THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Engineering Services Group

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

Summary

This monthly report provides highlights and a summary of Engineering Services Group activities for August 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
- Partnering Workshop

Purpose

Informational

Attachments

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

Date of Report: September 2025

Engineering Services' Monthly Activities for August 2025

Highlights

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

Goal: Follow Through on Business Model Refinement Recommendations
Outcome: Initiate an Integrated Strategy for Infrastructure Reliability (ISIR)
• Completed the second bi-monthly meeting with member agencies to advance the goals and objectives for the ISIR effort. The third workshop is scheduled for September 19, 2025. • Initiated a Phase 2 study for the East-West Conveyance Pipeline.
Goal: Develop a Biennial Budget that Meets Metropolitan's Needs
Outcome: Implement risk-informed capital investment planning to ensure reliable critical infrastructure
• As of early August, the Capital Investment Plan (CIP) Evaluation Committee had reviewed and scored 83 new projects and 488 existing projects for inclusion in the biennium 2026/28 CIP. Data from this process will be used to prioritize and plan the CIP out as far as 30 years. This plan is expected to be presented to the Board in March 2026. At the same time, staff is reviewing spending for the current biennium and intends to present options for increasing the current CIP appropriation to accommodate refurbishment and replacement needs.
Goal: Execute CAMP4W Implementation Strategy to Integrate Climate Adaptation District-Wide
Outcome: Identify Climate Adaptation Strategies
• Metropolitan staff executed a task order with a consultant to initiate an operational system and flexibility study. The kick-off meeting was held in August.
Outcome: Evaluate projects and programs using the CAMP4W assessment criteria

- Continued working with the project proponents of Pure Water Southern California (PWSC) and Sites Reservoir to assess resilience criteria.
- The preliminary assessment of PWSC for the full buildout of 150 mgd was presented in July 2025. Additional assessments will be presented on September 30 for additional delivery options. A comprehensive assessment of PWSC using the CAMP4W assessment criteria is scheduled for November 2025.

Outcome: Integrate Climate Considerations and Implement Adaptation Strategies

- Updated criteria for CIP proposal evaluation to add/boost points for projects with sustainability components such as generating or storing renewable energy, reducing reportable GHG emissions, and helping to achieve environmental stewardship and sustainability commitment.

Goal: Complete Environmental Impact Report (EIR) and Planning for Board to Consider Pure Water Southern California

Outcome: Complete EIR analyses and public process

- Completed 60-day public review period for the draft EIR. Currently responding to comments received from agencies, organizations, and individuals. Certification of EIR in early 2026 is on track.

Outcome: Update program cost and staging approach

- Program cost updates are being prepared for each staging approach. A board workshop will be held in September 2025 to present the updated cost information.

Outcome: Convene Regional Water Reuse Collaborative to identify and launch coordination and integration opportunities

- The PWSC team visited the Hyperion Water Reclamation Plant to tour the membrane bioreactor pilot plant. Presentations were made to both PWSC and Pure Water Los Angeles (PWLA) teams on program components, planning, and research efforts to date. Staff also shared program funding information with PWLA. PWSC will host the next collaboration activity at Los Angeles Sanitation's Warren Facility and tour the Grace F. PWSC Innovation Center.

Goal: Achieve Equitable Supply Reliability for State Water Project Dependent Areas

Outcome: Execute board-approved supply reliability projects

- The Notice to Proceed for construction of the Venice Pump Station was issued. This action initiates construction of Stage 1 for the Sepulveda Feeder Pump Stations Project.
- Construction for the Wadsworth Pump Plant Bypass is 97 percent complete and is anticipated to be complete in February 2026.

• Construction for the Inland Feeder Badlands Tunnel Surge Protection is 96 percent complete and is anticipated to be complete in August 2025.
Outcome: Advance Foothill Pump Station/Inland Feeder Intertie Project
• Permit acquisition is on schedule. State permits are anticipated to be obtained in September 2025 and Federal permits in December 2025. • A board action to award a construction contract is planned for early 2026 after environmental permits are obtained.
Outcome: Evaluate Further Potential Investments toward addressing State Water Project Dependent Areas
• Completed the feasibility study to determine the viability and analysis of a conveyance facility from Antelope Valley-East Kern Water Agency VEK conveyance facilities to the State Water Project West Branch.

