



- **Board of Directors**
Engineering, Operations, and Technology Committee

4/14/2026 Board Meeting

8-2

Subject

Appropriate \$1.025 billion for projects identified in the Capital Investment Plan for Fiscal Years 2026/27 and 2027/28 and authorize the General Manager to initiate or proceed with work on capital projects identified in the Capital Investment Plan for Fiscal Years 2026/27 and 2027/28; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Metropolitan's proposed overall two-year budget for Fiscal Years (FYs) 2026/27 and 2027/28 includes funds for Capital Investment Plan (CIP) expenditures to support core infrastructure refurbishment and replacement (R&R) work, key initiatives like drought mitigation projects, and planning and design of Pure Water Southern California (PWSC). This action enables the General Manager to manage capital projects in accordance with current board authorization and appropriation processes.

Following the Board of Directors Workshop on March 24, 2026, staff was directed to develop two biennium CIP budget options that reflect revisions from the original proposal that was provided in February 2026 (Board Item 9-1). The revised options are presented in this board letter. Both revised options reduce core CIP expenditures for the biennium from \$950 million to \$875 million. The first option includes PWSC expenditures in the CIP, but limits spending to funds that have previously been received through external sources, such as grants or partner contributions; and the second option includes an additional nominal \$150 million in the CIP budget for PWSC. With either option, staff will assess PWSC under the CAMP4W framework and obtain Board approval before starting significant capital investment on PWSC. This action appropriates funds and authorizes work so that staff can implement projects identified in the CIP Appendix for FYs 2026/27 and 2027/28.

Proposed Action(s)/Recommendation(s) and Options

Staff Recommendation: Option #2

Option #1

- Appropriate \$950.9 million for projects identified in the CIP Appendix for FYs 2026/27 and 2027/28; and
- Authorize the General Manager to initiate or continue work on the capital projects described in the CIP Appendix for FYs 2026/27 and 2027/28, subject to any limits on the General Manager's authority and CEQA requirements.

Fiscal Impact: Appropriation of \$950.9 million under Appropriation No. 15541, which includes \$875 million for core CIP work and \$75.9 million received from grant and other funds for PWSC. This option would reduce available matching funds required to receive additional reimbursements from the \$125 million in federal grant funding previously awarded by the U.S. Bureau of Reclamation's Large-Scale Recycled Water Program.

Business Analysis: This option will allow efficient management of the CIP. However, work activities for PWSC would be limited without additional CIP funding, thereby delaying completion of planning and design activities for Pure Water Southern California.

Option #2

- a. Appropriate \$1.025 billion for projects identified in the CIP Appendix for FYs 2026/27 and 2027/28; and
- b. Authorize the General Manager to initiate or continue work on the capital projects described in the CIP Appendix for FYs 2026/27 and 2027/28, subject to any limits on the General Manager's authority and CEQA requirements.

Fiscal Impact: Appropriation of \$1.025 billion under Appropriation No. 15541, which includes \$875 million for core CIP work and \$150 million for PWSC.

Business Analysis: This option will allow efficient management of the CIP and provide the ability to advance planning and design activities for the initial stage of PWSC, subject to board approval.

Option #3

Do not appropriate funds. Seek individual authorizations and appropriations for each project.

Fiscal Impact: Due to additional administrative effort and time required to prepare funding requests and board actions for individual capital projects for each phase of the project, annual capital expenditures are anticipated to be less than planned under Option #1 or Option #2. Execution of needed CIP projects would be significantly delayed.

Business Analysis: Appropriation of funds and authorization to execute capital projects individually will increase board paperwork and would result in increased project administration costs while hindering staff's ability to manage the CIP efficiently.

Alternatives Considered

In February 2026, staff initially recommended that the budgeted CIP expenditures be increased from the budget of \$666.48 million for FYs 2024/25 and 2025/26 to \$1.1 billion for FYs 2026/27 and 2027/28. The initially-recommended CIP expenditures included \$950 million for core CIP work, including R&R projects as well as system enhancement projects, and \$150 million for PWSC to advance program planning and design work. Through a series of board informational items and workshops, staff presented a CIP budget of \$1.1 billion which would address conveyance, distribution, and treatment vulnerabilities, protect Metropolitan's assets, and enhance delivery reliability to member agencies, while allowing board-directed drought projects to proceed. Following the Board of Directors Workshop on March 24, 2026, staff was directed to develop a biennium budget with \$875 million for core, non-PWSC CIP expenditures. Staff will identify opportunities to reduce CIP expenditures in FYs 2026/27 and 2027/28 by modifying project scopes or deferring projects. Continuing to defer or delay needed R&R projects will increase potential risks and the frequency of failures, potentially disrupting essential water deliveries.

Applicable Policy

Metropolitan Water District Administrative Code Section 2431: Engineering and Operations Committee Duties and Functions

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

Related Board Action(s)/Future Action(s)

By Minute Item 51353, dated October 9, 2018, the Board amended the Administrative Code to (a) allow for an appropriation of planned CIP expenditures following the approval of the biennial budget and authorize work on all capital projects identified in the CIP subject to the requirements of CEQA and limits on the General Manager's authority; and (b) delegate responsibility to the General Manager to determine whether a project is exempt from CEQA.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1 and Option #2:

The proposed actions are not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment. (State CEQA Guidelines Section 15378(b)(4)).

Metropolitan, as the Lead Agency, will be responsible for complying with the requirements of CEQA and the State CEQA Guidelines for each project that meets the CIP criteria prior to final approval of that project. As preliminary work and design on CIP projects proceed, Metropolitan staff will conduct any necessary CEQA review and prepare the appropriate environmental documentation for consideration and approval by the Board or the General Manager, as appropriate.

CEQA determination for Option #3:

None required

Details and Background

Background

As part of Metropolitan's biennial budget process, staff develops a recommended two-year budget and expenditure plan for the CIP. Following approval of the biennial budget, the Board also takes action to appropriate the funds necessary to fund the CIP in the upcoming biennium. In addition, the Board authorizes the General Manager to initiate or proceed with work on capital projects identified in the CIP Appendix, subject to the requirements of CEQA and the limits of the General Manager's authority. This approach to appropriate all funds for the CIP and authorize the General Manager to conduct all work identified in the CIP Appendix in a single board action has been in effect since October 2018. Since then, staff has utilized this streamlined approach to efficiently perform work on the CIP, resulting in a higher percentage of planned CIP work being conducted in a biennium compared to previous biennia utilizing the prior authorization practices.

With the proposed budget for FYs 2026/27 and 2027/28, staff initially recommended that the planned CIP expenditures be increased to \$1.1 billion from the current budget of \$666.48 million for the biennium. This approach reflected the need to gradually increase R&R spending levels over multiple budget cycles to align with current industry standards, maintain system reliability, and begin to address the current R&R funding backlog. The recommended increase also included key initiatives such as PWSC, advancement of drought-resiliency efforts. The initially recommended CIP expenditure level also addressed inflationary factors reflected in the California Construction Cost Index, which, if left unaddressed over time, would erode the level of investment available to rehabilitate Metropolitan's existing infrastructure and construct newly planned infrastructure.

In response to board deliberations at the March 24, 2026, budget workshop, staff was directed to develop a biennium budget with \$875 million allotted for core CIP work. The core CIP budget funds approximately \$560 million to \$600 million for R&R work, like Colorado River Aqueduct (CRA) utility and power system rehabilitation, dam and reservoir refurbishment, water treatment system rehabilitation, and prestressed concrete cylinder pipe rehabilitation; and also funds approximately \$315 million to \$275 million in upgrades to advance work on key initiatives like the drought mitigation portfolio for the State Project Water dependent areas and invasive mussel mitigation and control.

The recommended CIP budget includes \$150 million for PWSC, which would provide a new local source of safe and reliable drinking water for Southern California. PWSC will be assessed along with other major water-supply projects through the CAMP4W process. Unlike the rest of the expenditures in the CIP, capital expenditures on PWSC would only be started after subsequent CAMP4W assessments for the program are completed in 2026, and board approval to start capital work on the program is achieved. The recommended CIP funding for PWSC will be used to advance planning and design activities for the initial stage of PWSC, including solicitation for a progressive design build (PDB) entity for the advanced water purification facility and development of a basis of design report, as well as the solicitation for construction manager/general contractor (CM/GC) entities and final

design for the first two pipeline reaches, and ongoing program management activities. Onboarding the PDB and CM/GC entities will allow for greater construction cost and schedule assurance during design, with the appropriate off-ramps to allow the Board to make go/no-go decisions prior to initiating any construction activities for PWSC. Furthermore, the \$150 million for PWSC would be used as matching funds to be able to receive additional reimbursements from the \$125 million in federal grant funding previously awarded by the U.S. Bureau of Reclamation's Large-Scale Recycled Water Program.

The 10-year core CIP budget forecast is \$520 million for FY28/29 and increases four percent per year starting FY28/29 to account for inflationary trends. For this proposed budget, over \$6 billion in capital work has been identified over the 10-year budget window, of which approximately \$5 billion is planned for R&R projects for existing infrastructure and just under \$1 billion for infrastructure upgrades.

In February 2026, staff delivered the draft CIP Appendix to the Board as Attachment 3 to the Proposed Biennial Budget for FYs 2026/27 and 2027/28 (Board Item 9-1). The draft CIP Appendix (**Attachment 1**) reflects the original February recommendations and includes a description of the capital project evaluation and prioritization process, a summary by program and project group of planned biennial expenditures, a two-year expenditure projection by program, a 10-year expenditure projection by project type, planned major objectives under each program, and a description of each planned capital project. The only program that does not include individual project descriptions is the Minor Capital Projects Program. Projects within the Minor Capital Projects Program are identified on an ongoing basis during the two-year budget cycle and are valued at less than \$400,000 each. The anticipated expenditures for this program over the next two years are approximately \$15.9 million. Staff will adjust and finalize the CIP Appendix commensurate with the board's approval of CIP Options 1, 2 or 3 as part of the biennial budget.

To develop the proposed two-year budget and 10-year expenditure plan, Metropolitan used an extensive evaluation process that included a risk analysis to identify and prioritize projects for implementation. The resulting CIP for the upcoming biennium comprises a mix of projects supporting Metropolitan's strategic plan and financial targets. The plan considers budget and staffing constraints, and the data collected for budget preparation indicates that it will take more than thirty years to complete the current list of known projects. This estimate does not consider additional projects, which will be identified in future budget cycles. The proposed budget of \$1.025 billion for the next two years fits the proposed rate model. Expenditures less than the proposed budget would further defer priority rehabilitation work, increasing risk to the system reliability and the likelihood of unplanned system outages and/or service disruptions.

Some of the major objectives planned over the next two years are summarized below.

Climate Adaptation

- Complete design and start construction of the Demonstration Plant Direct Potable Reuse Modifications project.

Colorado River Aqueduct

- Complete construction of Hinds and Eagle Mountain Pumping Plants Utilities Replacement.
- Continue design and procurement for the CRA Main Transformer Rehabilitation project.

Dams & Reservoirs

- Complete construction of Garvey Reservoir Rehabilitation – Stage 1.
- Complete design of the Jensen and Mills finished water reservoir rehabilitation projects.
- Begin construction of the Copper Basin Discharge Valve refurbishment project.
- Start design of the Lake Mathews Pressure Control Structure and Electrical System Upgrades project, utilizing progressive design-build project delivery.

Distribution System

- Complete construction of Hollywood Tunnel North Portal Equipment Upgrades, LA-17A and LA-17C Venturi Flow Meters Replacement, Rio Hondo Pressure Control Structure Valve Replacement – Stage 1, and San Diego Canal Radial Gates Rehabilitation.

Drought Mitigation – SWP Dependent Areas

- Complete construction of Inland Feeder-Rialto Pipeline Intertie, Inland Feeder–Foothill Pump Station Intertie, and Sepulveda Feeder Pump Stations – Stage 1, Venice Pumping Station.
- Complete design and commence construction on the Sepulveda Feeder Pump Stations – Stage 1, Sepulveda Canyon Pumping Station and Slope Remediation.

Information Technology & Control Systems

- Complete construction of Mills Plant Fiber Conduit Installation, Desert Microwave Tower Site Upgrades, and Wi-Fi Upgrade for Riverside Sites.

Districtwide and Other Facilities and Systems

- Complete construction of Lake Mathews Aboveground Storage Tank Replacement.
- Complete final design of the Michael J. McGuire Water Quality Laboratory Upgrades project.
- Complete planning and preliminary design of the District Housing Improvements and Employee Village Enhancement at Hinds, Eagle Mountain, Iron Mountain, and Gene Pumping Plants project.

Prestressed Concrete Cylinder Pipe

- Complete construction of Sepulveda Feeder Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation – Reach 2.
- Continue design to rehabilitate the Sepulveda Feeder PCCP Rehabilitation – Reach 1.
- Continue preliminary design to rehabilitate PCCP portions of Calabasas Feeder and Rialto Pipeline.
- Continue electromagnetic inspections of all PCCP pipelines.

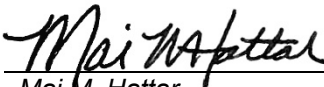
Pure Water Southern California

- Procure a progressive design builder and initiate design of the Advanced Water Purification Facility in the city of Carson, procure a construction manager/general contractor for pre-construction services, and initiate final design of the first two pipeline reaches, pending board authorization.

Water Treatment Plants

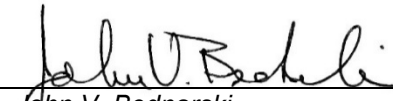
- Complete construction of Weymouth Administration and Control Buildings Seismic Upgrades, Jensen Plant Site Security Upgrade, and Diemer and Skinner Turbidity Meter Replacement.

The recommended action appropriates \$1.025 billion for projects identified in the CIP Appendix for FYs 2026/27 and 2027/28. This action also authorizes the General Manager to initiate or continue with work on the capital projects described in the CIP Appendix for FYs 2026/27 and 2027/28, initiate new minor capital projects to be identified during the biennial period, and continue work on existing minor capital projects, subject to any limits on the General Manager’s authority and CEQA requirements. The General Manager will allocate the appropriated funds to existing and new capital projects as needed in accordance with project schedules and progress. Actions taken by the General Manager per this authority will continue to be reported to the Board in the CIP Quarterly Reports.



Mai M. Hattar
Chief Engineer
Engineering Services

4/7/2026
Date



John V. Bednarski
Assistant General Manager

4/7/2026
Date

Attachment 1 – Draft Capital Investment Plan Appendix for Fiscal Years 2026/27 and 2027/28

Ref# es12704595



Capital Investment Plan Appendix

Fiscal Years
2026/27 and 2027/28



*Uniquely Metropolitan:
Maintaining Regional Reliability*



GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished
Budget Presentation
Award*

PRESENTED TO

**The Metropolitan Water District
of Southern California**

For the Biennium Beginning

July 01, 2024

Christopher P. Morrill

Executive Director

CAPITAL INVESTMENT PLAN TABLE OF CONTENTS

Summary	<u>1</u>
Capital Investment Plan Organization	<u>2</u>
Table 1 - Capital Programs	<u>2</u>
Capital Investment Plan Development	<u>3</u>
Table 2 - Project Proposal Guidelines	<u>4</u>
Table 3 - Evaluation Criteria and Multiplier	<u>7</u>
Project Evaluation	<u>8</u>
Capital Investment Plan for Fiscal Years 2026/27 and 2027/28	<u>9</u>
Financial Projections	<u>11</u>
Figure 1 - Capital Investment Plan for FY 2026/27 and FY 2027/28 by Program	<u>12</u>
Figure 2 - CIP 10-year Window by Project Type without Pure Water Southern California	<u>13</u>
Figure 3 - CIP 10-year Window by Project Type with Pure Water Southern California	<u>14</u>
Table 4 - Two-year Outlook	<u>14</u>
CIP Funding	<u>16</u>
Capital Investment Plan Detail	<u>18</u>
Table 5 - Key Program Information	<u>18</u>
Table 6 - Program Summary Index	<u>18</u>
Individual Program Summaries	<u>19</u>

CAPITAL INVESTMENT PLAN

Summary

The primary focus of the Capital Investment Plan (CIP) Appendix is to provide information on all CIP programs and projects that have been proposed, evaluated, and included in the budget forecast to begin or continue during and after fiscal year (FY) 2026/27 and FY 2027/28. Projects included in this document are referred to as “planned” and upon appropriation of the CIP budget for FY 2026/27 and FY 2027/28 are authorized to proceed by the Chief Engineer’s approval under the authority of the General Manager.

Scope, accomplishments, objectives, and financial projections are provided for each CIP program. Every project with work planned for the two budget years and beyond is listed under the individual program summaries. However, projects in the post-construction phase or the post-deployment phase are not included but will proceed to completion and closeout under the authorization carried over from previous biennia.

The total planned capital spending for FY 2026/27 and FY 2027/28 of approximately \$1.1 billion, which now includes Pure Water Southern California (PWSC). The planned spending consists of all anticipated costs for labor including administrative overhead, construction, and professional services, right of way, materials, operating equipment, and incidental expenses. It is planned to be funded by a combination of grants, current operating revenues (i.e., PAYGO), and debt. Engineering Services tracks actual spending against the plan and adjusts priorities and staff assignments to manage spending consistent with the overall CIP budget.

CIP Program	Total
Climate Adaptation	\$ 43,900,000
Colorado River Aqueduct	\$ 190,790,000
Dams & Reservoirs	\$ 148,120,000
Distribution System	\$ 34,900,000
Districtwide and Other Facilities and Systems	\$ 17,470,000
Drought Mitigation – SWP Dependent Areas	\$ 264,480,000
Information Technology & Control Systems	\$ 49,510,000
Minor Capital Projects	\$ 15,920,000
Prestressed Concrete Cylinder Pipe	\$ 80,120,000
Water Treatment Plants	\$ 104,790,000
Subtotal (without PWSC)	\$ 950,000,000
Pure Water Southern California	\$ 150,000,000
Total (with PWSC)	\$ 1,100,000,000

Capital Investment Plan Organization

CIP Structure

The CIP is structured into three levels for clear planning and reporting in the following format:

1. PROGRAM
2. PROJECT GROUP
3. PROJECT

The highest level of the CIP structure is Program. Programs are comprised of one or more Project Groups. There are 11 CIP programs described in Table 1.

Table 1 - CIP Programs

Program	Definition
Climate Adaptation	Projects under this program will replace, refurbish, upgrade, or construct new facilities to prepare Metropolitan to adjust to current and projected climate change impacts on its operation and its mission to provide its service area with adequate and reliable supplies of high-quality water in an environmentally and economically responsible way.
Colorado River Aqueduct (CRA)	Projects under this program will replace, refurbish, or upgrade facilities and components on the CRA system to reliably convey water from the Colorado River to Southern California.
Dams & Reservoirs	Projects under this program will upgrade or refurbish Metropolitan's dams, reservoirs, and appurtenant facilities to reliably meet water storage needs and regulatory compliance.
Distribution System	Projects under this program will replace, upgrade, or refurbish existing facilities within Metropolitan's distribution system including pressure control structures, hydroelectric power plants, and pipelines to reliably meet water demands.
Districtwide and Other Facilities and Systems	Projects under this program will refurbish, replace, upgrade, or provide new facilities and systems that support Metropolitan's business and operations.
Drought Mitigation – SWP Dependent Areas	Projects under this program will replace, refurbish, upgrade, or construct new facilities, which are identified to mitigate the vulnerability experienced by specific member agencies that are impacted during shortages on the State Water Project supplies.
Information Technology & Control Systems	Projects under this program will replace, upgrade, or provide new facilities, software applications, or technology that will enhance cyber security, reliability, flexibility, and capability of information, communication, and control systems.
Minor Capital Projects	This program is comprised of projects, with an estimated cost of less than \$400,000, that often require rapid response to address unanticipated failures, safety or regulatory compliance concerns, or to take advantage of shutdown opportunities. The projects will be identified after adoption of the budget throughout the biennium.
Prestressed Concrete Cylinder Pipe (PCCP)	Projects under this program will refurbish or upgrade Metropolitan's PCCP feeders to maintain reliable water deliveries without unplanned shutdowns.
Pure Water Southern California (PWSC)	Projects under this program will construct a large regional recycled water system that will provide a new local source of safe and reliable drinking water for Southern California. At full build-out, PWSC will produce up to 150 million gallons per day (mgd) of purified water for indirect and direct potable reuse applications. For FYs 2026/27 and 2027/28, the work included in the CIP budget is for the first 45-mgd stage.
Water Treatment Plants	Projects under this program will replace, refurbish, or upgrade facilities and components at Metropolitan's five water treatment plants and chemical unloading facility (CUF) to continue to reliably meet treated water demands.

