and mentees celebrated the culmination of their participation in the 2025 Engineering Services Mentoring Program, which marked its 13th year. Engineering maintained strong momentum of this program to increase the level of engagement, commitment and motivation within the program and mentor and mentee relationships; to urge mentors and mentees to stay connected; and to help new hires to acclimate to Metropolitan's environment and prepare them for new opportunities. The Mentoring Program seeks to motivate ongoing professional and technical development, while also enhancing engagement and strengthening the leadership pipeline.



Engineering Services Mentoring Program - Celebrating 13 years



Chief Engineer Mai Hattar addresses Engineering Services Mentoring Program participants in a celebratory culmination meeting



Mentors and Mentees exchange testimonials on overall program experiences