THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Engineering Services Group

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

Summary

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

- Colorado River Aqueduct (CRA) Program
- Dams and 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
- Integrated Strategy for Infrastructure Reliability Workshop

Purpose

Informational

Attachments

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

Date of Report: October 2025

Engineering Services
Monthly Activities for September 2025

Highlights

In the month of September, 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)
• Workshop 3, with member agency managers, was conducted on September 19, 2025. • Phase 2 of the Regional East-West Conveyance Study was initiated in August 2025, and multiple meetings with the consultant were conducted to develop a methodology to refine alignments for the raw water pipeline. • Phase 3 of the Surface Water Storage Study was initiated in early September 2025.
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
• A board workshop was conducted on September 23, 2025, to provide an update on program costs and staging approaches.

Goal: Achieve Equitable Supply Reliability for State Water Project Dependent Areas
Outcome: Execute board-approved supply reliability projects
• Construction of four projects to enhance supply reliability to State Water-dependent areas continues. This includes three eastern region projects, which are scheduled to be completed in late 2025/early 2026.
Outcome: Advance Foothill Pump Station/Inland Feeder Intertie Project
• Final design is anticipated to be complete by December 2025. Environmental permitting is ongoing with anticipated completion by February 2026.

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.

- Gene Communications Upgrade — This project will construct a new fiber optic cable line from Parker Dam to Gene Pumping Plant. The new line is predominantly located within Metropolitan fee property on new power poles with a small underground portion of the alignment within the Bureau of Reclamation's property. Construction is complete, and internet service via the fiber optic cable is now fully operational.
- 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 70 percent complete and scheduled to be complete by January 2026.

- Erosion Control Improvements — This project will install erosion control features along the CRA conveyance system at 23 conduit locations that are vulnerable to major erosion damage during storm events. Final design is 10 percent complete and is scheduled to be complete by September 2027.
- Hinds Discharge Valve Platforms — This project will replace corroded steel members, such as ladders and floor grates, at all nine discharge valve pits at the Hinds Pumping Plant. Final design is five percent complete and is scheduled to be complete by December 2026.
- Main Pump Access Improvements — This project will construct new platform systems at each pumping plant and implement additional access improvements to enhance the efficiency of maintenance activities on the lower motor guide-bearing assemblies. Preliminary design is 20 percent complete and is scheduled to be complete by December 2025.

Dams and Reservoirs Program

The Dams and 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 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.
- Garvey Reservoir Rehabilitation Stage 1 — 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 completed 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.

- San Gabriel Tower Gate Frame Removal — This project will remove existing gate frames and locate the existing steel reinforcing bars at the San Gabriel Tower. The project will also perform a 3D survey of the tower. The contractor is preparing submittals, and the construction is scheduled to start in January 2026.
- San Jacinto Diversion Structure Gate Replacement — This project will replace three cast-iron slide gates at the San Jacinto Diversion Structure with stainless steel slide gates designed for throttling. The three new slide gates were procured under a separate procurement contract and were delivered in June 2025 with electric actuators scheduled for delivery in November 2025. The construction contract was awarded in August 2025, and on-site construction is scheduled for January 2026.
- Skinner East Bypass Gates — This project will replace three existing cast-iron slide gates at the East Lake Skinner Bypass inlet channel. The existing gates are heavily corroded and bind during lifting operations. The existing gates will be replaced with three stainless steel gate assemblies and new actuators. The new gates have been procured and are being stored onsite at the Skinner Plant. The new actuators are scheduled for delivery in December 2025. Final design for the contract package that includes installation of the new gates is starting this month and is scheduled to be completed in May 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.

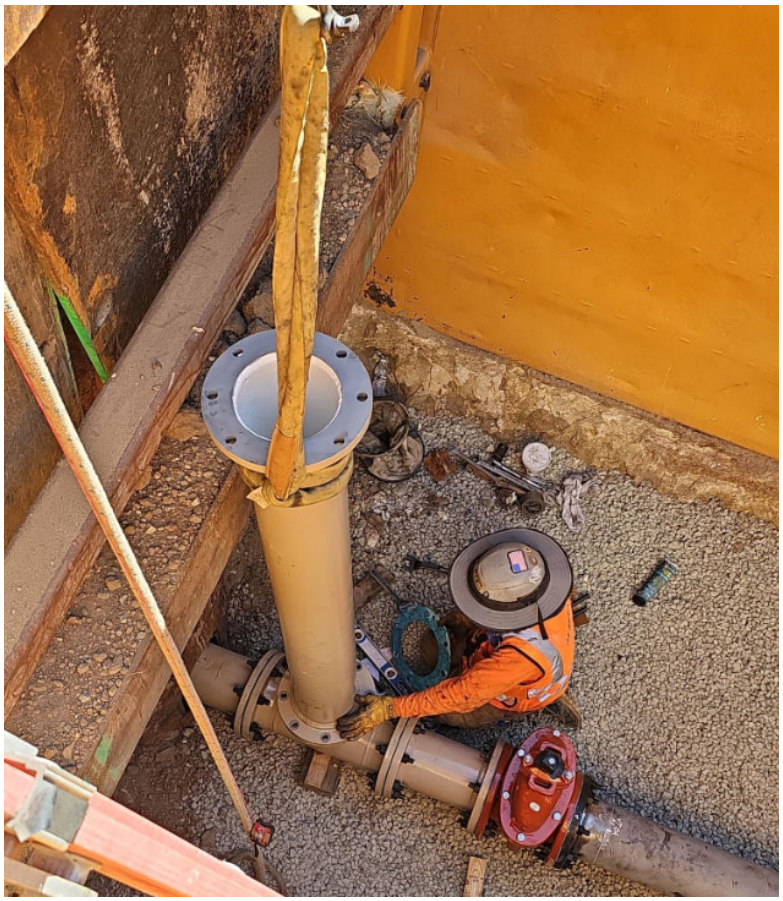
- Diamond Valley Lake (DVL) Wave Attenuator Replacement — This project adds a second attenuator to the existing wave attenuating system at the East Marina in Diamond Valley Lake. As part of the improvements, the existing floating wave attenuator (FWA) will be relocated to a new location, and the new attenuator will be installed in its place. The contractor completed concrete rehabilitation of the existing FWA; fabrication of the new FWA modules; assembly and fit-up of the new FWA modules; and continued installation and hydraulic tensioning of the tie-rods for the new FWA. Construction is 93 percent complete and is scheduled to be complete in October 2025.
- Lake Mathews 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 the project will be re-advertised for bids in September 2025. A board action for award of a construction contract is scheduled for December 2025.
- CRA Kitchens and Lodging — This project will replace the existing kitchens and lodges at Eagle and Iron Mountain pumping plants and construct a second lodge at the Gene Pumping Plant. Conceptual design was completed in September 2025.