Capital Investment Plan Development

Background

The projects that comprise the proposed CIP have been identified from many Metropolitan studies of projected water needs as well as ongoing monitoring and inspections, condition assessments, and focused vulnerability studies. Staff continues to study operational demands on aging facilities and has made recommendations for CIP projects that will maintain infrastructure reliability and ensure compliance with all applicable water quality regulations, and building, fire, and safety codes. Staff has also studied business and operations processes and proposed projects that will improve efficiency and provide future cost savings. Additionally, a number of projects have been identified and prioritized to mitigate the vulnerability experienced in the State Water Project dependent areas during the most recent drought.

CIP Development Process

The CIP is structured to reflect Metropolitan's strategic goals of providing a reliable supply of high-quality water at the lowest cost possible. As part of the CIP development process, all new and existing projects are evaluated against an objective set of criteria to ensure existing and future capital investments are aligned with Metropolitan's priorities for water supply reliability, water quality, and public safety.

This rigorous evaluation process has resulted in a thorough review and assessment of all proposed CIP projects by staff and managers prior to inclusion in the CIP budget. Staff continues to conduct comprehensive field investigations that identify critical replacement and refurbishment (R&R) projects, as well as a variety of necessary facility upgrades related to infrastructure reliability, drought resiliency, and regulatory compliance. Project schedules are evaluated regularly to plan for necessary capital investments in infrastructure reliability and to accommodate the urgency of each project. Additionally, current demand projections that account for ongoing conservation, planned increased local supply production, and the economy, have been evaluated to ensure that demand and drought-related projects are appropriately scheduled.

Project Proposals

Project sponsors are required to submit proposals for newly proposed projects and all existing projects that have not yet been authorized through the completion of the project to be considered for inclusion into the CIP. The proposals must include scope, justification, risks, alternatives, impacts of re-scheduling work for a later time, impact on operations and maintenance costs, and an estimate of total project cost. For existing projects, staff must also provide justification for continuing the project, explain any changes since the proposal was last evaluated, and describe critical phases for the upcoming years.

The projects are evaluated, scored, and prioritized based on the contents of the proposals. The key guidelines provided to the project sponsors are summarized in Table 2.

Table 2 - Project Proposal Guidelines

Section	Guideline		
Appropriation No., CIP Index No., Project No., (if existing) and Project Title	If a proposed project has been previously included in the CIP and has been assigned a CIP index number, provide the appropriation and CIP index number along with the project title and project number if one has been assigned. If not previously included in the CIP, provide a project title only.		
Sponsoring Group	Indicate the group sponsoring the project, as follows: <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 1) Bay Delta Resources 2) Conveyance and Distribution 3) Engineering Services 4) External Affairs 5) Finance and Administration 6) Human Resources 7) Information Technology </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> 8) Integrated Operations, Planning, and Support Services 9) Office of Sustainability, Resiliency, and Innovation 10) Safety, Security, and Protection 11) Treatment and Water Quality 12) Water Resource Management </td> </tr> </table>	<ol style="list-style-type: none"> 1) Bay Delta Resources 2) Conveyance and Distribution 3) Engineering Services 4) External Affairs 5) Finance and Administration 6) Human Resources 7) Information Technology 	<ol style="list-style-type: none"> 8) Integrated Operations, Planning, and Support Services 9) Office of Sustainability, Resiliency, and Innovation 10) Safety, Security, and Protection 11) Treatment and Water Quality 12) Water Resource Management
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Project Manager and Proposal Preparer	Enter the name of the project manager if one was assigned and enter the name of proposal preparer.		
GM Business Plan	Indicate the strategic priorities under GM's Business Plan the project best supports.		
Current Project Phase	Indicate the phase (Study, Preliminary Design, etc.) as of the date proposal submitted.		
Current Phase % Complete	Current phase percent complete as of the date proposal submitted.		
Project Description	Describe the project scope of work.		
Changes to Existing Project	For an existing project, describe any changes to the project scope, budget, or schedule over the past two years.		
Justification	<p>Describe the nature of the issue to be addressed by the project. What is the problem? What is the function of the facility/component being addressed by the project? Why is the project needed? Why can't the project be postponed?</p> <p>Consider issues such as:</p> <ul style="list-style-type: none"> • Operational flexibility • New facility expansion • New water supply • Aging infrastructure deterioration/failure • Process improvement/failure • Maintenance capability • Seismic vulnerability • Obsolescence (vendor support, parts, technology, etc.) • Security • Regulatory Compliance (water quality, environmental, health and safety, etc.) • Cost savings • Revenue generation • Energy savings • Productivity/Innovation/Sustainability/Resource Opportunity <p>Include an explanation of how the project addresses any of the above issues and provide documentation, when applicable, to substantiate the need for the project.</p>		

Section	Guideline
Directive	<p>Regulatory/Legal Settlement: Indicate if this is related to a written citation, verbal/written directive (including environmental mitigation mandated by a Mitigated Negative Declaration or Environmental Impact Report), or in-house identification (including enforceable code requirement or Metropolitan standard).</p> <p>Special Initiative/Directive: Indicate if the project is specifically identified in one of the core or strategic initiatives; identified via Area Study, System Overview Study, etc.</p>
Service Disruption	Describe how Metropolitan’s day-to-day operations could be impacted if the project is not approved. Consider business, as well as water system operations, including maintenance activities.
Cost/Sustainability/ Customer Service	Describe potential cost, water, and/or energy savings, waste reduction (including reduction of greenhouse gas emission), energy generation (renewable or non-renewable), better customer service (internal or external), etc., that justify the project. Include a pay-back period.
Risks	<p>Define specific hazards that could prevent Metropolitan from achieving its mission, the associated likelihood of the hazard occurring, and the consequences if the hazard occurs.</p> <p>Here is the list of consequence categories to choose from.</p> <ul style="list-style-type: none"> • Safety (public and/or personnel) • Compliance & Legal (regulatory & environmental compliance, administrative code & board action, and/or legal action) • Reputation (board/media response & public confidence, and/or environmental stewardship & sustainability) • Financial (financial impact) • Reliable Service (member agency impact, operations, water quality, power transmission, power generation, recreation, and/or non-water delivery business continuity) <p>For example, if a project’s main objective is to seismically retrofit an existing building, the main hazard should be a seismic event, the likelihood of the hazard occurring should likely be the approximate earthquake return period that can result in significant damage to the building, and the consequences if the hazard occurs may include safety, reputation, financial, and reliable service.</p>
Alternatives	Provide a brief description of any potential project scope alternatives, including any opportunities to “stage” the work. Include if it is possible to only perform a portion of a project to meet foreseeable customer needs. Consider the possibility of new technology, changing demands, as well as environmental impacts and economies of scale. Describe any reasonable projects, processes, or other initiatives available as alternatives to the project. Discuss both positive and negative aspects of each alternative. If possible, explain what other similar agencies are doing about this or a similar issue.
Additional Background Information	Provide any other supplemental information (e.g., detailed history of a problem, supporting technical information, shutdown constraints, etc.) that will help in evaluating the project. This can also be attached to the proposal.

Section	Guideline
Project Schedule and Estimated Cost	Provide a detailed resource-loaded project schedule by project phase (e.g., study, preliminary design, final design, advertise thru award, procurement, construction, test & start-up, and project closeout). The total project estimate and the total remaining costs are calculated based on the total project cost to date and the resource-loaded project schedule provided.
Post-Implementation O&M Impacts	To the extent available/known, provide a description of the impacts, costs, and/or benefits this CIP project is anticipated to have on Metropolitan's current and future O&M expenses and services upon completion (e.g., labor, maintenance, and equipment costs; enhanced reliability; improved water quality, etc. For example, "Ozone generators will substantially increase electrical consumption by approximately \$1 million annually and the number of new pieces of equipment will require periodic maintenance per the manufacturer's recommendations beginning in FY 2027/28. PDR and future studies will provide additional detail on the overall lifecycle costs"). This is required for projects greater than \$2 million and whose planned implementation date is within the next five fiscal years.

Evaluation Criteria

The evaluation criteria cover four characteristics or objectives for CIP projects: Project Justification, Directive, Service Disruption, and Cost/Sustainability/Customer Service. In addition, a multiplier is applied to a project rating to factor in a risk assessment. Table 3 provides a description of the criteria and multiplier.

Table 3 - Evaluation Criteria and Multiplier

Criteria	Description
Justification	Assessment of the overall importance of a project. Criterion looks at whether or not a project supports the following: <ul style="list-style-type: none"> - Supply reliability - Infrastructure reliability - Regulatory compliance - Other goals (e.g., cost savings, revenue generation, energy savings, increased productivity, innovation, sustainability, and shutdown/resource opportunity)
Directive	Assessment of whether or not a project is specifically identified in one of the core or strategic initiatives, if any permitting agency such as the California State Department of Safety of Dams has issued a directive or citation to take corrective actions, the current authorized scope of work, and/or support the GM Business Plan: <ul style="list-style-type: none"> - Regulatory/Legal Settlement/Commitment - Special Initiative/Directive - GM Business Plan
Service Disruption	Assessment of not doing a project. Criterion evaluates the following: <ul style="list-style-type: none"> - Impact to Metropolitan’s business operations - Impact to water system operations (e.g., system delivery and/or reliability, cascading impact on system due to failure, etc.)
Cost/Sustainability/Customer Service	Assessment of whether or not a project improves the following: <ul style="list-style-type: none"> - Cost efficiency - Sustainability - Customer service

Multiplier	Description
Risk Multiplier	The risk multiplier number (0 to 8) is assigned based on the likelihood of hazards occurring and the potential consequences of those hazards. This number is used to multiply the project rating to account for the risks to Metropolitan if the project is not completed.

Project Evaluation

A CIP Evaluation Committee comprised of staff from Operations, Water Resource Management, Real Property, Engineering Services, Finance, Information Technology, Environmental Planning, Safety & Regulation, and External Affairs evaluate and score all project proposals. The evaluation criterion is designed to prioritize projects that directly support reliability, quality, and safety for inclusion in Metropolitan's proposed CIP.

An iterative process is employed to first score and rank every new and existing project, and then solicit feedback from project sponsors, resource providers, and management to establish schedules and cash flow requirements. The final schedule and implementation plan for FY 2026/27 and FY 2027/28 are reflected in the budget and objectives summarized under each of the Individual Program Summaries that appear later in this document.

Capital Investment Plan for Fiscal Years 2026/27 and FY 2027/28

In October 2018, Metropolitan's Board amended the Administrative Code to allow for an appropriation of the total amount of planned biennial CIP spending following the approval of the biennial budget and authorize work on all CIP projects identified in the CIP subject to the requirements of CEQA and limits on the General Manager's authority; and delegate responsibility to the General Manager to determine whether a project is exempt from CEQA. In order to be considered a planned project, the project must be included and described in this Capital Investment Plan Appendix for the two-year budget cycle. Consistent with this action, all requests to allocate appropriated CIP funds and proceed with planned CIP projects are reviewed and approved by the Chief Engineer acting under the General Manager's authority. Upon approval, such requested funds are then transferred to the pertinent CIP project. These transfers are based on management decisions to initiate CIP projects and/or proceed to the next phase of planned work.

To arrive at the spending plan for individual programs, the budget and schedule for each individual project is paired with project metadata (CIP scores, management and sponsor priorities, project status, etc.). The projects are then organized (or leveled) using an algorithm that combines anticipated capital spending with project prioritization. The resulting plan represents a spending model snapshot in time and is adjusted during the biennium as priorities and conditions change.

Additions

Projects not described in this CIP Appendix are considered unplanned and are not included in the planned biennial spending. Unplanned projects require specific board authorization to amend the CIP Appendix to add unplanned projects before work can be initiated. Three unplanned projects were added to the FY 2024/25 and FY 2025/26 budget as authorized by the Board through the first quarter of FY 2025/26. These projects were identified after adoption of the budget and included projects are Palos Verdes Reservoir Helicopter Dip Tank Facility, Weymouth Ozone Contactor Expansion Joint Improvements, and the SWP Invasive Mussel Mitigation and Control. These projects are now included in this document and are considered planned projects for FY 2026/27 and FY 2027/28.

New Projects

Since the start of the current biennium, a total of approximately 100 new project proposals, including unplanned but excluding Minor Capital projects have been submitted and reviewed by the CIP Evaluation Committee to either proceed as proposed, or be staged to perform only a portion of the work in the biennial budget period, and have been incorporated into the current or this new CIP Appendix. In addition, portions of existing projects have been staged and split into separate projects to expedite the most urgent R&R work. Nearly 80 split projects have been recorded for the current biennium through the first quarter of FY 2025/26.

Major Objectives

Below, grouped by CIP Program, are descriptions of some of the CIP project major activities anticipated to be underway or completed over the next two fiscal years.

Climate Adaptation

Complete construction of Stage 1 and Stage 2-Phase 1 of the Zero Emission Fleet Pilot Infrastructure. Complete design and construction of the Demonstration Plant Direct Potable Reuse Modifications project.

Colorado River Aqueduct

Complete construction of Copper Basin Reservoir Discharge Valve Rehabilitation, CRA Pumping Plants Sump System Rehabilitation, and Hinds & Eagle Mountain Pumping Plants Utilities and Paving. Continue design and procurement for the CRA Main Transformer Rehabilitation project.

Dams & Reservoirs

Complete construction of Garvey Reservoir Rehabilitation – Stage 1. Complete design of the Jensen and Mills finished water reservoir rehabilitation projects. Start design of the Lake Mathews Pressure Control Structure and Electrical System Upgrades project, utilizing progressive design-build project delivery.

Distribution System

Complete construction of Auld Valley and Red Mountain Control Structures Upgrades, Hollywood Tunnel North Portal Equipment Upgrades, LA-17A and LA-17C Venturi Flow Meters Replacement, Rio Hondo Pressure Control Structure Valve Replacement – Stage 1, and San Diego Canal Radial Gates Rehabilitation.

Drought Mitigation – SWP Dependent Areas

Complete construction of Inland Feeder-Rialto Pipeline Intertie, Inland Feeder-Foothill Pump Station Intertie, and Sepulveda Feeder Pump Stations- Stage 1, Venice Pumping Station. Complete design and commence construction on the Sepulveda Feeder Pump Stations Stage 1, Sepulveda Canyon Pumping Station and Slope Remediation.

Information Technology & Control Systems

Complete construction of Mills Plant Fiber Conduit Installation, Desert Microwave Tower Site Upgrades, and WiFi Upgrade for Riverside Sites.

Districtwide and Other Facilities and Systems

Complete construction of Diamond Valley Lake Floating Restroom & Docks Replacement and Lake Mathews Aboveground Storage Tank Replacement. Complete final design of the Michael J. McGuire Water Quality Laboratory Upgrades project. Complete planning and preliminary design of the District Housing Improvements and Employee Village Enhancement at Hinds, Eagle Mountain, Iron Mountain, and Gene Pumping Plants project.

Prestressed Concrete Cylinder Pipe

Complete construction of Sepulveda Feeder PCCP Rehabilitation – Reach 2. Continue final design to rehabilitate the remaining PCCP portions of the Sepulveda Feeder. Continue preliminary design to rehabilitate PCCP portions of Calabasas Feeder and Rialto Pipeline. Continue annual electromagnetic inspections of all PCCP pipelines.

Pure Water Southern California

Procure a progressive design builder and initiate design of the Advanced Water Purification Facility in the city of Carson, procure a construction manager / general contractor for pre-construction services and initial final design of the first two pipeline reaches, and acquire property for pump station facilities.

Water Treatment Plants

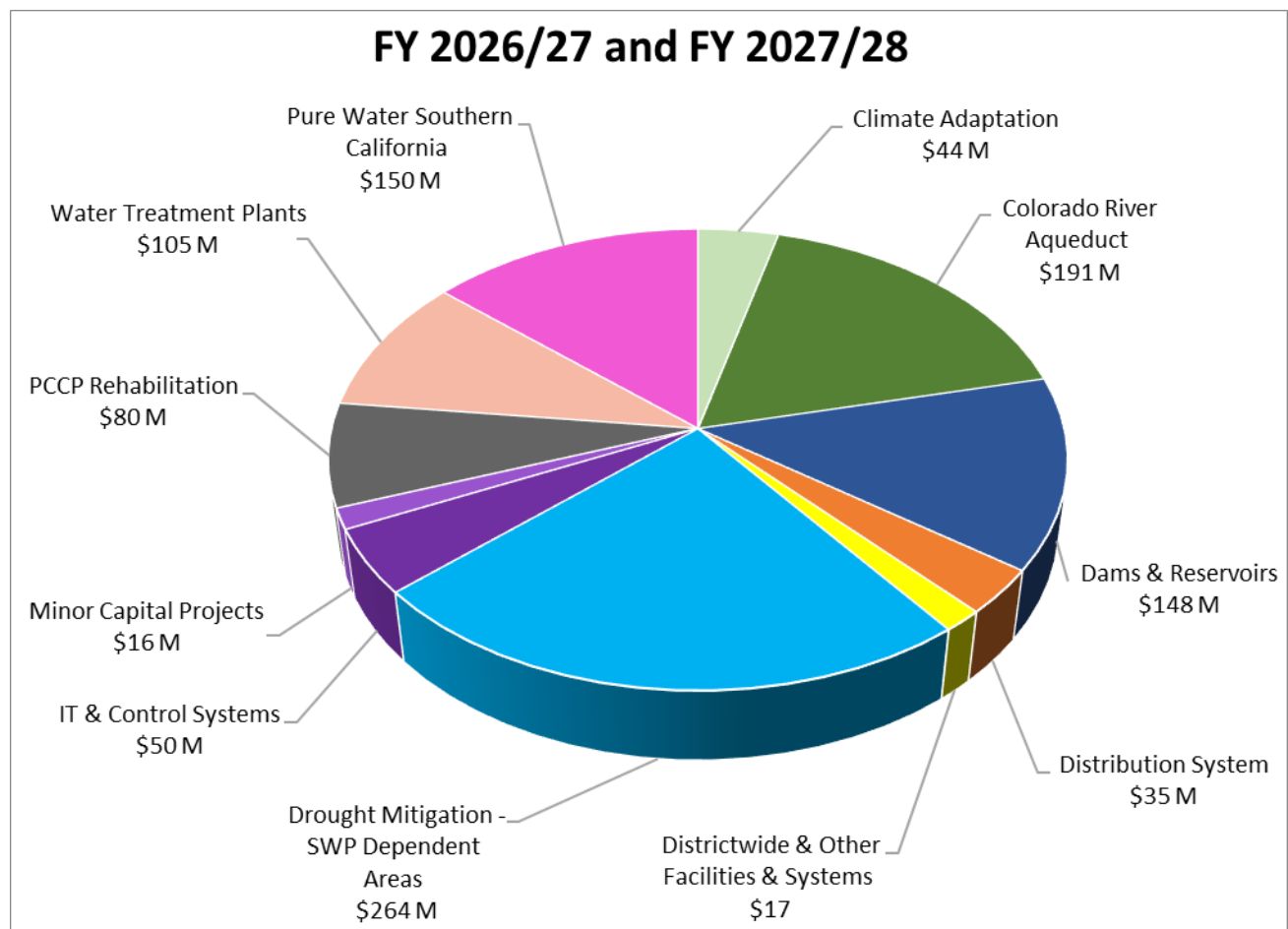
Complete construction of Weymouth Administration and Control Buildings Seismic Upgrades, Mills Fluorosilicic Acid Tank Replacement, Jensen Plant Site Security Upgrade, and Diemer and Skinner Turbidity Meter Replacement.

Financial Projections

Planned capital spending for FY 2026/27 and FY 2027/28 is estimated to be \$450.0 million and \$500.0million, respectively, and is planned to be funded by a combination of grants, current operating revenues (i.e., PAYGO), and debt. Considerations for timing of nearby projects and facility shutdowns, urgency, aging infrastructure, updated service demand projections, and regulatory requirements are taken into account. Estimated capital spending is updated on a regular basis as new projects are added, other projects are completed, construction cost estimates are refined, or contracts awarded. From time to time, projects that have been undertaken are delayed, redesigned or deferred for various reasons and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule.

The total planned spending for the FY 2026/27 and FY 2027/28 biennium is approximately \$1.1 billion as shown in Figure 1 by Program. Planned spending has been estimated based on anticipated project progress and estimated costs for all ongoing and planned work for the new biennium budget period.