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 Main Motor Protection Relay Replacement — This project will replace obsolete electromechanical motor protection relays and related components for the forty-five (45) main 6.9 kV pumps at the five CRA pumping plants with modern microprocessor-based relays. Implementation will occur in multiple stages to minimize operational impacts. Stage 1, serving as the pilot, will replace five of the most

deteriorated relays. Installation is two percent complete and anticipated to be complete by September 2026.

- CRA Eagle and Hinds Utilities — 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 a board action to award a construction contract is planned for October 2025.
- 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 90 percent complete and is anticipated to be complete by September 2025.

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.

- Garvey Reservoir Rehabilitation — This project will replace the aging reservoir floating cover and liner, structurally strengthen the outlet tower, upgrade the on-site water quality laboratory building, rehabilitate the junction structure, and replace the existing standby generator and a portion of the security perimeter fence. Design is complete, and award of a construction contract is planned for November 2025.
- Lake Skinner Drainage Improvements – This project replaces the existing drainage ditch at Lake Skinner Dam with an improved trapezoidal drainage ditch to improve stormwater drainage away from the face of the dam. Construction was completed in July 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. It is anticipated that an RFQ for Phase 1 design-build services will be released by September 2025, and the Phase 1 contract awarded in spring 2026. The project is anticipated to be completed by 2031.

Lake Skinner Drainage Improvements – Placing Concrete V-Ditch

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.
- 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 procuring the remaining pipe segments. Fabrication is complete, and pipe deliveries to the Etiwanda Pressure Control Facility began in July 2025 and are expected to continue through the end of September 2025.

Lakeview Pipeline Procurement – Lakeview Pipeline Steel Liner Delivery to Etiwanda Storage Site

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 in December 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. The project also includes revised landscaping and parking, accessibility, and sustainability improvements. Final design is approximately five percent complete and is scheduled to be complete in March 2028.
- 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' runways. In addition, new weather stations will be installed at the Eagle Mountain and Hinds Pumping plants' runways. Preliminary design is approximately 10 percent complete and is anticipated to be complete by December 2025.
- CRA Aircraft Facilities Improvements 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 is approximately 95 percent complete and is anticipated to be complete by September 2025.

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 installs 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. The contract completed the installation of the three conical plug valves and the installation of steel lining in April 2025. The electrical and SCADA work at the valve vaults and site restoration is complete. The contractor continues warranty work and punch list items on Western Avenue and continues with the modifications to the Palos Verdes Reservoir Bypass Line. Construction is 98 percent complete and is scheduled to be complete in September 2025.
- 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 is scheduled to be advertised in August 2025.
- Calabasas Feeder — This project will rehabilitate 9.3 miles of PCCP segments with steel liner through the city of Los Angeles. Preliminary design is 70 percent complete and is scheduled to be complete by March 2026.

Second Lower Feeder PCCP Rehabilitation Reach 3B
Began Excavation for Helo-pod Piping at Palos Verdes Reservoir

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 continued the replacement of filter valves and actuators in Filter Building No. 2. Construction is approximately 97 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 the project is scheduled to be advertised for bids in fall 2025.
- 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 approximately 99 percent complete and is scheduled to be complete in fall 2025.
- Diemer Fluorosilicic Acid Feed Facility Improvements — This project rehabilitates the Diemer plant's fluorosilicic acid feed facility to mantain operational reliability, meet Metropolitan's current chemical safety standards, and enhance worker safety. Planned upgrades include replacing the two fluorosilicic acid storage tanks; refurbishing and replacing chemical feed equipment and piping; improving the secondary containment layout, inlcuding relocation of controls and addition of safety features; and replacement of the facility roof structure. Final design is complete.