Diamond Valley Lake (DVL) Wave Attenuator Replacement —
Installation of Winches on New Floating Wave Attenuator

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 99 percent complete and is scheduled to be complete in October 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 a board action for a contract award is planned for December 2025. The project is expected to be completed by mid-2027.
- Foothill Feeder Acoustic Fiber Optics (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. Final design is approximately 50 percent complete and is planned for completion by March 2026. The project team is evaluating options for dewatering the pipeline now that mussels 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.



Second Lower Feeder PCCP Rehabilitation Reach 3B — Installing Mechanical Piping for Helopod Water Source

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 98 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 January 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 approximately 99 percent complete and is scheduled to be complete in December 2025.
- Diemer Chemical Feed Facility Improvements — This project rehabilitates the Diemer plant's chemical feed facility to mantain 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, inlcuding 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. Final design is complete, and a board action for award of a construction contract is planned for 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 five percent complete and is scheduled to be complete in spring 2028.

Weymouth Basins 5–8 and Filter Building No. 2 Rehabilitation — Inspecting Valve Display Installation Near Front Entrance by Moreno Avenue

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:
    - Completed and presented updated program cost estimate updates, schedules, and cashflow projections to the Board in September.
    - 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.
    - Completed the SB149 draft application for streamlining potential CEQA litigation, and continued coordination with the state to meet application requirements.

  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 January 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 the coming months to facilitate the design of the DPR testing facility.

- Preliminary Design of Initial Pipeline Reaches —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. Conceptual Design Report for the conveyance system has been completed.
    - The utility and geotechnical field investigations for Reaches 1 and 2 are in progress, 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.

- 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 complete in November 2025.
- 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 has completed the SCADA and power duct bank and is currently performing electrical work in preparation for the MCC electrical equipment delivery in early 2026. Construction is 90 percent complete and is scheduled to be complete in July 2026.
- 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 is currently performing final electrical work and site grading. Construction is 98 percent complete and is scheduled to be complete in October 2025.
- 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. The PDB entity will mobilize onsite in October to begin construction of the Venice Pump Station.

Inland Feeder Rialto Pipeline Intertie — Electrical Duct Bank Encasement Looking North

Inland Feeder-Badlands Tunnel Surge Protection – Spiral Staircase Door Installation

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 Delivery Line Rehabilitation – Gene Pumping Plant
  In September, Engineering conducted a VE workshop for the CRA Pumping Plant Delivery Line Rehabilitation project at Gene Pumping Plant. The project aims to extend the service life of the delivery lines and enhance the reliability of the CRA system. The scope includes replacement and rehabilitation of delivery line linings, replacement of all delivery line expansion joints, internal sealing of rivets in Delivery Line No. 1, construction of a flow meter platform, relining of the surge chamber relief lines, and repairs to the transition structures at the headgate. The workshop featured a site visit to Gene Pumping Plant and involved staff from Design, Construction Management, Construction Contracts, Operations, and Environmental Planning, along with consultant Subject Matter Experts. Using the value methodology, the team reviewed the project, generated and evaluated alternatives, and developed high-value recommendations for the project team's consideration.

Partner with interested parties and the communities we serve

Integrated Strategy for Infrastructure Reliability Workshop

Engineering held another workshop with the Member Agencies on the Integrated Strategy for Infrastructure Reliability (ISIR) this month. This is the workshop series to identify infrastructure improvements that increase resilience, reduce vulnerabilities, and ensure reliable water services for all member agencies. Workshop #3 included discussions on infrastructure development policies and level of service elements, equitable supply reliability projects update, System Flexibility Study methodology, Operational System Overview Study approach, and Spatial Storage Assessment components. It also addressed coordination with CAMP4W processes. Overall, the team received valuable feedback through the exchange of ideas, candid discussions, and interactive collaboration with Member Agency participants.

ISIR Workshop #3