Figure 1 - Capital Investment Plan for FY 2026/27 and FY 2027/28 by Program



Figures 2 and 3 depict the 10-year CIP projected cash flow from FY 2026/27 through FY 2035/36 with or without the projected cash flow for Pure Water Southern California (PWSC) and Table 4 provides a more detailed two-year outlook. Currently, activities associated with PWSC are limited to operations and testing at the Advanced Water Treatment Demonstration Plant (demo plant), as well as program activities including environmental permitting, conceptual design of the treatment and conveyance system facilities, preliminary design of the initial two pipeline reaches, and various program management tasks such as the preparation of various plans for program staging and implementation. Ongoing modifications to the demo plant are included in the CIP, while preparation of an Environmental Impact Report, design activities, and program management tasks are currently funded under the O&M budget, \$80 million in state funding, and \$125 million USBR grant. The capital work on PWSC in the upcoming FY 2026/27 and FY 2027/28 includes planning and design activities to advance the initial 45-mgd stage of the program. This includes procuring a progressive design builder and initiate design of the Advanced Water Purification Facility in the city of Carson, procuring a construction manager/general contractor for pre-construction services and initiate final design of the first two pipeline reaches, acquire property for pump station facilities, and other necessary work to advance the program.

Figure 2 - CIP 10-year Window by Project Type without Pure Water Southern California

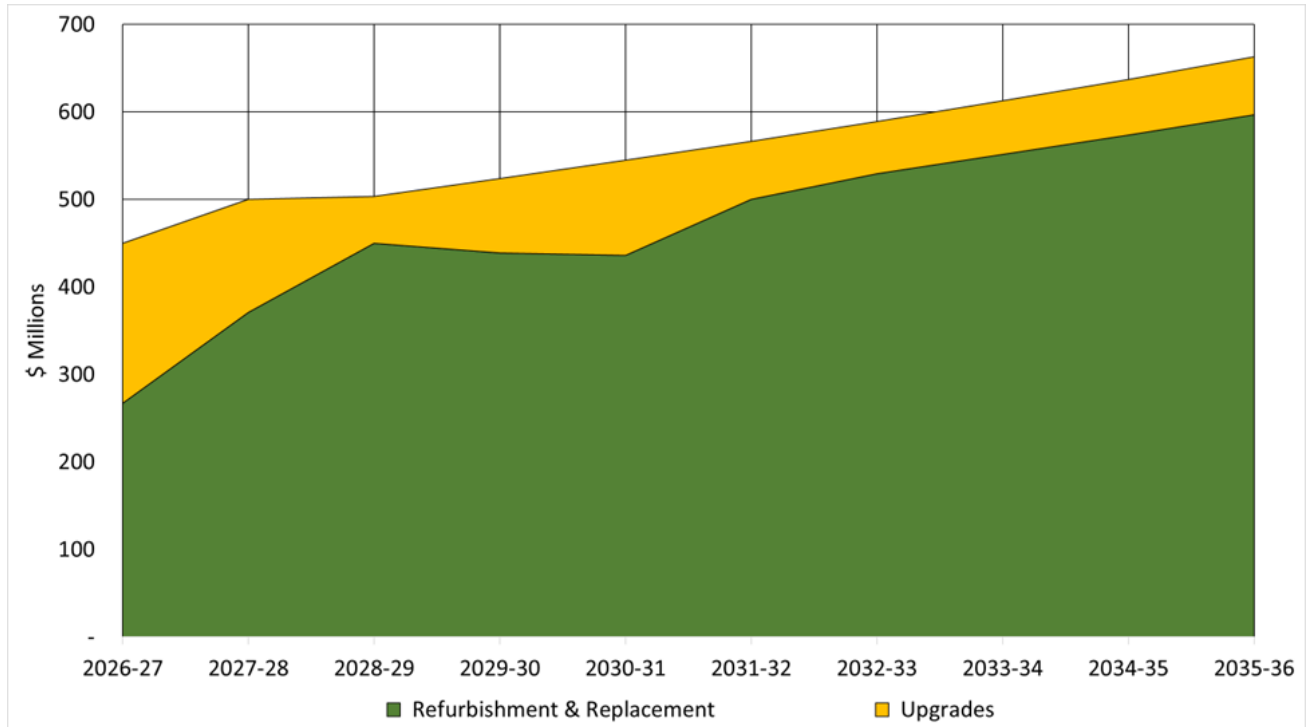


Figure 3 - CIP 10-year Window by Project Type with Pure Water Southern California

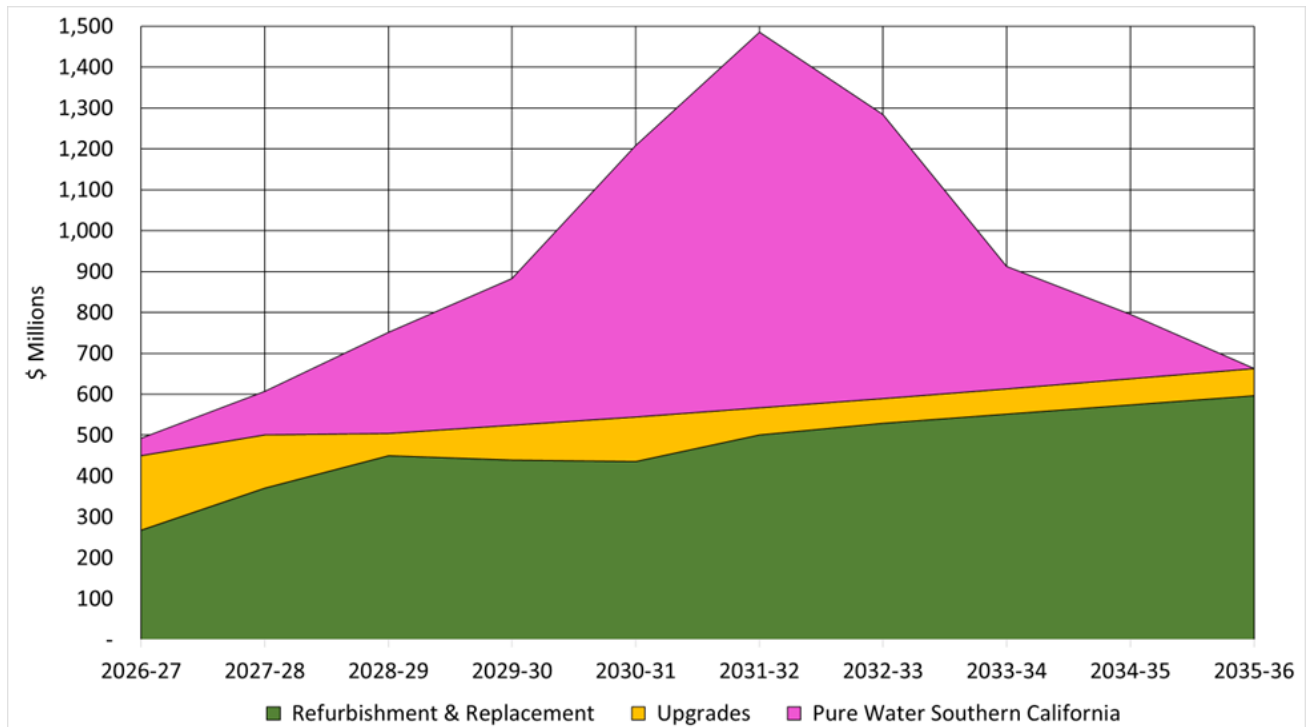


Table 4 - Two-Year Outlook

Capital Program and Project Groups	FYs 2026/27 & 2027/28
Climate Adaptation	\$ 43,900,000
Climate Adaptation - All	\$ 43,900,000
Colorado River Aqueduct	\$ 190,790,000
CRA - Conveyance	\$ 2,320,000
CRA - Electrical Systems	\$ 56,450,000
CRA - Pumping Plants	\$ 128,520,000
CRA - Other	\$ 3,500,000
Dams & Reservoirs	\$ 148,120,000
Dams & Reservoirs - All	\$ 148,120,000
Distribution System	\$ 34,900,000
Pipelines, Tunnels, Canals	\$ 4,250,000
Pump Stations/Pressure Control Structures/Hydroelectric Plants/ Service Connections/Flow Meters/Valves & Gates Structures	\$ 20,160,000
Right-of-Way & Infrastructure Protection	\$ 3,550,000
Distribution System - Other	\$ 6,940,000
Districtwide and Other Facilities and Systems	\$ 17,470,000
Employee Housing	\$ 80,000
Recreation	\$ 5,230,000
Districtwide & Additional Facilities & Systems	\$ 12,160,000
Drought Mitigation – SWP Dependent Areas	\$ 264,480,000
Drought Mitigation – SWP Dependent Areas - All	\$ 264,480,000
Information Technology & Control Systems	\$ 49,510,000
IT Applications	\$ 17,530,000
IT Infrastructure	\$ 11,060,000
IT Security	\$ 2,330,000
Control Systems/SCADA	\$ 18,590,000
Minor Capital Projects	\$ 15,920,000
Minor Capital Projects - All	\$ 15,920,000
Prestressed Concrete Cylinder Pipe	\$ 80,120,000
Allen-McColloch Pipeline	\$ 270,000
Calabasas Feeder	\$ 350,000
Rialto Pipeline	\$ 250,000
Second Lower Feeder	\$ 390,000
Sepulveda Feeder	\$ 78,140,000
PCCP - Other	\$ 720,000
Pure Water Southern California	\$ 150,000,000
Pure Water Southern California - All	\$ 150,000,000

Capital Program and Project Groups	FYs 2026/27 & 2027/28
Water Treatment Plants	\$ 104,790,000
Diemer	\$ 11,110,000
Jensen	\$ 40,910,000
Mills	\$ 4,240,000
Skinner	\$ 3,460,000
Weymouth	\$ 44,370,000
Water Treatment - General	\$ 700,000

CIP Funding

Funding for CIP is becoming more diverse than it has ever been as Metropolitan continues to seek outside sources of funds to support infrastructure projects. Listed below are funding sources other than the funds Metropolitan's Board will approve and appropriate for the next biennium.

Pure Water Southern California

In December 2022, Metropolitan's Board authorized the General Manager to use \$80 million in project funding from the State Water Resources Control Board (SWRCB) to commence activities related to the initiation of the Pure Water Southern California program. Metropolitan received the \$80 million funding in one lump sum payment on May 24, 2023, to support the design activities for the program. Approximately \$15 million of these funds is planned to be used to fund part of Metropolitan's CIP expenditures for FYs 2026-28. Through the reporting quarter, approximately \$43.4 million has been used to support program management tasks, including the preparation of various plans for program implementation and preliminary design of the initial two pipeline reaches.

Metropolitan is currently discussing with the program partners, Southern Nevada Water Authority (SNWA) and Arizona Department of Water Resources, to determine their potential contributions to the program. Los Angeles County Sanitation Districts (LACSD) has agreed to be responsible for implementation of the pretreatment and nitrogen management facilities, which includes the membrane bioreactor (MBR). The amended and restated agreement with LACSD was authorized on September 9, 2024. Metropolitan is currently discussing with other program partners to determine their potential contributions to the program.

The U.S. Bureau of Reclamation (USBR) awarded a \$5 million WaterSMART grant to Metropolitan in 2023. The grant agreement was finalized in May 2024. A three-time matching fund is required for this grant. Metropolitan also received a notice of intent to award a Large-Scale Water Recycling Project (LSWRP) grant in May 2024, which will reimburse 25 percent of the planning and design costs up to \$99,199,096 through the grant term. In November 2024, Metropolitan again received a notice of intent to award an LSWRP grant in the amount of \$26,273,759, for a total LSWRP grant amount of \$125,472,855. Metropolitan will share the LSWRP grant with LACSD, who will provide their share of the matching funds. The Board authorized the acceptance of the grant award on December 10, 2024, and USBR executed the grant agreement on January 10, 2025. The agreement allows Metropolitan to include program-related expenditures for reimbursement from April 2020, when the feasibility study was submitted. Metropolitan has submitted invoices for both grants and has received \$4.2 million from the WaterSMART grant and \$21.3 million from the LSWRP grant through the 2nd quarter of FY 2025/26.

Drought Mitigation Projects

December 2022, Metropolitan's Board adopted a resolution to accept \$50 million in state funding from the California Department of Water Resources to support Metropolitan's drought mitigation projects. The California Department of Water Resources (DWR) administers the funds and releases the reimbursement after Metropolitan invoices expenses. The \$50 million fund is available for reimbursement through June 30, 2026, and five percent of this amount may be used for administrative costs by DWR. From the state-allocated amount, it allocated to Metropolitan \$47.5 million to improve and expand its infrastructure to be more resilient and flexible to respond to fluctuating water supplies. The improved system will enhance the ability to convey water throughout all its service area. To date, three projects on the east side of Metropolitan's system are covered under this grant. These three projects are part of an overall plan to provide direct delivery of Diamond Valley Lake (DVL) supplies to the Rialto Pipeline. As of the 1st quarter of FY 2025/26, a total of \$42.2 million in reimbursement has been received from the State for the three projects. This funding allows additional rehabilitation projects to proceed as a result of applying state grant funds towards the applicable CIP projects.

In November 2023, Metropolitan submitted a grant application to USBR requesting \$5 million to support Inland Feeder/SBVMWD Foothill Pump Station project as part of water supply reliability improvements in the Rialto Pipeline service area. USBR offers funding through its WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024 to water districts in the Western United States to increase water supply reliability through investments in existing infrastructure and increased water management flexibility. The USBR program funds up to \$5 million per project for projects that can be completed within three years. This funding allows additional rehabilitation projects to proceed as a result of applying the grant funds towards the applicable CIP projects. The grant requires a 50 percent cost-sharing, therefore Metropolitan would pay for at least the same amount (\$5 million) towards cost of the project. The source of the cost-share funds is budgeted CIP funds planned to be spent on the project and will fulfill Metropolitan's grant matching funds requirement. The total cost of this project is estimated to be \$40 million. The grant agreement was finalized in May 2025. In addition to grant funding, USBR acts as federal lead to project's National Environmental Policy Act (NEPA) process and United States Fish and Wildlife Service (USFWS) permit consultation. During the 1st quarter of FY 2025/26, USBR continued consultation with USFWS to secure permit required for construction of the project.

Battery Energy Storage System

In October 2020, Metropolitan's Board authorized adding battery energy storage system (BESS) projects to the CIP to enhance the efficiency of Metropolitan's long-term power use, provide a hedge against projected electricity price increases, and improve the resiliency of the electric power supply at the Jensen, Skinner, and Weymouth water treatment plants. This decision was aided by the California Public Utilities Commission's enhanced incentives for microgrid-capable BESS at critical facilities, which are expected to reimburse Metropolitan for \$8.147 million of project costs. Weymouth BESS construction was completed in January 2025 and commissioning & startup are expected to be completed in the second quarter of FY 2025/26. Jensen and Skinner BESS constructions are currently underway. The Skinner is expected to be completed in the third quarter of FY 2025/26, and the Jensen is expected to be completed in the fourth quarter of FY 2025/26. Unlike the funds received for Pure Water discussed above, the incentive will be paid to Metropolitan in phases: 50 percent at project completion, with the remaining 50 percent paid equally over five years upon annual proof of a 5 kg CO₂/kWh reduction in greenhouse gas emissions.

Webb Tract Delta Island Wetland Restoration and Rice Field Development

In May 2023, Metropolitan's Board adopted a resolution to support a grant application for a \$20.9 million grant from the Sacramento-San Joaquin Delta Conservancy (Delta Conservancy), and staff signed a grant agreement with the Delta Conservancy in March 2024 that funds two projects on Webb Tract, a Metropolitan-owned island located in Contra Costa County. The two projects include construction of approximately 1,400 acres of rice fields and design, permitting, and construction of approximately 2,400 acres of wetland on the Webb Tract island. Under this grant, staff submits invoices to Delta Conservancy quarterly to receive reimbursement of expenditures that comply with the grant requirements. As of the first quarter of FY 2025/26, a total reimbursement of \$1,555,758 has been received from the Delta Conservancy. On July 22, 2025, Metropolitan received concurrence from the California Department of Fish and Wildlife on its determination that the Webb Tract Wetland Restoration Project qualifies for a Statutory Exemption for Restoration Projects, thus completing the California Environmental Quality Act review process. In August 2025, Metropolitan's Board awarded an agreement to lease 2,159 gross acres to a farming partner to grow rice on Webb Tract. Wetland final design is ongoing with 90% design package completed and reviewed. Permitting is anticipated to be completed by the end of 2025 and construction is estimated to begin in spring of 2026.

Diamond Valley Lake Recreation

The Diamond Valley Lake (DVL) Recreation Program is a unique appropriation. The program was fully funded with \$92.8M in 2004 with the intent of constructing recreational facilities at the East and West Dams. One condition placed on the appropriation was that proceeds from the sale of any surplus DVL properties would be used as additional funds to the program. In 2021, Metropolitan sold DVL land valued at \$4.5M and this amount was added to the DVL Recreation appropriation. Future sales will be addressed similarly. The proposed projects under this program are described in the Districtwide and Other Facilities and Systems Program section.

Capital Investment Plan Detail

The core of this section is the Individual Program Summaries, which provide information for each CIP project that has been proposed, evaluated, and included in the budget forecast to begin or continue during and after FY 2026/27 and FY 2027/28. Scope, accomplishments, objectives and financial projections are provided for each CIP program. Every project with work planned for the two budget years and beyond is listed under the appropriate Program Summary by Project Group. The information provided reflects project details current as of the time of publication and is subject to change. The Individual Program Summaries are ordered alphabetically by program title. The information contained in the Individual Program Summaries is described in further detail below.

Key Information

For each program, key information is highlighted at the top of the Individual Program Summary page and includes the FY 2026/27 and FY 2027/28 biennial estimate. Table 5 provides an explanation of each item.

Table 5 - Key Program Information

Item	Description
Program Description	A brief explanation of the types of projects included in the Program
Fiscal Years 2026/27 and 2027/28 Estimate	Estimate of planned spending from July 2026 through June 2028. It does not include a contingency amount.
Accomplishments for FY 2024/25 and FY 2025/26	Listing of new projects initiated and major milestones achieved during the last biennium
Objectives for FY 2026/27 and FY 2027/28	Listing of key projects with major milestones planned during the budget biennium with the total project estimate, estimated construction completion, and the planned milestone for FY 2026/27 and FY 2027/28

Narratives

Each Individual Program Summary also contains a narrative portion that includes a description of each project planned to be underway during the two-year budget period and beyond.

Table 6 - Program Summary Index

Program Title	Page No.
Climate Adaptation	19
Colorado River Aqueduct	23
Dams & Reservoirs	42
Distribution System	52
Districtwide and Other Facilities and Systems	85
Drought Mitigation – SWP Dependent Areas	96
Information Technology & Control Systems	99
Minor Capital Projects	110
Prestressed Concrete Cylinder Pipe	111
Pure Water Southern California	115
Water Treatment Plants	120

Individual Program Summaries

Climate Adaptation Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$43.9 million

Program Information: *The Climate Adaptation Program is composed of projects to replace, refurbish, upgrade, or construct new facilities to prepare Metropolitan to adjust to current and projected climate change impacts on its operation and its mission and to comply with related regulatory requirements.*

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - Headquarters Building Zero Emission Vehicle Infrastructure Upgrades – Stage 1
 - Inglewood Lateral Improvement
 - Zero Emissions Fleet Pilot Infrastructure – Stage 2, Phase 1
- Major milestones achieved or forecasted to be achieved:
 - Advanced Water Treatment Demonstration Plant
 - Technical memoranda for phased DPR implementation and tertiary membrane bioreactor (tMBR) modification plan - completed
 - Direct potable reuse (DPR) bench scale testing - completed
 - Delta Properties Infrastructure Improvements Phase 5 – construction completed
 - Jensen and Skinner Battery Energy Storage System – construction to be completed
 - PWSC DPR Demonstration Facility – procurement contracts to be awarded
 - Webb Tract Delta Island Wetland Restoration – construction contract to be awarded
 - Weymouth Battery Energy Storage System – construction completed
 - Zero Emission Fleet Pilot Infrastructure Projects
 - Stage 1 - final design of pilot charges at Metropolitan Headquarters and coordination with LADWP to be completed
 - Stage 2, Phase 1 - final design of pilot charges for four locations including Diemer, Mills, and Weymouth plants and the Gene Pumping plant, to be completed

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Delta Islands Pump Station Rehabilitation	\$ 15,000,000	2029	Complete design
Delta Smelt and Native Species Preservation Wetlands	\$ 12,500,000	2029	Complete design and construction
PWSC Direct Potable Reuse Demonstration Facility	\$ 74,000,000	2028	Complete testing, design, and construction
Webb Tract Wetland Restoration and Rice Field Development	\$ 18,600,000	2027	Complete construction
Zero Emission Fleet Pilot Infrastructure Projects	\$ 6,000,000	2027	Complete construction of pilot chargers at five locations

Climate Adaptation - All

Delta Islands Pump Station Rehabilitation

In 2016, Metropolitan purchased five islands/tracts (about 20,400 acres) in the central Delta: Bacon, Bouldin, Holland Tract (portion), Webb Tract, and West Chipps Islands (sold in 2021 to DWR). Collectively, these lands represent a crucial part of the Delta for multiple potential values that are consistent with the State's co-equal goals of ecosystem restoration and water supply reliability for California. As part of this purchase, each property has existing infrastructure that contains a system of individual siphons that bring diverted river water onto the property, through irrigation canals for agricultural purposes, and eventual conveyance of net water by gravity to pump stations, which pump remaining water off the property through discharge pipes to prevent flooding. This project will construct new pump stations on all the Metropolitan-owned islands to replace aging pump stations, to increase system reliability and minimize the service disruption, which could result in loss of revenue if tenant operations are impacted by flooding due to pump station issues. The condition of the discharge pipelines will also be assessed and replaced, if necessary, as part of this project.