Weymouth Basins 5–8 and Filter Building No. 2 Rehabilitation —
MWD Construction Inspector, Christopher Gocken, Inspecting Joint at Basin 8

Adapt to changing climate and water resources

Pure Water Southern California

The PWSC Program is a large regional recycled water program that will provide a new local source of safe and reliable drinking water for Southern California. PWSC currently focuses on four areas: demonstration testing, environmental planning, technical studies, and preliminary design of initial pipeline reaches. PWSC will produce up to 150 million gallons per day of purified water from the Advanced Water Purification Facility (AWPF) in Carson for indirect potable reuse and direct potable reuse (DPR) applications.

- Environmental Planning — The draft EIR was completed, published in May 2025, and the 60-day public review period has closed. Staff is reviewing comments received and preparing responses. Board certification of the final EIR is scheduled for early 2026.
- Program Management — PWSC program management provides project controls, scheduling, budget development, risk management, coordination with program partners and stakeholders, grants and funding, and preparation of various plans and studies.

  - In December 2024, the Board authorized entering into an agreement with the United States Bureau of Reclamation (USBR) to accept up to $125,472,855 in funding under the USBR Large-Scale Water Recycling Program grant. Metropolitan has received approximately $17.4 million from USBR to date.
  - Technical studies are underway to support the planning of DPR implementation and development of program phasing options, including treated water augmentation.
  - A board workshop was held on July 22 to discuss term sheets for future agreements with member agencies that will be directly taking water.
  - Updated program costs are in development and will be presented to the Board this fall.

- 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, 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 has been prepared. This document records key assumptions of AWPF components.

- Direct Potable Reuse — Metropolitan has completed bench-scale testing to screen potential DPR treatment processes that could be used for the program. Planning of pilot-scale and demonstration-scale testing is in progress. Key testing equipment will be procured in the coming months to facilitate the design of the DPR testing facility.

- Conveyance Pipeline 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.
  - Completed the Conceptual Design Report for the conveyance system and continued preparing the comprehensive cost update.
  - Continued coordination with Southern California Edison (SCE) in drafting a lease agreement for Metropolitan's usage of approximately 12 miles of SCE right-of-way along the San Gabriel River.
  - Continued utility and geotechnical field investigations for Reaches 1 and 2, with preliminary design anticipated to be completed by the year's end.

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 and Butterfly Valve Procurement — This project will connect Metropolitan's Inland Feeder to San Bernardino Valley Municipal Water District's 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 needed 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. The project requires permits from CA

Fish and Wildlife and US Fish and Wildlife (USFWS) to address impacts to endangered species found at the project site. The project received a $5M USBR grant, and USBR is assisting Metropolitan with permit consultation with USFWS. USFWS is expected to issue a Biological Opinion by December 2025. Final design is currently in progress and is anticipated to be completed by November 2025.

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 Board authorized an amendment to the PDB agreement in July 2025 to initiate construction 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.

CRA Pumping Plant Sump System Rehabilitation

In August, Engineering conducted a Constructability Review (CR) workshop for the CRA Pumping Plant Sump System Rehabilitation project. This project will replace pumping systems that collect and discharge drainage from plant dewatering and maintenance activities, portions of pump circulating water systems, lighting systems, and sump access ladders and platforms. All these systems date back to the initial construction of the CRA in the late 1930s and have experienced significant corrosion and deterioration during more than 80 years of continual operation.

Originally advertised and awarded in 2018, the contract was later modified to equipment procurement only due to COVID-19 work restrictions in 2020. Long-lead items such as pumps and motors were acquired before the contract was terminated.

This CR examined the current, revised scope of work prior to advertising. The work involved includes replacing equipment integral to pump operations and involves the installation of temporary pumping systems and Metropolitan-Furnished Equipment during limited outage periods. Workshop participants included staff from Design, Construction Management, Construction Contracts, Operations, Environmental Planning, and consultant subject matter experts, guided by a professional facilitator.

Partner with interested parties and the communities we serve

Partnering Workshop

A targeted partnering meeting focused on CRA electrical projects was held in July 2025 to optimize collaboration on electrical protection systems at desert facilities. These projects are shutdown-driven, which creates a cycle of urgency to meet shutdown dates. Construction for these projects is also often performed by Metropolitan forces, which allows for close coordination from the project's initiation to completion. Approximately 25 staff members from the Engineering and Operations Groups were in attendance, including Project Management, Electrical, Design, Hydroelectric, and Desert teams.