Delta Properties Infrastructure Improvements Phase 5 - Regulatory Compliance (Senate Bill 88)

California State Senate Bill (SB 88) is the water measurement law that requires water right holders in the Delta and diverters who divert 10 acre-feet of water per year or more under a permit or license to install and maintain a device or employ a method capable of measuring the rate of direct diversion, rate of collection to storage, and rate of withdrawal or release from storage. Metropolitan's Delta properties are required to comply with this law. Approximately 88 meters with telemetry and support equipment are necessary to comply with the regulation. A total of approximately 60 flow meters have been installed to date, and this project will install the remaining flow meters and associated support equipment.

Delta Smelt and Native Species Preservation Wetlands

The Delta Smelt is a small, euryhaline fish species endemic to the San Francisco Estuary. Since the 1980s, the Delta Smelt population has exhibited significant declines in abundance leading to it being listed as endangered under the California Endangered Species Act, which may potentially create additional regulatory operational constraints on Delta water exports for state and federal water contractors. Metropolitan is working with multiple state and federal government agencies and researchers from UC Davis to advance research objectives through multiple collaborative study efforts. This project will utilize natural pond habitats located on Metropolitan's Delta island(s) to construct tule marsh wetlands, supplementation ponds, and associated hydraulic water conveyance systems including irrigation ditches and potential groundwater wells to address issues and questions including methods for potential successful reintroduction of Delta smelt in the Delta. An evaluation determined that Bouldin Island is the most suitable location for this project. Other goals related to this project could involve use of floating peat wetlands, setting back the existing levee, and reintroduction of tidal energy gradients.

Districtwide Zero and Near Zero Emissions Fleet Infrastructure

Identifying new ways to reduce greenhouse gas (GHG) emissions and reduce Metropolitan's carbon footprint is essential to the implantation of Metropolitan's Climate Action Plan (CAP). This project will design and construct infrastructure to meet mandated Zero Emission (ZE) and Near-Zero Emission (NZE) state and local regulations and comply with California Environmental Quality Act (CEQA) GHG reductions identified in the CAP. This project would be implemented in phases, starting with development of a comprehensive transition plan to a ZE and NZE fleet, implementation of transition plan that includes interim and long-term infrastructure design, installation of recommended infrastructure (e.g., charging and/or dispensing stations), and installation of infrastructure related to solar and/or battery energy storage and other sustainability opportunities. The fleet includes passenger vehicles; light-, medium-, and heavy-duty on-road vehicles, off-road construction vehicles/equipment; and forklifts. The initial step to implement the transition includes developing a comprehensive plan for Metropolitan's future fleet infrastructure to comply with state and local regulations. The second step includes pilot testing of up to 100 charging stations and charge management systems at 20 field sites to bridge the gap until the districtwide transportation hubs full build-out are complete and to validate the operability and functionality (including lessons learned) of the new system. The final step includes installation of charging infrastructure at the districtwide transportation hubs to allow full fleet transition to zero emission vehicles.

Consistent with these steps, the project has been staged as follows:

- **Zero Emission Fleet Pilot Infrastructure - Stage 1:** This project will install pilot electric vehicle chargers at Metropolitan's Headquarters and the Weymouth plant.
- **Zero Emission Fleet Pilot Infrastructure - Stage 2:** This project will install the remaining electric vehicle charging stations needed to bridge the gap until the districtwide Zero Emission Vehicle Infrastructure full build-out is complete.
- **Zero Emission Fleet Pilot Infrastructure - Stage 2, Phase 1:** This project will install 30 Level 2 Ford Pros and Level 2+ In-charge vehicle charging stations and three Level 3 electric fast-charging stations at 14 field sites, including associated step-down transformers, breakers, cables, and conduits to the charging stations. The fourteen locations include Metropolitan's five water treatment plants, Headquarters Building, Soto Street, Garvey Reservoir, Lake Matthews, Chlorine Unloading Facility, Diamond Valley Lake, Gene, Iron Mountain, and Hinds Pumping Plants.
- **Headquarters Building Zero Emission Vehicle Infrastructure Upgrades:** This project will install the remaining electric vehicle charging infrastructure at Metropolitan's Headquarters Building.
- **Headquarters Building Zero Emission Vehicle Initial Infrastructure Upgrades:** This project will install the initial approximately 70 electric vehicle chargers at Metropolitan's Headquarters Building.

Hayfield Groundwater Storage and Extraction

This project will improve the spreading basin and construct a well field extraction and conveyance system to withdraw stored CRA water in the groundwater basin and discharge it back into the CRA at the Hinds Pumping Plant. The initial phase will focus on installing a limited conveyance system to extract the 100,000 acre-feet of water currently stored in the Hayfield Groundwater Basin. The Hayfield basin is located south of the Hinds Pumping Plant and adjacent to the CRA. This project will improve drought resilience and enhance the reliability of CRA operations.

Inglewood Lateral Improvement

The project will increase the capacity of the existing Inglewood Lateral via an upsized or parallel pipeline. The project aims to remove an existing constraint in the distribution system that would enable increased deliveries from the Joseph Jensen Water Treatment Plant during high State Water Project allocations and maximize deliveries of reverse flow during low State Water Project allocations using two expanded Sepulveda Feeder pump stations.

PWSC Direct Potable Reuse Demonstration Facility

Metropolitan's Grace F. Napolitano Innovation Center (Demonstration Plant) at the Los Angeles County Sanitation Districts' A. K. Warren Water Resource Facility (Warren Facility) in Carson was originally designed to demonstrate testing of Indirect Potable Reuse (IPR) processes as part of Pure Water Southern California. This project will add new facilities; modify existing facilities; and expand the existing infrastructure, utilities, and process train to facilitate Direct Potable Reuse (DPR) treatment testing and data collection for process optimization for regulatory acceptance and full-scale implementation. This project will also include physical plant security improvements; new operational field offices; improvements to support public outreach functions; and new electrical power service improvements to support long-term efforts at the Demonstration Plant.

Webb Tract Rice Field Development

Located in the Sacramento-San Joaquin Delta region, Webb Tract Island was purchased by Metropolitan in 2016. The island is deeply subsided due to current agricultural practices. Metropolitan plans to develop a portion of the island for rice cultivation as part of a multi-benefit program to reverse subsidence, reduce greenhouse gas emissions, increase revenue, and protect the State Water Project's freshwater pathway. This project will convert up to 1,500 acres of existing agricultural land for rice farming. The project will include precision land leveling to support the planting and harvesting of rice as well as the installation of water control structures such as check gates and irrigation equipment to ensure uniform flow of water across the rice fields.

Webb Tract Wetland Restoration

Located in the Sacramento-San Joaquin Delta region, Webb Tract Island was purchased by Metropolitan in 2016. The island is deeply subsided due to current agricultural practices. Metropolitan plans to restore wetlands on a portion of the island as part of a multi-benefit program to reverse subsidence, reduce greenhouse gas emissions, increase revenue, and protect the State Water Project's freshwater pathway. This project will restore approximately 2,400 acres of wetland on the island. The work will include earth moving, berm construction, installation of water control structures, tule planting, environmental monitoring, and other work associated with the wetland restoration.

Yorba Linda HEP Power Supply to Diemer Water Treatment Plant

This project will modify the existing Yorba Linda Hydroelectric Power Plant (HEP) to directly supply electrical power to the Diemer Water Treatment Plant (WTP), thereby reducing the plant's dependence on the Southern California Edison (SCE) grid. The work includes installing new 4.16 kV feeders, modifying existing switchgear at both sites, integrating metering upgrades, and updating programmable logic controllers (PLC). The system will allow seamless transition of power delivery, while surplus energy will continue to be sold to the wholesale market.

Colorado River Aqueduct (CRA) Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$190.8 million

Program Information: *The CRA Program is composed of projects to replace, refurbish, or upgrade facilities and components of the CRA system to reliably convey water from the Colorado River to Southern California.*

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - CRA 230 kV Transmission Line and Fiber Optic Improvements
 - CRA 230 kV Transmission Tower Barrier Improvements
 - CRA Main Motor Units Protection Relay Replacement – Stage 1
 - Desert HVAC Replacement – Gene Pumping Plant Administrative Building
 - Hinds Pumping Plant Fuel Dispenser System Improvement
 - Intake and Gene Pumping Plant Transformer Bushings and Pressure Device Replacements
 - Intake Transformer Bank Protection Relays Replacement
 - Iron Mountain Fuel Dispenser System Improvement
 - Iron Mountain Pumping Plant Hazardous Waste Containment Upgrade
- Major milestones achieved or forecasted to be achieved:
 - Construction:
 - CRA Conduit Structural Protection - completed
 - CRA Conveyance System Flow Monitoring Stations –completed
 - CRA Freda Siphon Barrel No. 1 Restoration – completed
 - CRA Pumping Plant Storage Buildings at Hinds, Eagle Mountain, and Iron Mountain – to be completed
 - CRA Pumping Plant Urgent 15 kV Power Cable Replacement – completed
 - Gene Pilot Security Improvements – completed
 - Gene Pumping Plant Urgent Security Improvements - completed
 - Construction and procurement contracts awarded:
 - CRA 69 kV and 240 kV Transformers Replacement – procurement contract awarded
 - CRA Pumping Plants Sump System Rehabilitation – construction contract to be awarded
 - Hinds & Eagle Mountain Pumping Plants Utilities and Paving– construction contract awarded
 - Hinds Pumping Plant Fuel Dispenser System Improvement – construction contract to be awarded
 - Final Design Completed
 - Cabazon Radial Gate Facilities Improvement

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
CRA 69 kV and 240 kV Transformer Replacement	\$ 252,500,000	2035	Continue equipment procurement
CRA Pumping Plant Sump System Rehabilitation	\$ 38,100,000	2029	Begin construction
Gene and Iron Mountain Pumping Plants Utilities and Paving	\$ 57,700,000	2029	Begin construction
Hinds and Eagle Mountain Pumping Plants Utilities and Paving	\$ 40,700,000	2027	Begin construction
Hinds Pumping Plant Discharge Valve Pit Platform Replacement	\$ 8,400,000	2027	Begin construction

CRA - Conveyance Project Group

Cabazon Radial Gate Facilities Improvement

The Cabazon Radial Gate facility is located on the CRA in the city of Cabazon within Riverside County, approximately one mile upstream of the San Jacinto Tunnel. The Cabazon Radial Gate facility was constructed in 1936 and consists of a large radial gate controlled by an electric motor actuator. The facility was designed to protect the downstream conduits and tunnels from becoming over-pressurized in the event of a blockage by diverting water into an 800-foot-long concrete-lined channel, which flows into the San Gorgonio Wash. The existing radial gate, motor, and controls have reached the end of their service life and are no longer reliable. This project will replace the radial gates, motors, gate actuator controls, and make safety, security, and fire systems improvements.

CRA Canal Rehabilitation

The CRA is a 242-mile-long conveyance system comprising five pumping plants, 124 miles of tunnels, 63 miles of canals, and 55 miles of conduits, siphons, and reservoirs. The aqueduct is routinely shut down and inspected for signs of deterioration and to perform needed repairs. This project will conduct a comprehensive investigation of the approximate 63 miles of open CRA canal section, looking into the need for any possible upgrades or replacements to address deficiencies in the existing canal system, which may include the replacement of portions of concrete, improvements to instrumentation and controls, communication, and electrical systems that serve the canal, replacement or improvements of the security fencing spanning 125 miles around the perimeter of canals, and road and drainage improvements.

CRA Chemical Addition Improvements

Sodium hypochlorite is added along the CRA to control algal growth, which could damage downstream process equipment and reduce flow through the aqueduct. The existing process of providing weekly chemical addition into the canal produces spikes in disinfectant concentrations, which causes the Colorado River water to be more corrosive to conveyance systems and plant equipment and produces higher concentrations of trihalomethanes (THMs). This project will construct new chemical storage and injection facilities to provide a steady rate of addition at five locations along the CRA. Each new chemical injection facility will be upgraded to include a sodium hypochlorite tank and pump skid, chemical storage building with climate control and spill containment, delivery driveway with spill containment area, piping, injection system, security cameras, fencing, electrical and Supervisory Control and Data Acquisition (SCADA) upgrades, and other appurtenances.

CRA Conveyance System Flow Sensor Installation

CRA pumping system upgrades performed in the early 1990s increased pumping capacity above the original design flow of the CRA. Close monitoring of the CRA system is needed to reliably maintain 8-pump flow. This project will add new gauging stations along the conveyance system that will be tied into Metropolitan's Supervisory Control and Data Acquisition (SCADA) system to provide flow data and information that will assist with maintaining uniform and steady-state flow conditions through the CRA system.

CRA Conveyance System High Flow Reliability Upgrades

The CRA was originally designed for flows of 1,600 CFS. In the 1990s, the pumps were upgraded, which increased the pumping capacity to 1,800 CFS, but no modifications were made to the conveyance portions of the CRA system. Operating at 8-pump flows results in operational issues such as pressurization of unreinforced structures, over-topping of canals, and heightened equipment vibration. This project will enhance the conveyance portion of the CRA system and implement other improvements at the five pumping plants to ensure reliable flows during 8-pump flow operations.

CRA Erosion Protection

The CRA is comprised of 55 miles of cut-and-cover conduits. The cut-and-cover conduits are arch or horseshoe shape, unreinforced, cast-in-place concrete. In most locations along the CRA, the overlying soil protects the cut-and-cover conduits from rock and debris flows. However, at narrow ravine crossings, heavy storm events often erode the soil and expose the conduits, making them vulnerable to structural damage from the rock and debris flows. This project will provide erosion protection features such as gabion structures or concrete slabs, including grading of the eroded areas to protect the conduit. In addition, diversion berms or concrete swales will be constructed to divert storm flows over the concrete slabs.

CRA Flow Measuring Stations Security Upgrades

Metropolitan has several remote sites along the CRA that are used to monitor and control the aqueduct. Due to the remote location, these sites have solar panels, electrical panels, and solar batteries to power the control systems. These systems have been the target of vandalism and theft. This project will furnish and install concrete buildings at remote locations along the Colorado River Aqueduct and move pole-mounted electrical panels and battery cabinets inside the buildings.

CRA Freda Siphon Barrel No. 1

Siphons constructed along the CRA allow controlled stormwater flows and vehicles to cross over the CRA. Like many of the CRA's 146 siphons, the Freda Siphon was constructed of cast-in-place reinforced concrete in the 1930s. Freda Siphon has developed minor surface leaks. This project will investigate methods to permanently address recurring leaks and will perform improvements that are cost-effective, long-term, and require minimal shutdown time and maintenance.

CRA Freda Siphon Barrel No. 1 Internal Seal Installation - Stage 2

The CRA Freda Siphon Barrel No. 1 was constructed without control joints and has a history of cracking and leakage. Surface investigations of the CRA Freda Siphon Barrel No. 1 conducted over the past two years revealed potential leakage locations. This project will install internal seals along the siphon during the annual CRA shutdown, reducing the risk of future unplanned outages and costly emergency repairs.

CRA Tunnels - Seismic Resilience Upgrades

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews in Riverside County, including 124 miles of tunnels, which were constructed in the late 1930s and were placed into service in 1941. While the CRA was constructed in accordance with current seismic codes of that time, recent seismic risk assessments of the CRA identified that some tunnels are vulnerable to damage from a strong earthquake on the southern San Andreas Fault. This project will strengthen tunnel sections on the Colorado River Aqueduct to improve their performance against seismic hazards, including ground shaking and landslides.

Desert Pumping Plants Delivery Line Flow Meter Replacement

The CRA pumping plants utilize flow meters to accurately measure the output from each plant. This system is crucial for regulating the water in the CRA and is relied upon by the Desert operational control center. However, it suffers from chronic failures and downtime associated with all parts of the system. Electronics, cables, and transducers have had failures in recent years. This project will replace the delivery line flow meters at all five Desert pump plants, including the flow meter electronic unit, transducers, conduits, and cables.

Eagle Lift & Eagle West Siphons Seismic Improvements

The CRA was placed into service in 1941. As the aqueduct traverses the desert, it must cross numerous drainage channels, ravines, and other natural depressions. At each crossing, the aqueduct's open channel transitions into a buried conduit (an inverted siphon), which drops below ground and passes beneath the natural surface feature. At the downstream end of the siphon, water re-emerges into the open aqueduct. Typically, siphons are cast-in-place reinforced concrete conduits, which vary in length from 150 feet to 5 miles. An initial assessment of the Eagle Lift and Eagle West Siphons identified potential slope failure of the soil covering the siphons and possible rock fall from the surrounding terrain as a result of a strong seismic event. This project will perform a detailed slope stability analysis and evaluate and implement mitigation options.

Iron Mountain and Eagle Mountain Pumping Plants Reservoir Floor Relining

The Iron Mountain and Eagle Mountain pumping plants each have approximately 9.3-acre forebay reservoirs, constructed in the 1930s. Recent geotechnical investigations of the asphalt reservoir floor liners found them to be in poor condition. This project will replace the existing asphalt liners at each plant with a material that precludes seepage water loss and extends the life of the facility.

Iron Mountain Tunnel Rehabilitation

The Iron Mountain Tunnel was constructed in the 1930s as part of the CRA system. The tunnel is located downstream of the Iron Mountain pumping plant and is eight miles long. The tunnel's cross-section is horseshoe-shaped, with overall dimensions of 16 feet high by 16 feet wide. Longitudinal and transverse cracks up to one inch wide have developed along a 2,500-foot-long stretch of the tunnel. This project will mitigate the cracks with a focus on tunnel strengthening and corrosion protection.

West Portal Perimeter Security Upgrade

The West Portal site of the San Jacinto Tunnel does not have a continuous perimeter fence. The location is susceptible to intruders. This project enhances site security at the West Portal of the San Jacinto Tunnel by installing a continuous high-security perimeter fence and advanced networked intrusion detection systems to prevent unauthorized access and improve overall facility protection.

Whitewater Tunnel No. 2 Seismic Upgrade

CRA Whitewater Tunnel No. 2 closely parallels the southern San Andreas Fault and crosses a splay of the fault approximately one-third mile from its west portal. A recent seismic risk assessment of the CRA identified that this tunnel is vulnerable to major damage from a strong earthquake on the southern San Andreas Fault. This project will improve sections of the tunnel to mitigate damage from large earthquakes and improve access to quickly make repairs if necessary.

CRA - Electrical Systems Project Group

Black Metal Mountain 2.4 kV Electrical Power Upgrade

The Black Metal Mountain site houses communications facilities essential to operation of Metropolitan's desert facilities. The existing power line to the site is undersized and inadequate to meet the facility's power needs. This project will replace the existing single-phase 2.4 kV overhead power line serving the Black Metal Mountain communication facilities with a three-phase 4.16 kV system to improve reliability and meet future load demands. The scope includes installing metal poles, upgrading low-voltage distribution to underground where feasible, adding individual building meters, and improving the access road with surfacing, drainage, and safety features.

Camino, Gene, and Iron Mountain 230 kV Disconnect Switches Replacement

Metropolitan's CRA facilities include high-voltage transmission lines from Lake Mead to supply power to each of the five pumping plants. The 230 kV transfer bus disconnect switches at Gene, Iron Mountain, and Camino Switching Station are original 1930s equipment that has exceeded its useful life. These switches are critical for isolating and bypassing transmission buses during maintenance or fault conditions to ensure uninterrupted power to CRA pumping plants. Spare parts are no longer available, and ongoing maintenance poses increasing reliability and safety risks. This project will upgrade disconnect switches at Gene, Iron Mountain, and Camino Switching Station. The project will modernize critical transmission infrastructure, minimize outage risk, and support continuous water delivery while aligning with current utility standards.

CRA 230 kV Transmission Line and Fiber Optic Improvements

The CRA has an extensive 230 kV transmission system that originates from Hoover Dam and supplies power to all five pumping plants. This 305-mile-long transmission system was installed in the 1930s. This project will perform a comprehensive assessment of the nearly 90-year-old 230 kV transmission line serving the Colorado River Aqueduct. The evaluation will address the structural integrity, electrical performance, and long-term reliability of all major components, including towers, conductors, insulators, and hardware. Key activities include visual inspection, structural and electrical analysis, LiDAR clearance survey, and risk assessment. The project will also integrate modern fiber optic communications by replacing a static wire with optical ground wire to enhance system monitoring and future CRA connectivity. Based on findings, a mitigation plan will be developed to address any identified deficiencies, ensuring the continued safe and reliable operation of the transmission line.

CRA 230 kV Transmission Tower Barrier Improvements

The Desert Region's 230 kV transmission line is critical infrastructure, which provides power to the CRA facilities and pump stations. The project will design and build new protective barriers for two 230 kV transmission towers on the transmission line, which are located adjacent to highways CA 62 and CA 177. The protective barriers will help to ensure that the towers are protected from unintended damage from traffic accidents.

CRA 2.4 kV Village Electrical Power Distribution Upgrades

This project will replace the existing 2.4 kV village, O&M power distribution systems, and other facilities connected to this distribution circuit at Gene, Iron Mountain, Eagle Mountain, and Hinds pumping plants with a new 4.16 kV system. The scope includes replacing cables, conduits, feeders, risers, approximately 700 poles, 130 transformers, and associated equipment such as switchgear and protective devices. Where feasible, underground installation will be implemented. The project also includes fiber optic cable installation to each residence to enhance communication capabilities. All work will comply with current NEC and applicable standards to improve system reliability, safety, and operational flexibility.

CRA 6.9 kV Power Cables Replacement

There are a total of 45 primary pumps and motors at the five CRA pumping plants. Power is transmitted to the motors via 3-inch-diameter cables, which run through a tunnel that connects each switch house to each pump house. The quantity of cables varies from nine to 27 per plant. These cables were installed in four phases from 1939 through 1959. After 59 to 79 years of continuous service, the power cables have deteriorated and need to be replaced. Oil has begun to leak through cracks in the lead jacket, at the cable connection joints, and at the cable termination points. Frequent repairs are required to address the leaks and maintain the cables' insulating capacity. This project includes the replacement of the deteriorated main power cables for pump units 1 to 5 at each of the five CRA pumping plants. The cables for units 1 to 5 have been replaced; however, the new cable terminations leak oil and must be replaced.

CRA 6.9 kV Power Cables Replacement Units 6 to 9

There are a total of 45 primary pumps and motors at the five CRA pumping plants. Power is transmitted to the motors via 3-inch diameter cables, which run through a tunnel that connects each switch house to each pump house. The quantity of cables varies from nine to 27 per plant. These cables were installed in four phases from 1939 through 1959. After 66 to 86 years of continuous service, the power cables have deteriorated and need to be replaced. Oil has begun to leak through cracks in the lead jacket, at the cable connection joints, and at the cable termination points. Frequent repairs are required to address the leaks and maintain the cable's insulating capacity. The cables for pump units 1 to 5 have been replaced. This project includes the replacement of the deteriorated main power cables for pump units 6 to 9 at each of the five CRA pumping plants.

CRA 6.9 kV Power Cables Termination Refurbishment Units 1 to 5

There are a total of 45 primary pumps and motors at the five CRA pumping plants. Power is transmitted to the motors via 3-inch diameter cables, which run through a tunnel that connects each switch house to each pump house. Oil has begun to leak through the cable termination points of several units from 1 to 5 at all five CRA pump plants. This project will replace the leaking terminations with new terminations.

CRA 69 kV and 240 kV Transformers Replacement

Transformers are needed at the CRA pumping plants to adjust the incoming voltage from the transmission system to the various voltages needed to run the plants. All existing transformer units are original equipment, with many dating from the 1940s. Recent inspections revealed oil leakage and other signs of aging for some of the transformers. Failure of an existing transformer would disrupt power supply to a pumping plant and interrupt water delivery. The scope of the project includes replacement of the transformers along with spill containment structures. This work also includes rehabilitation of transformer cranes, upgrade of transformer monitoring and protection equipment, and secondary spill containment for the transformer banks. Additional work may include refurbishing existing transformers and related equipment to maintain reliable and safe operation while new units are being procured and installed.

CRA Auxiliary Power System Rehabilitation and Upgrade for Four Pumping Plants

The CRA pumping plants have medium and low voltage systems that were constructed to the design standards of the 1930s-1950s. They provide power for general lighting, cranes, computers, shop equipment, and critical equipment such as the pumping plant sump pumps and lubrication oil pumps. This project upgrades the Auxiliary Power Systems at Intake, Gene, Eagle Mountain, and Hinds pumping plants to enhance reliability and operational efficiency. The work includes replacing inverters, battery racks, electrical panels, circuit breakers, conduits, cable trays, and extensive wiring that support critical systems such as cooling water pumps, lubrication oil pumps, control systems, and fire water systems. Transformer replacements include a 480 V to 120/208 V unit at Intake and 2.4 kV to 480 V and 2.4 kV to 120/208V units at Gene, Eagle Mountain, and Hinds, including associated potheads, cables, and related ancillary equipment.

CRA Pumping Plants 2.3 kV and 480 V Switch Rack Rehabilitation

The electrical power system at the Desert pumping plant facilities conveys power to all areas within the property confines, including the operations and maintenance areas and the villages. This project involves replacing the Station Light and Power systems at selected CRA pumping plants. Work may include upgrades to medium- and low-voltage electrical equipment, installation of metal-clad indoor switchgear, new transformers, circuit breakers, switchgear buildings, and supporting systems such as HVAC, SCADA, fire protection, and plant DC power. Electrical upgrades will be performed in accordance with Metropolitan standards, and all work will comply with applicable safety codes. The project may include related appurtenances and modifications as needed, with scope subject to adjustment based on field conditions and operational requirements.

CRA Pumping Plants 6.9 kV Circuit Breaker Replacements

The existing high-voltage circuit breakers that power the main pumps at the CRA pumping plants are obsolete, and replacement parts are no longer available. This project will replace and upgrade the existing 6.9 kV circuit breakers at the Intake, Gene, Iron Mountain, Eagle Mountain, and Hinds pumping plants to meet current operational requirements and Metropolitan standards. The work may include relocating breakers indoors, installing tie breakers, and upgrading associated electrical equipment. Improvements will also address system protection, SCADA integration, and coordination with existing infrastructure. Additional work may be performed to comply with safety codes and include related appurtenances as required.

Eagle Mountain Redundant DC Supply

The Eagle Mountain 230 kV substation currently relies on a single DC power supply to operate its protection and control systems, creating a critical single point of failure. In the 2024 Transmission Reliability Planning Assessment, CAISO identified this as a NERC TPL-001-5.1 Category P5 compliance issue requiring corrective action. This project involves installing a second, redundant DC power supply at the Eagle Mountain 230 kV substation to improve system reliability and comply with NERC TPL-001-5.1 requirements. Upgrades may also be made to security and electrical systems to meet Metropolitan standards. Work will include modifications necessary to comply with applicable safety codes and related appurtenances as required.

Hinds Transformer Power Cable Replacement

The power cables that feed the Hinds sand trap and wasteway radial gate are installed in a shallow ductbank that is deteriorating due to heat. This project will construct a new ductbank with power conductors designed to address these deficiencies.

Intake and Gene Pumping Plants 480 V and 2.4 kV Standby Diesel Engine Generator Replacement

Back-up power for critical auxiliary systems at the Iron Mountain, Gene, and Intake pumping plants is provided by stand-by diesel generators. The standby generators are over 50 years old, require frequent repairs, and have reached the end of their service lives. Additionally, upgrades to the generators' ancillary equipment are necessary to comply with current fire codes and environmental regulations. This project involves replacing the standby generator systems at the Gene and Intake pumping plants to improve emergency power reliability and support critical operations. One Tier 4-rated indoor standby generator will be installed at each site, along with associated load banks, double-walled fuel tanks, and related components housed in new generator buildings. Electrical and control systems will be upgraded to integrate with existing switchgear, SCADA, and distribution infrastructure in accordance with Metropolitan standards. Additional work will be completed as needed to comply with safety codes, environmental regulations, and operational requirements. The final scope and system configurations will be confirmed during the design phase to accommodate site-specific conditions and evolving project needs.

Intake and Gene Pumping Plants Transformer Bushings and Pressure Device Replacements

Seven transformers provide electrical power to each CRA pumping plant to maintain continuous operation. All existing transformer units are original equipment, with many dating from the 1940s. This project provides for the procurement and installation of new bushings, pressure-reducing devices, and other components as needed for the transformers located at the Intake and Gene pumping plants. This work is being implemented in phases due to installation constraints and manufacturer storage recommendations. This project is a subcomponent of the larger CRA main transformer rehabilitation effort and will ensure continued operational reliability of the CRA until existing transformers are replaced.

Intake Transformer Bank Protection Relays Replacement

This project entails upgrading the outdated electromechanical protection relays and associated components for the 69 kV to 6.9 kV Bank One and Bank Two main transformers at the Intake Pumping Plant. The existing relays are obsolete, no longer supported by the manufacturer, and lack modern diagnostic and communication capabilities. Replacing them with advanced microprocessor-based relays and updating associated components will enhance system reliability, improve operational efficiency, and ensure compliance with current industry standards. The new relays will deliver critical protection functions to support the continued reliable operation of the transformers and protect both equipment and personnel in the event of a fault.

Iron Mountain Station Light & Power Electrical Improvements

The five CRA pumping plants have aging electrical systems. Many of the components are obsolete and no longer available. This project will upgrade critical electrical systems at the Iron Mountain Pumping Plant through the consolidated implementation of three components: replacement of the existing 2.4 kV station light and power switchrack with a 4.16 kV system and construction of a new switchgear building; installation of a new indoor EPA Tier 4-certified standby diesel generator with associated support systems; and rehabilitation of the auxiliary power system serving essential plant loads. Work includes new transformers, switchgear, inverters, battery systems, distribution panels, HVAC, and SCADA integration. Construction will be completed during a single planned shutdown to minimize operational disruptions, improve system reliability, and maintainability.

New Iron Mountain 230 kV Circuit Breaker 309

This project will enhance the reliability and operational flexibility of the CRA Iron-Eagle 230 kV transmission line by upgrading electrical infrastructure at the Iron Mountain Pumping Plant. The scope includes the procurement of new 230 kV circuit breakers and replacement of the existing CB 309 breaker and its integration with protective relays and the existing switchyard. CB 309 will be coordinated with Southern California Edison's CB 407 at the Eagle Mountain Pumping Plant to improve system protection and fault isolation capabilities. These improvements will reduce the risk of prolonged power outages, protect water delivery operations, and support Metropolitan's long-term system reliability goals.

CRA - Pumping Plants Project Group**CRA Asphalt Replacement**

The existing asphalt pavement at the desert facilities has deteriorated from the many years of exposure to the harsh desert environment. The project will remove and replace existing deteriorated roadways and paved working areas surrounding the pump plant, as well as maintenance/storage yards, at all five CRA pumping plant locations. The proposed rehabilitation will include a survey of existing conditions and replacement of existing asphalt concrete with new engineered asphalt pavement mix, roadway striping, grading, and potential stormwater drainage system improvements.

CRA Automated Trash Rack Cleaning System at Three Pumping Plants

The Iron Mountain, Eagle Mountain, and Hinds pumping plants have trash racks protecting the plant intake siphons. These trash racks are critical for CRA reliability by preventing stringy weeds, vegetation, sticks, and other larger debris from entering the plants. If these weeds and debris pass through the trash rack, it can result in emergency failures to equipment like circulation water pumps and sand strainers, increased labor for maintenance, and decreased equipment service life. This project will install automated trash rack cleaning systems, which will resolve these issues.

CRA Desert Region Communications Building

The existing desert region communications infrastructure and facilities were part of the plant's original construction in the 1930s and have gradually been extended across multiple facilities over the years. Therefore, there is no centralized location capable of housing all server equipment, batteries, and an emergency generator. While there is an existing communication building at the Gene Pumping Plant, it is undersized to accommodate all the various server racks necessary for IT, SCADA, security, and NERC, and it does not have space for a backup generator or an adjacent battery room. The backup batteries and generators are critical to ensure redundancies during a power failure. This project will assess the Desert Region's communication infrastructure needs and will construct a new communications building at the Gene Pumping Plant that includes a generator room, a battery room, and a large room for communications and electrical equipment. The communications room will be sized to accommodate multiple rows of racks for IT, SCADA, security, and telecommunication equipment and wiring, and possibly NERC-compliant electrical equipment.

CRA Fall Prevention Swing Gate Installations

The project will furnish and install over 300 Cal-OSHA compliant, self-closing swing gates to replace existing chains located on fixed-ladder ways and elevated work platforms at the five CRA pumping plant facilities. The scope will include removing and disposing of the existing chains and clamping on the new swing gates. The new swing gates will be installed at every fixed ladder way, including at each unit's discharge sump, suction valve sump, heat exchange catwalks, distribution pipes, headgate catwalks, and other miscellaneous locations.

CRA Headgate Surge Chamber Rehabilitation

Each of the five CRA pumping plants has nine main pumps that lift water from the pump house through a series of converging delivery lines that convey water from the pump house to a headgate structure located at the top of a hill. These structures then convey water to the downstream portion of the aqueduct. Flow from each headgate structure is regulated by three large steel gates. Recent inspections at the Intake and Gene pump plants have revealed that the protective coatings on various components of the gates have begun to crack and peel. This project will recoat the headgate structure outlet gates at all pumping plants to prevent metal loss due to corrosion. Additional scope may be added as a result of the preliminary assessment to ensure proper operation and maintenance of the outlet gates.

CRA Hinds Pumping Plant Sand Trap Slide Gate Installation

The Hinds Pumping Plant has a sand trap facility located upstream to remove sand before it enters the plant and damages the pumps. The current configuration of the Hinds sand trap creates a plant vulnerability because it cannot be opened to drain during an emergency, such as a severe leak in the plant or a plant outage. Consequently, the water volume stored in the sand trap's outlet channel and the additional plant inlet conduit and canal would be gravity-fed into the plant continuously. This can potentially overwhelm the circulating water sump pumps and flood the plant, resulting in catastrophic damage to the plant facility. This project will replace a fixed steel plate that covers an existing 3-foot square opening with a sluice gate, allowing staff to open it and drain the water in case of an issue that could flood the plant, such as a power outage.

CRA Intake Pumping Plant Shore Protection

The existing shore protection, consisting of rocks and concrete, was installed around the time of the Intake Pumping Plant construction in the 1930s and has exceeded its service life. This project will improve the shore adjacent to the Intake Pumping Plant to protect the access road and facilities and mitigate against both short-term and long-term coastal erosion due to waves, flooding, and water surface level changes in Lake Havasu.

CRA Intake Pumping Plant Substructure Improvements

An inaccessible sub-structure cavity containing utility piping is located beneath the HVAC equipment room located on the north end of the Intake Pumping Plant Control House. This project will install a new concrete accessway and wall at this location along the exterior of the Intake Control House to provide maintenance access and prevent lake water intrusion. The project will also evaluate options for creating a base surface for maintenance by installing a platform for filling the cavity void above Intake Delivery Line No. 3 and determine the extent of required plumbing replacements. Intruding soil and water in the substructure will be removed before the upgrades, paving will be replaced, and existing surface structures, such as HVAC condenser units, will be relocated as needed to accommodate the work.

CRA Main Motor Units Protection Relay Replacement – Stage 1

Each of the five CRA pumping plants has nine main pumps that lift the water to the required elevation necessary to continue flow down the aqueduct. This project will upgrade the outdated electromechanical motor protection relays and associated protection components for the five (5) main 6.9 kV pumps across the CRA pumping plants with modern microprocessor-based relays to enhance system reliability and operational efficiency. The new relays will provide critical protection functions, such as thermal overload, voltage and frequency monitoring, and SCADA integration, ensuring accurate fault detection, faster issue resolution, and reduced risk of motor damage or unplanned downtime.

CRA Main Motor Units Protection Relays Replacement

This project will upgrade the outdated electromechanical motor protection relays and associated protection components for the forty (40) main 6.9 kV pumps across the five CRA pumping plants with modern microprocessor-based relays to enhance system reliability and operational efficiency. The existing relays are obsolete, no longer supported by manufacturers, and lack advanced diagnostic and communication capabilities. The new relays will provide critical protection functions, such as thermal overload, voltage and frequency monitoring, and SCADA integration, ensuring accurate fault detection, faster issue resolution, and reduced risk of motor damage or unplanned downtime.

CRA Main Pump and Motor Refurbishment

Each of the five CRA pumping plants has nine main pumps that lift the water to the required elevation necessary to continue flow down the aqueduct. In the mid-1980s, a major rehabilitation project was undertaken on the 45 main pumps. As a result, the 45 main pumps have performed well over the nearly 40 years since the rehabilitation work was completed. However, the pumps are now showing signs of deterioration caused by continuous operation over that length of time. This project will refurbish the 45 main pumps and their auxiliary systems, including lubricating oil systems, circulating water systems, controls and instrumentation systems, discharge valves, electrical and control panels, and individual equipment components as needed.

CRA Main Pump Controls and Instrumentation

Each of the five CRA pumping plants has nine main pumps that lift the water to the required elevations necessary to continue flow down the aqueduct. The 45 main pumps rely on multiple auxiliary systems including the controls and instrumentation systems. While the main pumps have undergone previous rehabilitation the controls and instrumentation system has not. Most of the current instrumentation is over 60 years old, obsolete, and no longer manufactured. This project will replace the main pump controls and instrumentation and add increased monitoring to the CRA main pumps.

CRA Main Pump Discharge Valve Refurbishment

Each of the five CRA pumping plants has nine main pumps that lift the water to the required elevations necessary to continue flow down the aqueduct. The 45 main pumps rely on multiple auxiliary systems including the discharge valves. While the main pumps have undergone previous rehabilitation the discharge valves have not. The discharge valves are from the original CRA construction and now need to be replaced. This project will refurbish or replace the existing discharges valves using a phased approach to maintain full pump availability. Work will be completed during annual shutdowns or during scheduled low-flow periods. This project will also evaluate the addition of an automatic valve lubricator system.

CRA Main Pump Rehabilitation - Stage 1

Each of the five CRA pumping plants has nine main pumps that lift the water to the required elevation necessary to continue flow down the aqueduct. The 45 main pumps rely on multiple auxiliary systems including lubricating oil systems, circulating water systems, controls and instrumentation systems, discharge valves, electrical and control panels, and individual equipment components. In the mid-1980s, a major rehabilitation project was undertaken on the 45 main pumps. As a result, the 45 main pumps have performed well over the nearly 30 years since the rehabilitation work was completed. However, the pumps are now showing signs of deterioration and need to be replaced. This project will perform a comprehensive condition assessment and refurbishment of the remaining 44 main pumps and their auxiliary systems, including lubricating oil systems, circulating water systems, controls and instrumentation systems, including lubricating oil systems, circulating water systems, controls and instrumentation systems, discharge valves, electrical and control panels, and individual equipment components as needed.

CRA Main Pump Rehabilitation - Stage 1 - Pilot

Each of the five CRA pumping plants has nine main pumps that lift water to the required elevation necessary to continue flow down the aqueduct. The 45 main pumps rely on multiple auxiliary systems including lubricating oil systems, circulating water systems, controls and instrumentation systems, discharge valves, electrical and control panels, and individual equipment components. In the mid- 1980s, a major rehabilitation project was undertaken on the 45 main pumps. As a result, the 45 main pumps have performed well over the nearly 40 years since the rehabilitation work was completed. However, the pumps are now showing signs of deterioration caused by continuous operation over that length of time. While that project successfully extended the service life of the pumps and increased their hydraulic capacity, the pump auxiliary systems were not addressed at that time. The pump auxiliary systems are from the original CRA construction and are now deteriorating and need to be replaced. This project will refurbish one main pump at Gene Pumping Plant and its auxiliary systems, including lubricating oil systems, circulating water systems, controls and instrumentation systems, discharge valves, electrical and control panels, and individual equipment components, as needed.

CRA Main Pumping Plants Sand Removal System

At each of the five CRA pumping plants, water is withdrawn from the CRA, filtered to remove large debris and sand, and then pumped through a circulating water system. The circulating water system feeds the pumphouse, service water system, the cooling system at each pump unit, the fire water system, the irrigation water system, and the domestic water treatment system. The existing filtration system is not designed to strain out fine silts. Consequently, the fine silt has built up as sediment in the circulating water system, leading to excessive wear and failure of equipment such as pump packing, cooling water piping, and heat exchangers. This project will upgrade the filtration system to remove fine silt and eliminate sediment build up and refurbish or replace any identified damaged components.

CRA Main Pumping Plants Unit Coolers and Heat Exchangers

Each of the five CRA pumping plants has nine main pumps. Each main pump has a cooling system to cool various components of the pump system. At each pump house, water is pumped through a circulating water system, which feeds multiple unit coolers and heat exchangers for each individual main pump unit. Over the years, the cooling system has developed many leaks. Lack of sufficient cooling water could cause equipment overheating, and the leaks could damage nearby electrical equipment. This project will replace, refurbish, or upgrade the cooling and heat exchange system at each pump unit.

CRA Pumping Plant Access Improvements

The Colorado River Aqueduct (CRA) pumping plant access roads must accommodate heavy traffic loads for deliveries of chemicals, materials, equipment, and staff. The existing asphalt roads are distressed and show numerous areas of longitudinal and alligator cracking. The harsh desert climate conditions have caused the pavement to age and become distressed more quickly. These roads are the sole means of access to the pumping plants, making reliable use of the roads critical to allow equipment, chemical, and material deliveries, ingress for first responders, and general access. This project will rehabilitate approximately 11 miles of the existing access roads leading to the Intake, Iron Mountain, Eagle Mountain, and Hinds Pumping Plants using a combination of pavement overlay and pavement replacement with new aggregate base subgrade. This project will also include pavement markings.

CRA Pumping Plant Lower Guide Access Improvements

At each CRA pumping plant, maintenance staff perform monthly inspections of the lower guide areas located beneath each main pump. The access hatches used for these inspections are positioned approximately 20 feet above the deck in hard-to-reach areas, creating safety and accessibility challenges. This project will design, fabricate, and install new work platforms to enhance safety and facilitate routine inspection activities.

CRA Pumping Plant Public Address and Alarm Communication System Upgrades

The existing communication signals at each of the five CRA pumping plants are currently separated into different systems, including: the public address system, plant alarms, evacuation, fire, and carbon dioxide fire suppression system alarms, and phones. The signals in these systems were originally installed to utilize the existing 1930's era phone line systems and are becoming increasingly difficult to maintain as replacement parts are becoming harder to find and troubleshooting is difficult. This project will replace the existing communication systems with a new integrated and modernized auditory communication system with alarms that are able to be identified based on different distinct alarm tones. Signal wires will be routed to a network-enabled public address and general alarm system, and new speakers will be added at each plant to improve the ability to hear audible alarms throughout the plants, even when loud pumps are operating.

CRA Pumping Plants Circulation Water Systems

Each of the five CRA pumping plants has nine main pumps. Each of these pump units uses cooling equipment to cool various components of the pump system that feeds from the plant's circulating water system. This system has a loop with branch connections and an isolation valve at each unit. The piping and the valves that supply the circulating water systems run through the entire length of the plants and are all from the original CRA construction. The piping and the valves are now showing signs of deterioration. They are clogged, corroded, and leaking. This project will replace and upgrade the circulation water systems for each pumping unit. Additional related scope may be added as a result of preliminary assessment of the circulating water system to ensure reliable operation of the CRA pumping plants.

CRA Pumping Plants Delivery Line Rehabilitation

Each of the nine main pumps at the five CRA pumping plants discharges the water into individual six-foot-diameter discharge lines. The nine discharge lines then merge and transition into three 10-foot-diameter delivery lines. Delivery Line Nos. 1, 2, and 3 convey flow to the top of the lift and then discharge into a headgate structure. These delivery lines vary in length from 500 feet to 1,400 feet up steep and rocky slopes. The five Delivery Line No. 1s were constructed in the 1930s and were lined with coal tar enamel to protect the interior of the pipe from corrosion. After 84 years of service, the existing coal tar enamel lining on Delivery Line No. 1 at each plant is cracking, flaking, and the steel is starting to corrode. The mortar linings for Delivery Line Nos. 2 and 3, constructed in the 1950s, require rehabilitation at selected locations. Expansion joints are also deteriorated and showing signs of corrosion. This project provides a comprehensive rehabilitation of the delivery lines at each of the five CRA pumping plants, including replacement of the coal tar enamel with a cement mortar lining, expansion joints, and minor coating refurbishment.

CRA Pumping Plants Rollup Door and Window Replacements

Over the past 80 years, the desert has taken its toll on the windows and rollup doors at all five CRA pumping plants. Many windows can no longer be opened, making it difficult to keep the main pump motors cool on 120-degree summer days. And the rollup doors in the pump houses and head gate structures require continual maintenance to keep them operable. This project will replace these building features while remaining consistent with architectural standards.

CRA Pumping Plants Sand Trap Traveling Bridge Cranes Control Upgrades

Three of the CRA pumping plants (Iron Mountain, Eagle Mountain, and Hinds) have a sand trap facility located upstream of the plants. These sand trap facilities are critical in minimizing the amount of sand entering the pump plant facility. The desert's sandy terrain, combined with high-velocity wind gusts, results in large quantities of sand blown into the CRA canal system. If this sand is not removed, the sand containing water can enter the plant intakes, damaging pipe walls and turbines, and ultimately result in premature equipment failures. This project will provide upgrades to the existing three sand trap facilities to convert the traveling bridge pump system to an automated system that can be controlled by staff remotely or scheduled to run autonomously, equipped with safeguard protections to self-disable, alarm systems to alert plant staff of failures, SCADA and camera system upgrades, and programmable logic controller (PLC) programming to allow plant monitoring and control. The project will also address the issues with the lateral movement of the crane and trolley rails that have been occurring at all sand traps. Best design practices and standards will be implemented to properly restrain the crane and trolley rails.

CRA Pumping Plants Station Air Compressors

The station air systems supply the CRA pump plants with operational and maintenance air supply. Compressed air is used for the operation of cooling water valves for the main pump units, as well as for maintenance air in the machine shop, synchronous motor exciter maintenance, and other similar maintenance activities within the facility. The existing air system packages were installed in the early 2000's and are at the end of life. Maintenance of the compressed air systems has increased dramatically within the last several years, including costly repairs such as a full rebuild of the compressor and air-drying apparatus. This project will replace the compressed air system within all five CRA pumping plants. In-kind replacement of CRA pumping plant station air systems will include compressors, air dryers, and associated equipment.

CRA Pumping Plants Sump System Rehabilitation

Each of the five CRA pumping plants has two sumps that collect water leakage from the main pumps and discharge valves. Each sump is approximately 9 feet wide, 20 feet long, and 35 feet deep, and can hold up to 48,000 gallons, or approximately one day's worth of leakage water. The sump system pumps this water back to the pumping plant's main intake manifold or to its forebay, depending on the plant. The 74-year-old sump piping systems and support structures are deteriorating and have exceeded their service lives. Failure of the sump piping systems has the potential to cause extensive flooding and damage to equipment within the pumping plants. This project will rehabilitate the pumping plant sump systems, including replacement of corroded sump mechanical equipment, piping, and access structures at all five CRA pumping plants. Access features will be upgraded by replacing corroded catwalks, ladders, and handrails within the sumps. This project will also rehabilitate the circulating water equipment and piping systems located in the sump area.

CRA Pumping Plants Water Tanks Rehabilitation

Each of the five CRA pumping plants has three concrete water storage tanks for pump cooling/circulating water, irrigation/fire water, and domestic water. These tanks were constructed in 1930s and are critical to the plant operation. This project will upgrade all 15 tanks to address seismic deficiencies, leakage, and water temperature issues. Work will also include improvements to linings, coatings, and appurtenances such as ladders, vents, drains, piping, and wall penetrations.

CRA Switchracks and Ancillary Structures Erosion and Drainage Control Protection

The five CRA pumping plants are located in remote areas of the California desert, which are periodically subjected to flash floods that carry high volumes of water, silt, and debris. During major storm events, the pumping plants' pump houses and support facilities are susceptible to flooding and deposition of silt and debris. In recent years, at several of the plants, debris flows have affected various critical electrical facilities. This project will include site grading, addition of perimeter drainage channels to intercept offsite flows, upsizing of storm drain culverts, and extension of patrol roads to access the new storm drain facilities for maintenance.

Critical Desert Region Facilities Physical Security Improvements

CRA facilities are critical components of Metropolitan's water delivery system. These facilities include the CRA pumping plants, Camino Electrical Substation, Gene Wash, Gene Airstrip, Copper Basin, and Black Metal Mountain. These facilities have inadequate perimeter fencing. This project will install physical security improvements, including fencing, signage, road and access control improvements at main entrances, and permanent guardhouses at the critical CRA facilities except for Iron Mountain Pumping Plant, which will be completed as part of another project.

Desert Pump Plant Reservoir Spillway Auto Rejection - Iron Mountain and Eagle Mountain

The Iron Mountain and Eagle Mountain Reservoirs are located on the upstream side of the Iron Mountain and Eagle Mountain pumping plants, respectively. The reservoirs dampen fluctuations in flow entering the plants. Each reservoir contains a spillway that allows water to be discharged to the desert in the event of a power outage to the main pumps. The two spillways were designed in the 1930s to safely reject up to approximately 1,200 cubic feet per second (cfs). The pumping plants were expanded in the 1950s, and the aqueduct can now operate up to approximately 1,750 cfs. This project will modify the reservoir spillways to allow safe rejection of up to 1,750 cfs of water in the event of a power outage of the main pumps.

Eagle Mountain and Hinds Pumping Plants Hazardous Waste Containment Upgrade

Hazardous wastes such as chemicals, oil, paint, paint thinners, and antifreeze are generated through routine operations at the Eagle Mountain and Hinds pumping plants. Hazardous wastes are collected and placed into either metal or plastic drums ranging in size from five to 55 gallons. The existing hazardous wastes are then stored in a fenced storage area. This project will replace the existing hazardous waste storage facilities with a code-compliant hazardous waste storage facilities at Eagle Mountain and Hinds pumping plants.

Gene and Iron Mountain Pumping Plants Utilities and Paving

Gene and Iron Mountain pumping plants are located in remote areas of San Bernardino County where municipal domestic water distribution systems are not available. Each plant is instead served by a community on-site water treatment system. Water from the CRA is treated and conveyed to each village house and to the industrial portions of the pumping plants through a gravity-fed water distribution system, which consists of distribution piping, isolation valves, blow-offs, air relief valves, and other associated appurtenances. Inspections of the distribution systems have found blockages, leaks, taste and odor problems, and root intrusion. The system has been experiencing frequent leaks and breaks. This project will replace the domestic water distribution systems, which include the main line pipes, service laterals, new backflow prevention devices, valves, meters, remote water quality analyzers, and other appurtenances to deliver quality water reliably.

Municipal wastewater collection and treatment facilities are not available where the pumping plants are located. The pumping plants are served by community on-site wastewater systems. These on-site systems collect, treat, and dispose of domestic wastewater generated from bathrooms, kitchen facilities, maintenance buildings, guest lodges, and staff residences at the plants. The on-site systems consist of three primary components: community septic tanks and leach fields; collector lines located throughout the pumping plants that convey wastewater to the septic tanks; and sewer laterals that convey wastewater from individual buildings to the collector lines. The existing wastewater systems at the plants have deteriorated through continual use and need to be replaced. This project will replace the wastewater systems at the pumping plants. The systems will include new main-line pipes, building laterals, septic tanks and leach fields, and other appurtenances to reliably collect and treat wastewater.

On-site non-potable irrigation water systems serve the irrigation needs of pumping plants and fire sprinklers inside a few manufacturer houses at both pumping plants. The system consists of distribution piping, isolation valves, blow-offs, air relief valves, and other associated appurtenances. Similar to domestic water and wastewater systems, irrigation water systems have deteriorated and need to be replaced. The systems will include new main-line pipes, service laterals, valves, blow-offs and air relief valves, and other appurtenances to deliver irrigation water reliably.

The asphalt roadways at the pumping plants provide access between buildings and the villages for Metropolitan staff, residents, and visitors. These asphalt surfaces are over 30 years old. Due to the harsh desert conditions and deterioration of the subgrade over time, potholes and cracks have developed throughout the villages. The planned upgrades to the roadway pavement include removal and replacement of existing pavement, as well as grading and installation of culverts to improve drainage.

Gene Pumping Plant Unit No. 1 Brushless Motor Exciter System

Each of the 45 main pumps at the CRA pumping plants requires an exciter to operate. The existing system is obsolete, and replacement parts are no longer available. This project will replace the existing exciter on Gene Pumping Plant Unit No. 1 with a modern brushless exciter. Work includes design, procurement, demolition, installation, and integration with existing electrical and control systems. Electrical upgrades will be made to meet Metropolitan standards, and all work will comply with applicable safety codes. The project may include related appurtenances and modifications as needed. This pilot project will help assess the use of brushless technology for the remaining motor units across all five CRA pumping plants. The scope may be adjusted based on field conditions and operational requirements.

Gene Pumping Plant Warehouses Storage Rack Rehabilitation

Existing materials storage racks located within the Gene Pumping Plant Warehouse and Spare Parts Warehouse buildings need additional anchorage and are susceptible to toppling or movements that cause heavy items to fall in the event of an earthquake. Retrofits of these racks are needed primarily to ensure worker safety in the two warehouses at the Gene Pumping Plant and to minimize the potential of damage to materials/equipment during a failure by ensuring secure racks. This project will evaluate structural and seismic deficiencies in existing storage racks, including anchorage and structural members, and provide retrofits as needed to bring the storage racks to meet the latest code. There are approximately 42 storage racks in and around the Spare Parts Warehouse and approximately 10 storage racks inside the Main Warehouse at the Gene Pumping plant.

Hinds and Eagle Mountain Pumping Plants Utilities and Paving

Hinds and Eagle Mountain pumping plants are located in remote areas of Riverside County where municipal water distribution systems are not available. Each plant is instead served by a community on-site water treatment system. Water from the CRA is treated and conveyed to each village house and to the industrial portions of the pumping plants through a gravity-fed water distribution system, which consists of distribution piping, isolation valves, and valve boxes. Recent inspections of the distribution systems have found blockages, leaks, taste and odor problems, and root intrusion. This project will replace the domestic water distribution systems, which include the main line pipes, building laterals, new backflow prevention devices, valves, meters, remote water quality analyzers, and other appurtenances to deliver quality water reliably.

Municipal wastewater collection and treatment facilities are not available where the pumping plants are located. The pumping plants are served by community on-site wastewater systems. These on-site systems collect, treat, and dispose of domestic wastewater generated from bathrooms, kitchen facilities, maintenance buildings, guest lodges, and staff residences at the plants. The on-site systems consist of three primary components: community septic tanks and leach fields; collector lines located throughout the pumping plants that convey wastewater to the septic tanks; and sewer laterals that convey wastewater from individual buildings to the collector lines. The existing wastewater systems at the plants have deteriorated through continual use and need to be replaced. This project will replace the wastewater systems at the pumping plants. The systems will include new main-line pipes, building laterals, septic tanks and leach fields, and other appurtenances to reliably collect and treat wastewater.

On-site non-potable irrigation water systems serve the irrigation needs of pumping plants and fire sprinklers inside a few manufacturer houses at both pumping plants. The system consists of distribution piping, isolation valves, blow-offs, air relief valves, and other associated appurtenances. Similar to domestic water and wastewater systems, irrigation water systems have deteriorated and need to be replaced. The systems will include new main-line pipes, service laterals, valves, blow-offs and air relief valves, and other appurtenances to deliver irrigation water reliably.

The asphalt roadways at the pumping plants provide access between buildings and the villages for Metropolitan staff, residents, and visitors. These asphalt surfaces are over 30 years old. Due to the harsh desert conditions and deterioration of the subgrade over time, potholes and cracks have developed throughout the villages. The planned upgrades to the roadway pavement include the removal and replacement of existing pavement, as well as grading and the installation of culverts to improve drainage within the disturbed areas of the pumping plants, including the villages.

Hinds Discharge Valve Platform Units 7, 8, and 9 Urgent Rehabilitation

At each of the CRA pumping plants, water is pumped from the plants' intake manifold through the main pumps and out of the discharge valves. From the discharge valves, water travels through the delivery lines and into the aqueduct. The discharge valves are located in small concrete pits below the pumping plant floor room. At the Hinds Pumping Plant, the concrete pits are equipped with a raised platform due to their depth. The platform is necessary to maintain the discharge valve's ancillary equipment. After nearly 80 years of service in a humid environment created primarily by the pump's cooling water discharge, the metal platform has corroded significantly and needs to be replaced. This project will replace the discharge valve platform and relocate cooling water discharge piping for discharge pits at the Hinds Pumping Plant Units 7, 8, and 9. Additional scope may be added as a result of the preliminary assessment to replace the platform that will ensure the safety of the workers, as well as improve access to maintain the discharge valves.

Hinds Pumping Plant Discharge Valve Pit Platform Replacement

At each of the CRA pumping plants, water is pumped from the plants' intake manifold through the main pumps and out of the discharge valves. From the discharge valves, water travels through the delivery lines and into the aqueduct. The discharge valves are located in small concrete pits below the pumping plant floor room. At the Hinds Pumping Plant, the concrete pits are equipped with a raised platform due to their depth. The platform is necessary to maintain the discharge valve's ancillary equipment. After nearly 80 years of service in a humid environment, the metal platform has corroded significantly and needs to be rehabilitated. This project will rehabilitate the discharge valve platform at the Hinds Pumping Plant and ensure the safety of the workers, as well as improve access to maintain the discharge valves. Replacement of the platforms for Units 7, 8 and 9 are being expedited under a separate project.

Intake Utilities and Paving

The Intake Pumping Plant is located in remote areas of San Bernardino County where municipal domestic water distribution systems are not available. The plant is instead served by a community on-site water treatment system. Water from the CRA is treated and conveyed to the village house and to the industrial portions of the pumping plant through a gravity-fed water distribution system, which consists of distribution piping, isolation valves, blow-offs, air relief valves, and other associated appurtenances. Inspections of the distribution system have found blockages, leaks, taste and odor problems, and root intrusion. The system has been experiencing frequent leaks and breaks. This project will replace the domestic water distribution systems, which include the main line pipes, service laterals, new backflow prevention devices, valves, meters, remote water quality analyzers, and other appurtenances to deliver quality water reliably.

Municipal wastewater collection and treatment facilities are not available where the pumping plant is located. The pumping plant is served by community on-site wastewater systems. These on-site systems collect, treat, and dispose of domestic wastewater generated from bathrooms, kitchen facilities, maintenance buildings, guest lodges, and staff residences at the plant. The on-site systems consist of three primary components: community septic tanks and leach fields; collector lines located throughout the pumping plants that convey wastewater to the septic tanks; and sewer laterals that convey wastewater from individual buildings to the collector lines. The existing wastewater systems at the plant have deteriorated through continual use and need to be replaced. This project will replace the wastewater systems at Intake. The systems will include new main-line pipes, building laterals, septic tanks and leach fields, and other appurtenances to reliably collect and treat wastewater.

On-site non-potable irrigation water systems serve the irrigation needs of the pumping plant and fire sprinklers inside a few manufacturer houses at both pumping plants. The system consists of distribution piping, isolation valves, blow-offs, air relief valves, and other associated appurtenances. Similar to domestic water and wastewater systems, irrigation water systems have deteriorated and need to be replaced. The systems will include new main-line pipes, service laterals, valves, blow-offs and air relief valves, and other appurtenances to deliver irrigation water reliably.

The asphalt roadways at the pumping plant provide access between buildings and the villages for Metropolitan staff, residents, and visitors. The asphalt surfaces are over 30 years old. Due to the harsh desert conditions and deterioration of the subgrade over time, potholes and cracks have developed throughout the villages. The planned upgrades to the roadway pavement include removal and replacement of existing pavements, as well as grading and installation of culverts to improve drainage.

Iron Mountain Physical Security and CRA Desert Region Technology Improvement

CRA facilities are critical components of Metropolitan's water delivery system. These facilities include five pumping plants, Camino Electrical Substation, Gene Wash, Gene Airstrip, Copper Basin, and Black Metal Mountain. This project will install physical security improvements, including fencing, signage, cameras, motion detectors, remote speakers, card readers, and lighting at the Iron Mountain Pumping Plant. This project will also include security technology improvements at the CRA facilities listed above, including surveillance cameras, access control devices, and integration of security devices with Metropolitan's security system.

Iron Mountain Pumping Plant Hazardous Waste Containment Upgrade

Hazardous wastes such as chemicals, oil, paint, paint thinners, and antifreeze are generated through routine operations at the Iron Mountain Pumping Plant. Hazardous wastes are collected and placed into either metal or plastic drums ranging in size from five to 55 gallons. The existing hazardous wastes are then stored in a fenced temporary storage area. This project will replace the existing hazardous waste storage facility with a code-compliant hazardous waste storage facility.

CRA - Other Project Group**CRA Pump Houses Plumbing Rehabilitation**

Each of the CRA pump houses has restrooms, a kitchen, and utility sinks for use by operators on-site. These facilities were part of the original CRA construction. They have deteriorated over time and require frequent repairs. This project will address the aging infrastructure and provide reliable facilities for plant staff.

CRA Pumping Plant Switch House Roof Rehabilitation

At the CRA pumping plant facilities, high-voltage lines from the main transformers enter the switch house, where the power is distributed for the main pumps. The switch house roof is exposed to the extreme desert environment, and the existing elastomeric coating is in disrepair. Leaks can potentially reach the high-voltage equipment inside, which can cause operational failures and interrupt CRA operation. Efforts to spot patch/repair have been ineffective. The roof of the switch house building needs complete removal of the existing sealing materials and new roofing to be installed. This project will rehabilitate the switch house roofs at the Intake, Gene, Iron Mountain, Eagle Mountain, and Hinds pumping plants.

CRA Support Facilities Seismic Retrofit and CRA Building ADA Improvements

An initial seismic risk assessment has revealed that several CRA support structures may be vulnerable to a major seismic event. These support structures include office and maintenance buildings, guest lodges, and dining and recreation halls located at Hinds, Eagle Mountain, Iron Mountain, and Gene pumping plants. This project will perform detailed seismic assessments and retrofit the support structures if necessary. All buildings, essential and non-essential, at all five CRA pumping plants will also be evaluated for ADA access and improvements.

CRA Transition Structures Rehabilitation and Fall Protection System Installation

Working at elevated areas requires fall protection per California Occupational Safety and Health Administration (Cal-OSHA) regulations. The project will furnish and install new handrails, self-closing swing gates, and other applicable safety measures at 60 transition structures along the CRA conveyance system. The scope also includes evaluating the condition of the concrete structures and performing rehabilitation, as necessary.

Desert HVAC Replacement

This project will replace heating, ventilation, and air conditioning (HVAC) systems throughout the desert region for CRA support facilities, which are less energy efficient and past their useful life, with newer, more energy-efficient units. The new systems will consist of certified energy-efficient equipment with modernized HVAC systems. This project will also include the addition of any appurtenances and construction of support facilities for more reliable and efficient HVAC operation.

Desert HVAC Replacement – Gene Pumping Plant Administrative Building

This project will replace the heating, ventilation, and air conditioning (HVAC) system at the Gene Pumping Plant administrative building, which is less energy-efficient and past its useful life, with a newer, more energy-efficient unit. The new system will provide a climate-controlled environment for office staff working in the desert and ensure optimal performance of the HVAC systems while reducing O&M efforts.

Eagle Mountain and Gene Pumping Plants Fuel Dispenser System Improvements

Metropolitan has fuel stations at Eagle Mountain and Gene pumping plants supplying gasoline and diesel for equipment and operations and maintenance vehicles. Due to the extended high-heat season in the desert, elevated temperatures cause gasoline to vaporize, resulting in the pumps' inability to function properly to dispense fuel. This project will convert the existing gasoline fuel system from a suction system to a pressurized system, eliminating the issue and providing fuel reliably for CRA operations and maintenance.

Hinds Pumping Plant Elevator Rehabilitation

The Hinds Pumping Plant is the only CRA pumping plant facility that has an elevator within the pump house structure due to the unique configuration of the facility. This elevator is required at Hinds because of an intermediate floor between the motor room floor and the pump room floor. This elevator is critical for allowing plant staff to move equipment to the intermediate floor area. The elevator system was installed in 1957 and needs to be rehabilitated due to its age and years of operation. This project will rehabilitate the elevator system at the Hinds Pumping Plant. The scope of work includes assessing the condition of the existing equipment to identify components that require replacement and rehabilitation. Hazardous abatement will be required during rehabilitation work.

Hinds Pumping Plant Fuel Dispenser System Improvement

Metropolitan has a fueling station at Hinds Pumping Plant that supplies gasoline and diesel for equipment and operations and maintenance vehicles. Due to extended high heat season in the desert, elevated temperatures cause gasoline to vaporize, resulting in the pumps' inability to function properly to dispense fuel. This project will convert the existing gasoline fuel system from a suction system to a pressurized system to eliminate the issue and provide fuel reliably for CRA operations and maintenance.

Iron Mountain Fuel Dispenser System Improvement

Metropolitan has fuel stations at Iron Mountain Pumping Plant, supplying gasoline and diesel for equipment and operations and maintenance vehicles. Due to the extended high-heat season in the desert, elevated temperatures cause gasoline to vaporize, resulting in the pumps' inability to function properly to dispense fuel. This project will convert the existing gasoline fuel system from a suction system to a pressurized system, eliminating the issue and providing fuel reliably for CRA operations and maintenance.

Dams and Reservoirs Program

Fiscal Years 2026/27 and 2028/28 Estimate: \$148.1 million

Program Information: The Dams & Reservoirs Program is comprised of projects to upgrade or refurbish Metropolitan's dams, reservoirs, and appurtenant facilities to reliably meet water storage needs and regulatory compliance.

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - Copper Basin Sodium Hypochlorite Tank Rehabilitation
 - Diamond Valley Lake Forebay Concrete Joint Seal Replacement
 - Lake Mathews Pressure Control Structure and Electrical System Upgrades
 - Palos Verdes Reservoir Second Outlet Structure Fall Protection
 - Skinner Finished Water Reservoir Effluent Slide Gate Rehabilitation & Dry Start-Up System
- Major milestones achieved or forecasted to be achieved:
 - Copper Basin and Gene Wash Reservoirs Discharge Structure Rehabilitation – Stage 2 – construction contract to be awarded
 - Garvey Reservoir Rehabilitation – Stage 1 – construction contract awarded
 - Jensen Finished Water Reservoirs Rehabilitation – preliminary design completed
 - Lake Mathews Pressure Control Structure and Electrical System Upgrades – received Statements of Qualifications (SOQ) for Progressive Design-Build (PDB) contract
 - Lake Skinner Dam V-Ditch Replacement – construction completed
 - Mills Finished Water Reservoirs Rehabilitation – preliminary design completed

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Copper Basin and Gene Wash Reservoirs Discharge Structure Rehabilitation – Stage 2	\$ 29,700,000	2027	Begin construction
Diamond Valley Lake Dam Monitoring System Upgrades – Stage 3	\$ 2,100,000	2026	Complete construction
Garvey Reservoir Rehabilitation – Stage 1	\$ 138,300,000	2028	Complete construction
Jensen Finished Water Reservoirs Rehabilitation	\$ 34,900,000	2030	Complete design
Lake Mathews Pressure Control Structure and Electrical System Upgrades	\$ 333,700,000	2032	Award Stage 1 PDB Contract
Mills Finished Water Reservoirs Rehabilitation	\$ 47,700,000	2030	Complete design

Dams & Reservoirs - All Project Group

Copper Basin and Gene Wash Reservoirs Discharge Structure Rehabilitation - Stage 2

The Copper Basin and Gene Wash Reservoirs provide critical storage that stabilizes and regulates flows along the CRA. In an emergency, discharge valves at the dam's base allow for rapid, controlled drainage. After 87 years of continuous service, these valves are leaking and require replacement. The dams are under the jurisdiction of the California Division of Safety of Dams (DSOD), which requires that the discharge valves must remain fully operational at all times. The project includes replacing the fixed cone valves, refurbishing a hydraulically operated gate valve and associated piping, upgrading electrical and control systems, installing a cathodic protection system, and improving the access road to safely accommodate construction personnel, materials, and equipment at the Copper Basin Reservoir. This project will also replace dam ladders at both Gene Wash and Copper Basin Reservoirs.

Copper Basin Generator Replacement

Emergency power is needed to control flows at the Copper Basin outlet structure in the event of a power outage. This project will replace the aging Copper Basin outlet structure generator and associated transfer switch system, which are difficult to maintain due to their age and the difficulty in finding parts.

Copper Basin Road Improvements for Sodium Hypochlorite Deliveries

The Copper Basin road provides operational access to the facility and enables critical sodium hypochlorite deliveries. This chemical is used to disinfect the downstream CRA facilities, preventing the growth of quagga and zebra mussels. The existing access road is often closed after a storm event, so sodium hypochlorite tankers are unable to make deliveries. Among other improvements, this project will improve the 4.2-mile dirt road by providing an enhanced driving surface, erosion protection, and adding turn-out areas.

Copper Basin Sodium Hypochlorite Tank Expansion

Quagga mussels are an invasive species in the Colorado River that breed and grow in layers on CRA System surfaces. This has a detrimental effect on CRA conveyance structures (canals, conduits, siphons, tunnels, reservoirs) and pump plant facilities and equipment (pump impellers, valves, circulation water systems, motors, headgates, etc.). The best defense to prevent the growth of quagga mussels is dosing with sodium hypochlorite at Copper Basin. Copper Basin has a facility with two 15,000-gallon tanks to store sodium hypochlorite. However, this volume can only accommodate two days of CRA operations during 8-pump flow and high temperatures. This limited volume can require three deliveries of 5,000 gallons of sodium hypochlorite tankers per day, which is an operational vulnerability if the chemical cannot be delivered for some reason. This project will expand the existing Copper Basin Sodium Hypochlorite tank farm by doubling its storage capacity with the addition of new storage tanks.

Copper Basin Sodium Hypochlorite Tank Rehabilitation

Quagga mussels are an invasive species in the Colorado River that breed and grow in layers on CRA System surfaces. This has a detrimental effect on CRA conveyance structures (canals, conduits, siphons, tunnels, reservoirs) and pump plant facilities and equipment (pump impellers, valves, circulation water systems, motors, headgates, etc.). The best defense to prevent the growth of Quagga Mussels is dosing with sodium hypochlorite at Copper Basin. Copper Basin has a facility with two 15,000-gallon tanks to store sodium hypochlorite. Based on a 2023 tank inspection performed during the CRA shutdown, the tanks are in poor condition and in need of rehabilitation or replacement. This project will procure and replace the existing sodium hypochlorite tanks at Copper Basin.

Diamond Valley Lake Crane Rehabilitation

The scope of the project is to rehabilitate the 25-ton gantry crane at the Diamond Valley Lake Inlet/Outlet Tower. The project will also include a study to evaluate the possibility of increasing the crane capacity to enable it to be used as an alternative lifting device for the emergency drop gate in the event of a failure of the drop gate's normal hydraulic lifting system. This project will enhance infrastructure resiliency and will enhance the reliability of water deliveries. The electronic drive components of the rehabilitated crane will be housed in weatherproof enclosures.

Diamond Valley Lake Forebay Concrete Joint Seal Replacement

The Diamond Valley Lake Forebay is used to move water in and out of DVL from the San Diego Canal. The concrete joint sealant in the DVL forebay has been in service for over 20 years and is showing signs of deterioration. This project will remove and replace approximately 150,000 linear feet with high-performance Metropolitan-approved sealant.

Diamond Valley Lake Network Security Detection Systems

Diamond Valley Lake is a critical water storage facility vital to Metropolitan's ability to provide reliable water deliveries to the region. The large geographical footprint of this facility requires advanced and more powerful electronic security surveillance systems that can immediately detect unauthorized drone intrusions, human physical malfeasance, criminal threats, and natural threats (wildfire) reliably, accurately, and in real-time to enable a quicker response to better protect life, property, and critical infrastructure.

Diamond Valley Lake Oxygenation System

This project will construct a liquid oxygen storage and feed system at Diamond Valley Lake to improve water quality, reduce impacts of cyanobacteria blooms, and maintain operational flexibility to ensure reliable and high-quality water in Diamond Valley Lake.

Diemer Finished Water Reservoir Slope Protection Improvements

The California Division of Safety of Dams' annual inspection of the Diemer Finished Water Reservoir (FWR) noted that the existing dense vegetation on the abutting slope was obscuring dam safety inspections and providing shelter for burrowing rodents. This project will remove the existing 2.5-acre dense vegetative ground cover on the embankment slopes of the Diemer FWR and rehabilitate the embankment surface with a new slope protection system that minimizes surface erosion, prevents rodent burrowing, and maintains the stability and integrity of the reservoir embankment slopes.

Eastern Region Security Camera System Upgrade - Area 3

The existing security system that serves the Eastern Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, and is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the East Region Area 3, including: CUF, Lake Mathews, Temescal HEP, Cactus Comm, and Pleasant Peak

Eastern Region Security Camera System Upgrade - Area 4

The existing security system that serves the Eastern Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, and is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the East Region Area 4: Detention Peak Comm, Diamond Valley Lake, San Diego Canal, West Portal, PC-1 PCS, Perris HEP-PCS, Red Mountain, and Badlands Tunnel.

Etiwanda Reservoir Rehabilitation

The Etiwanda Reservoir has been in operation for nearly 35 years. The liner and appurtenances are in need of refurbishing to maintain their integrity and prevent excessive seepage as noted during periodic inspections. This project will rehabilitate the reservoir by replacing the reservoir liner with a geomembrane liner, replacing the sub-drain sump pump system, and installing new electronic monitoring instrumentation and equipment to better monitor the operational status of the sump pump system. The project scope will also include inspection, evaluation, and rehabilitation or replacement of: (1) the asphalt pavement for the reservoir perimeter roads and parking lot; and (2) various valves and gates.

Etiwanda Reservoir Security Upgrades

The Etiwanda Reservoir facility has been experiencing increasing number of incidents of trespassing and vandalism. This project will replace the gate near residences with a high security gate that is cut and climb resistant and install multiple network security systems to detect and deter unauthorized individuals from accessing the site.

Garvey Reservoir Rehabilitation

The Garvey Reservoir Rehabilitation Project involves refurbishment, replacement, and upgrades of several reservoir components, including the reservoir cover and liner, outlet tower, valves in the junction structure, facility electrical system, standby generator, surge tank telemetry equipment, and administration building and water quality laboratory, as well as construction of a new pump station. The proposed project is intended to accomplish necessary improvements and enhancements at Garvey Reservoir to ensure operational reliability, improve seismic safety, provide for compliance with the Americans with Disabilities Act, and facilitate efficient operations and maintenance activities.

Gene Wash and Copper Basin Dams Safety Monitoring Improvements

The Gene Wash and Copper Basin dams both fall under the jurisdiction of the Division of Safety of Dams (DSOD). This project will add automated dam safety monitoring capability to Copper Basin and Gene Wash Reservoirs to enhance the safety and reliability of these critical CRA dams, and to ensure long-term compliance with the DSOD regulatory requirements.

Jensen Finished Water Reservoirs Rehabilitation

The Jensen plant has two 50-million-gallon (MG) finished water reservoirs. Reservoir No. 1 is a concrete structure with a concrete roof that was completed in 1972. Reservoir No. 2 has a polypropylene floating cover, which was installed in 1997. The concrete roof of Reservoir No. 1 has a bituminous built-up roofing system and a lightweight concrete cap made of perlite. The floating cover at Reservoir No. 2 is showing significant signs of wear and needs to be replaced. Additionally, turbulent flow at the inlet has torn holes in the floating cover on several occasions near the corners of the fixed metal air vents. This project will refurbish areas of the perlite cover at the Reservoir No. 1 and provide a comprehensive rehabilitation of Reservoir No. 2, which will include installation of a new floating cover and liner and a rainwater removal system, modification of the plant domestic water system connection, and refurbishment of the effluent gate and dewatering system. The work will also include modifications to the existing inlet configuration to enhance mixing and reduce the occurrence of nitrification, replacement of instruments and flow meters, and installation of an inlet diffuser pipe system. In addition, within both reservoirs, this project will replace perimeter fence, install bollards and posts, rehabilitate asphalt concrete and access road, and provide other improvements necessary to enhance security and reliability.

Lake Mathews Area Paving

The Lake Mathews facility serves as the central location for Metropolitan Force construction staff, equipment, and supplies. These resources provide construction and maintenance capabilities for projects requiring rapid response or specialized expertise throughout Metropolitan's service area. After 50 years of service, the paving throughout the Lake Mathews facility now shows extensive signs of deterioration, including alligator cracking, upheaval, swell, settlement, grade depressions, rutting, and potholes. This project will remove, haul away, repave, re-stripe, and improve drainage within multiple severely deteriorating pavement areas at the Lake Mathews facility.

Lake Mathews Dam Erosion Control

Lake Mathews is impounded by three embankment dams: Main Dam, Dike No. 1, and Dike No. 2. The Main Dam and Dike No. 1 were originally constructed in 1938, and raised to their current height in 1961, when Dike No. 2 was constructed. Over the years, erosion issues were encountered on the crest, downstream faces of the dam and dikes, and surrounding areas. The erosion in these areas has impacted the effective drainage of surface water runoff away from the dam and dike structures and has caused the loss of dam materials from the crest and downstream face. This project will install erosion control features at the Lake Mathews dam and dikes to address the drainage issues, to minimize further erosion of the dam materials, and to minimize maintenance efforts after storm events.

Lake Mathews Dam Monitoring System Upgrades

Metropolitan relies on extensive instrumentation systems and regular inspections as a cornerstone of its dam monitoring and surveillance program. The instrumentation allows for detection of any early warning signs of dam distress and provides near real-time monitoring of the dams and their foundations. Extensive monitoring equipment has been installed at Lake Mathews over the last 87 years. Recent inspections have noted that several of the piezometers and weirs at these facilities no longer function reliably and require rehabilitation or replacement. A field survey and condition assessment will be conducted to develop a staged replacement schedule, and based on the results of the assessment, installation of new instrumentation with an automated data acquisition system will be installed in and around the three embankment dams at Lake Mathews.

Lake Mathews Forebay Seismic Upgrades

Lake Mathews is the terminus of Metropolitan's CRA and was constructed in the 1930's. Untreated water stored in the reservoir is withdrawn through the lake's forebay and hydroelectric plant and is then conveyed through the Upper Feeder and Lower Feeder to the Weymouth and Diemer plants. The Lake Mathews forebay discharge valves and outlet tower have gradually deteriorated over almost 90 years of operation. This project will focus on the seismic upgrade of the existing forebay, forebay tower, dike, outlet tower gates, overflow spillway structure, and potential replacement of mechanical equipment, including slide gates, as these facilities are used with the existing turbine operation.

Lake Mathews Hydraulic Power Unit Rehabilitation

The Lake Mathews Junction Shaft connects Outlet Towers Nos. 1 & 2. The roller gates at the junction shaft used to control flows and isolate between the towers do not operate consistently and reliably. The large isolation gates utilize hydraulic power units (HPUs) to operate under normal conditions and store energy for use in emergency conditions when electric power is not available. Although maintained in accordance with the manufacturer's recommendations, the gates no longer function as designed. This project will replace the two roller gate operators at the Lake Mathews junction structure, which provide isolation for Outlet Tower No. 2, and replace the HPUs and support systems. This project also includes upgrades to the instrumentation and control system at Outlet Tower No. 2 to obtain accurate readings of valve positions.

Lake Mathews Junction Shaft Gate Refurbishment

Lake Mathews is the terminus for the CRA. The existing isolation gate for Outlet Tower No. 1 was recently stuck in the 70% open position. Therefore, the tower cannot be reliably isolated. Isolation of the tower is needed during times of poor water quality at low lake elevations to prevent adverse water quality impacts to downstream member agencies. This project will rehabilitate the existing isolation gates and guides at the Lake Mathews Outlet Tower Junction Shaft. This project also includes improvements to the existing isolation flanges at Lake Mathews Outlet Tower No.1 to facilitate isolation if the junction shaft gates are not operational.

Lake Mathews Network Security Detection Systems

Lake Mathews is a critical facility that is the terminus of the CRA, a protected wildlife reserve, and a reservoir. The very large geographical footprint of this facility requires advanced and more powerful electronic security surveillance systems that can immediately detect and mitigate unauthorized drone intrusions, human physical malfeasance, criminal threats, and natural threats (wildfire) reliably, accurately, and in real-time to enable a quicker response to better protect life, property, and critical infrastructure.

Lake Mathews Outlet Tower No. 2 Valve Rehabilitation

The outlet tower valves operate intermittently and do not open and close completely. Without proper operation of the valves, tier selection and flow rates are impacted, which may adversely affect system operations, including raw water quality, water treatment processes at the downstream Weymouth and Diemer plants, and secure isolation of the tower from the lake needed for maintenance and inspection work. The valves are also required for dewatering the reservoir in an emergency, and maintaining full operability of the valves is required by the California Division of Safety of Dams (DSOD). This project will complete a comprehensive study and implement recommendations on the replacement or refurbishment of the butterfly valves on the Lake Mathews Outlet Tower No. 2, which may include the replacement or refurbishment of 30 butterfly valves.

Lake Mathews Perimeter Fencing Upgrade

Lake Mathews is the terminus of the CRA and is located in Riverside County. The existing chain-link fence along the approximately 15-mile perimeter of the Lake Mathews facility has deteriorated and is ineffective at preventing intrusions. The fence can be easily cut, resulting in an increase in break-ins and illegal dumping through the fence. This project will: 1) replace the existing five-foot tall chain-link fence with taller, anti-cut, anti-climb security fence, constructed of steel or wrought iron or as recommended by the security team; 2) relocate the guard shack at El Sobrante Road to secure future development and install crash-rated gate; 3) provide a new road to the new location of the guard shack with rejection traffic lanes; 4) provide a new gate and fencing at Lake Mathews Road; 5) upgrade the existing guard shack and the security gate off of La Sierra Avenue. This project will enhance infrastructure safety, security, and resiliency.

Lake Mathews Pressure Control Structure and Electrical System Upgrades

Lake Mathews is the terminus of Metropolitan's CRA and was constructed in the 1930's. Untreated water stored in the reservoir is withdrawn through the lake's forebay and hydroelectric plant and is then conveyed through the Upper Feeder and Lower Feeder to the Weymouth and Diemer plants, respectively. The Lake Mathews forebay discharge valves and outlet tower have gradually deteriorated over 77 years of operation. Portions of the facilities need to be replaced to maintain reliable deliveries from Lake Mathews into the Central Pool. This project will construct a new pressure control structure with a bypass pipeline alongside the existing forebay, a new sodium hypochlorite injection system, and facility-wide electrical system upgrades, which include replacing the underground and overhead distribution lines; replacing the existing unit power centers and adding additional unit power centers where needed; and integrating the new electrical system with Metropolitan's supervisory control and data acquisition system.

Lake Mathews Reservoir Dredging and Emergency Dewatering Facilities

Sediment has accumulated in the reservoir since it was first built and filled in 1938. Sediment is a result of continual erosion within the Lake Mathews watershed and has led to increased turbidity at water treatment plants, reservoir storage loss, and plugged the main dam diversion tunnel into Cajalco Creek. In addition, the California Department of Water Resources, Division of Safety of Dams (DSOD), has specific outlet dewatering requirements for large dams/reservoirs that impound over 5,000 acre-feet of water. Although the current dewatering method at the forebay meets DSOD's requirement, there is a possibility that the Upper Feeder and Lower Feeder that take water from the forebay may be damaged and become unusable during a seismic event. It is now recommended to reestablish access to the diversion tunnel at the bottom of the main dam by dredging. This project will evaluate dredging options for Lake Mathews Reservoir. Dredging will remove decades of accumulated sediment that reduces reservoir storage capacity, contributes to decreased water quality, and blocks access to dewatering infrastructure at the main dam diversion tunnel. The evaluation will identify and prioritize dredging locations through bathymetric surveys and other remote methods, as well as identify mitigation options for the environmental hazards of dredging. The project will also determine the condition of the main dam diversion tunnel and all its mechanical equipment and perform a comprehensive refurbishment to restore its full function.

Lake Mathews Spillway Upgrades

Following the 2017 Oroville Dam spillway failure, the California Division of Safety of Dams (DSOD) required dam owners in California to assess the condition of their spillways to confirm they meet minimum safety standards. Of Metropolitan's 20 facilities permitted by DSOD, two were directed to undergo comprehensive assessments: Lake Mathews and Lake Skinner. This project's objectives are to perform comprehensive spillway assessments of this facility to evaluate hydraulic capacity, geotechnical stability, structural integrity, and potential erosion from dam releases, and to make improvements necessary to comply with safety standards. To date, Metropolitan has submitted the required work plan for re-evaluation of the spillway at Lake Mathews, received approval of that plan in September 2017, and submitted a comprehensive spillway assessment report, which is currently under review by the DSOD.

Lake Skinner Dam Embankment Stability Evaluation and Mitigation

Lake Skinner Dam is a zoned earthfill embankment constructed in 1973 with a maximum height of 103 feet. Previous seismic assessments indicated that a large seismic event has the potential to cause damage to the dam's internal drainage and would adversely impact the dam's ability to store water. This project will update the site-specific seismic parameters and will include a detailed seismic analysis of the embankment and foundation using more sophisticated numerical methods in accordance with the current industry standards. Based on the findings of the detailed seismic analysis, alternatives for rehabilitation will be developed, and the selected option will be implemented as necessary.

Lakes Skinner Dam Monitoring System Upgrades

Metropolitan relies on extensive instrumentation systems and regular inspections as a cornerstone of its dam monitoring and surveillance program. The instrumentation allows for detection of any early warning signs of dam distress and provides near real-time monitoring of the dams and their foundations. Extensive monitoring equipment has been installed at Lake Skinner over the last 52 years. Recent inspections have noted that several of the piezometers and weirs at these facilities no longer function reliably and require rehabilitation or replacement. A field survey and condition assessment will be conducted to develop a staged replacement schedule, and based on the results of the assessment, installation of new instrumentation with an automated data acquisition system will be installed in and around the three embankment dams at Lake Skinner.

Lake Skinner Outlet Tower Butterfly Valve Replacement

The Lake Skinner Outlet Tower is a critical component of the Skinner plant and distribution system operations and is equipped with five tiers of submerged butterfly valves. The valves have been in operation for 45 years and are approaching the end of their service lives. Replacement parts are not available and must be custom fabricated. This project will replace or rehabilitate all the butterfly valves at the Lake Skinner Outlet Tower. While long-term plans could include the addition of a new outlet tower, improving the condition of the existing outlet tower valves will enable operational flexibility and maintain operational reliability.

Lake Skinner Outlet Tower Seismic Upgrade

Lake Skinner was constructed in the 1970s and is located in the city of Temecula in Riverside County. Water is delivered from the lake through its outlet tower to the Skinner Water Treatment Plant. If the lake needed to be drained rapidly in the event of an emergency, the outlet tower would be used to safely release the water. The outlet tower is under the jurisdiction of the California Division of Safety of Dams (DSOD), which requires that the tower meet current seismic codes. Under Metropolitan's seismic assessment program, staff conducted an initial assessment of the Lake Skinner Outlet Tower. Seismic analyses have identified that the tower may be damaged during a major earthquake. This project will develop an emergency dewatering plan for DSOD's review and approval; conduct a detailed seismic evaluation of the tower, develop options to mitigate impacts to the tower if necessary; and refurbish the valves and modify the tower for seismic resiliency as necessary to mitigate any impact to operations.

Lake Skinner Oxygenation System

Lake Skinner is subject to seasonal thermal stratification when the lake water temperature prevents mixing of vertical layers, resulting in anaerobic conditions and cyanobacteria blooms. These conditions in the lake can ultimately affect water treatment operations and the quality of the finished drinking water due to taste and odor compounds and sometimes cyanotoxins produced by the cyanobacteria. Lake Skinner currently has a compressor-based aeration system that pumps air to the bottom of the lake in an attempt to mix the water and prevent thermal stratification, but the system is undersized and has been at times ineffective. The existing compressor system is reaching the end of its service life and requires replacement. This project will study existing conditions and implement an option such as the following: 1) replace the existing aging aeration system in kind, 2) design and construct a new more efficient and effective compressor based-aeration system or 3) design and construct a hypolimnetic oxygenation system at Lake Skinner including an oxygen supply or liquid oxygen facilities, an anchored diffuser piping assembly in the lake, and associated electrical modifications to improve water quality conditions in Lake Skinner and ensure water supply reliability.

Live Oak Reservoir Liner Replacement

The Live Oak Reservoir has a 2,500-acre-foot capacity and is located in the city of La Verne. The main purpose of the reservoir is to allow peaking of the Devil Canyon Power Plant and to provide for outages. The reservoir water surface controls the upstream hydraulic gradient for the San Dimas Hydroelectric Power Plant. An inspection identified that the reservoir liner is damaged in several areas. This project will replace the existing asphalt concrete liner of the entire reservoir.

Live Oak Reservoir Rehabilitation

This project will rehabilitate the entire Live Oak Reservoir facility to restore aged systems and components after over 50 years of service. The project includes replacement of valves, HVAC, electrical components, panels, grounding, sump pumps and associated instrumentation, restoration of the influent manifold liner, rehabilitation of the fire main loop, replacement of piezometer instrumentation, replacement of fencing, repaving/restoration of the access roads, installation of an enhanced security monitoring system, and evaluation and improvement of the surface drainage of the dam's downstream face to improve erosion protection.

Mills Finished Water Reservoirs Rehabilitation

The Mills plant relies on two finished water reservoirs with floating covers and geomembrane liners to provide storage for the downstream distribution system, each with a storage capacity of 25 million gallons. The Hypalon cover on Reservoir No. 1 was installed in 1997, while the polypropylene cover on Reservoir No. 2 was installed in 1996. Over the past several years, an increasing number of rips and pinhole leaks in the covers were discovered and repaired. Due to their deterioration, the floating covers and geomembrane liners at both reservoirs need to be replaced. The rehabilitation work will include installation of new finished water reservoir liners and floating covers with a rain removal system, refurbishment or replacement of existing reservoir gates, installation of a new drop gate, and installation of a permanent bulkhead at Modules 1 & 2 in the combined filter effluent. To enhance mixing and reduce the occurrence of nitrification within the reservoirs, the work will also include the installation of an inlet diffuser pipe system and the replacement of reservoir instrumentation and influent flow meters. In addition, within both reservoirs, this project will replace perimeter fence, install bollards and posts, rehabilitate asphalt concrete and access road, and provide other improvements necessary to enhance security and reliability.

Palos Verdes Reservoir Groundwater Management

Wastewater from the various operations buildings and residences at the Palos Verdes Reservoir facility currently use septic systems for disposal. The reservoir underdrains previously discharged to the local stormdrain system but exceed discharge permit requirements. The reservoir underdrains were temporarily connected to the sanitary sewer system, but the connection is inadequate for long-term use. This project will construct a new permanent sewer line and connection to convey flows from septic collection systems, groundwater from reservoir underdrains, and reservoir liner leakage at the Palos Verdes Reservoir facility. The new permanent sewer will replace portions of an existing temporary sewer line and connection.

Palos Verdes Reservoir Modifications

The Palos Verdes Reservoir, constructed in the late 1930s as part of Metropolitan's original distribution system, is at the terminus of the Palos Verdes Feeder and Second Lower Feeder. This reservoir is currently out of service due to water quality issues. This project will evaluate options for minimizing nitrification in the distribution system adjacent to the Palos Verdes Reservoir, including options for improving circulation and chemical feed systems if the reservoir is to be returned to service. The project will also evaluate options for surge protection for the Palos Verdes Feeder and secondary outlet of the Palos Verdes Reservoir when the reservoir is offline or operating with the temporary bypass.

Palos Verdes Reservoir Second Outlet Structure Fall Protection

Working at elevated areas requires fall protection per California Occupational Safety and Health Administration (Cal-OSHA) regulations. This project will replace existing grating platforms and ladders inside Palos Verdes Reservoir Second Outlet structure. The replacement will provide the highest level of protection, ensuring safety, limiting liability, improving staff productivity, and ensuring compliance with the latest Cal-OSHA requirements.

Skinner Finished Water Reservoir Effluent Slide Gate Rehabilitation & Dry Start-Up System

Visual inspections have identified a leaking effluent gate due to deterioration from over 30 years of continuous use. Planned work includes replacement of the Skinner Finished Water Reservoir effluent slide gate, installation of a dry-start-up system required to remove the reservoir from service during construction, and rehabilitation and/or replacement of associated appurtenances.

Skinner Finished Water Reservoir Influent Slide Gate Rehabilitation

Visual inspections have identified a leaking influent gate due to deterioration from over 30 years of continuous use. This project will replace the Skinner Finished Water Reservoir influent slide gate and rehabilitate and/or replace associated appurtenances.

Skinner Lake Bottom Outlet Structure Crane Pad and Valve Rehabilitation

The Skinner Lake Bottom Outlet Structure was built in 1973 and provides an outlet from Lake Skinner for emergency drawdown through the 96-inch drawdown steel pipe as well as metered stream releases into Tucalota Creek. Staff performed inspections in August 2022. The inspection report recommended replacement of the 30 butterfly valves and refurbishment of the 36 Howell-Bunger valves. The Howell-Bunger valves have a concrete block with embedded lifting eyes estimated to weigh 30 tons. With no ability to stage a crane nearby, the concrete block, valves, and venturi meter spools cannot be moved for servicing. This project will create a crane pad with the necessary retaining wall to stage a crane. The project will also replace the 30 butterfly valves and rehabilitate or replace the 36 Howell-Bunger valves. Additionally, the DSOD requires Metropolitan to follow a bolt-exercising protocol of the 96-inch drawdown pipe bulkhead when they perform inspections to demonstrate that, in the event of an emergency drawdown, Metropolitan is able to adequately dewater the Lake. Currently, to remove the bolts, staff must climb on top of the bulkhead or be lifted in a small man basket. This project will provide a small platform to access and remove bolts on the bulkhead for both the DSOD inspections and in the event of an emergency drawdown of Lake Skinner.

Western Region Security Camera System Upgrade - Area 1

The existing security system that serves the Western Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the West Region Area 1, including 108th St., APC Carson, Oak Street PCS, Palos Verdes Reservoir, PV Relief (Walnut St.), Carson/Alameda PCS, and Second Lower Spillway PVR.

Western Region Security Camera System Upgrade - Area 5

The existing security system that serves the Western Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the West Region Area 5: Coyote Creek HEP-PCS, Deodora PCS, Orange County Reservoir, Santiago Tower, and Valley View HEP.

Weymouth Finished Water Reservoir Mixing Improvements

The Weymouth plant relies on one 50-million-gallon finished water reservoir to provide storage for the downstream distribution system. This project will refurbish the interior, damaged or missing baffle walls of the finished water reservoir and appurtenant structures to enhance mixing and reduce the occurrence of water quality degradation within the reservoir.

Weymouth Finished Water Reservoir Rehabilitation

The Weymouth plant's 50-million-gallon finished water reservoir was built in 1964 to meet the then-current building code. Because the finished water reservoir's concrete roof was constructed without expansion joints, numerous cracks in the roof slab continue to open and close with the expansion/contraction cycles caused by daily fluctuation in temperature. Rehabilitation is required to protect the concrete and to prevent corrosion of the exposed reinforcing steel. This project will rehabilitate cracked and spalling concrete at various locations, replace the reservoir access building's corroded louvers, and improve areas of the roof, including recoating of the helipad.

Distribution System Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$34.9 million

Program Information: *The Distribution System Program is comprised of projects to replace, upgrade, or refurbish existing facilities within Metropolitan's distribution system, including pressure control structures, hydroelectric power plants, and pipelines, to reliably meet water demands.*

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - 108th Street Pressure Control Structure Valve Replacement
 - CB-18 Magnetic Flow Meter Replacement
 - CENB-54 Flow Meter Replacement
 - Chloramine Booster Stations within the Treated Water Distribution Systems
 - Covina PCS Rehabilitation – Stage 1
 - Diemer Area Distribution System Online Analyzers Replacement
 - DWCV-4 Service Connection Acoustic Flow Meter Replacement
 - Foothill Feeder PCS Butterfly Valve Structure Fall Protection Improvements
 - Holland Road Drainage Modification
 - Lake Mathews Facility New Office Buildings
 - Lake Skinner Conveyance and Distribution Building Roof Replacement
 - OC-88A Pump Station Upgrades
 - Palos Verdes Feeder WB-06 Service Connection Fall Protection Improvements
 - PC-1 Pressure Control Structure Rehabilitation
 - Ramona Pressure Control Structure Rehabilitation - Stage 1
 - Rio Hondo Pressure Control Structure Valve Replacement - Stage 1
 - Sepulveda Feeder West Basin Feeder Interconnect Structure Fall Protection Improvements
 - SMN-01 Venturi Flow Meter Replacement
 - Upper Feeder and Lower Feeder Right of Way Infrastructure Protection Improvements – UF Station 42+06, Station 90+08, and LF Station 919+54
 - Wadsworth HEP Pump Rehabilitation

- Major milestones achieved or forecasted to be achieved:
 - Construction:
 - Foothill Hydroelectric Plant Seismic Upgrade – completed
 - OC-88 Pumping Plant Chiller Replacement – completed
 - Perris Valley Pipeline I-215 Tunnel Crossing - completed
 - Rialto Pipeline Rehabilitation at Station 2986+30 & Valve Replacement at Service Connection CB-11- completed
 - San Diego Canal Radial Gates Rehabilitation (V-06 & VO-8) – construction contract to be awarded
 - San Diego Canal Rehabilitation – Site 236 - completed
 - San Gabriel Tower and Spillway Improvements: Gate Frame Removal and Reinforcing Steel Survey – construction contract awarded
 - San Jacinto Diversion Structure Slide Gates V-01, V-02, and V-03 Replacement Rehabilitation – construction to be completed
 - Santa Monica Feeder Cathodic Protection – completed
 - Wadsworth Pumping Plant Fire Protection System Upgrades – construction contract to be awarded
 - Procurement contract awarded:
 - Auld Valley and Red Mountain Control Structures Upgrades – valve procurement
 - B-01 Venturi Flow Meter Replacement – flow meter procurement contract to be awarded
 - Covina PCS Rehabilitation – Stage 1 – valve procurement contract to be awarded
 - Hollywood Tunnel North Portal Control Structure Upgrades – valve procurement
 - LA-17A and LA-17C Venturi Flow Meters Replacement – flow meter procurement
 - Rio Hondo Pressure Control Structure Valve Replacement – Stage 1 – valve procurement
 - Final design completed:
 - Lakeview Pipeline Relining - Stage 2

Objectives for FYs 2024/25 and 2025/26

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Auld Valley and Red Mountain Control Structures Upgrades	\$ 13,100,000	2026	Complete valve procurement for Red Mountain Control Structure
B-01 Venturi Flow Meter Replacement	\$ 4,000,000	2027	Complete valve procurement
LA-17A and LA-17C Venturi Flow Meter Replacement	\$ 2,500,000	2026	Complete construction
San Gabriel Tower and Spillway Improvements	\$ 24,800,000	2029	Complete design

Pipelines, Tunnels, Canals Project Group

Casa Loma Siphon No. 1 and San Jacinto Pipeline Protection

The CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline cross under the San Jacinto River near Hemet, CA. The project will protect the pipelines at the river crossing from damage due to exposure, undermining, or flotation caused by periodic high flows in the river during severe storms. The damage may produce significant cracking or potential breakage of the conduit, which could impact the conveyance of water through the CRA. To mitigate against the risk of pipeline flotation in the San Jacinto River, a protective encasement will be constructed over the top of Casa Loma Siphon No. 1 and the San Jacinto Pipeline.

Cone Camp Intertie Bypass Pipeline Rehabilitation

The Cone Camp Intertie was constructed in 2002 as part of the Inland Feeder Highland Pipeline to allow the Inland Feeder to receive State Project Water (SPW) through the San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pipeline. At the intertie, a bypass pipeline is used to equalize pressure on both sides of the 78-inch butterfly shutoff valve prior to operating the valve. This bypass pipeline has been taken out of service due to pinhole leaks caused by microbiological corrosion due to stagnant water. Although normal operation of the Inland Feeder does not require the intertie, the intertie may be used to convey water for the Inland Feeder when Devil Canyon 2nd afterbay is offline. This project will rehabilitate the Cone Camp Intertie, including the existing 24-inch bypass pipe around the 78-inch butterfly valve. Work may include refurbishment or replacement of the 24-inch bypass pipe and associated valves, as well as other features necessary to support the bypass operation.

Conveyance and Distribution System Structures Rehabilitation

Most of Metropolitan's distribution system structures were constructed in the 1930s. There are 5,400 individual structures within the Metropolitan service area, including access structures, blind flanges, blowoffs, air vacuum valves, pressure and flow control structures, and service connections. This project will rehabilitate conveyance and distribution structures to like-new condition, likely using collaborative project delivery method.

Etiwanda Pipeline South - Stations 332+00 to 349+00 and Upper Feeder - Stations 1078+00 to 1083+00 Protection

The City of Rancho Cucamonga is planning to construct a grade separation on Etiwanda Avenue where the Etiwanda Pipeline is located, south of the Etiwanda Reservoir near the tie-in point to the Upper Feeder. Metropolitan is required to either relocate or protect its pipeline, at its own expense, to allow for improvements by the city. The option to protect the pipeline was selected over the relocation option due to time constraints imposed by the grade separation project. The city will install cast-in-drilled-hole piles (CIDH) in isolation casing within the main bridge span to protect the pipeline. Metropolitan is responsible for the cost of the city's relocation of rectifier and electrical service cabinets, underground conduits, electrolysis test stations, anode well, and patrol road to access manholes; modifications of manholes and vent piping for flow meters and air release vacuum valves, and sump discharge lines.

Garbani Water Delivery Pipeline

Metropolitan is required to provide water to Domenigoni Properties for agricultural usage as a settlement related to Diamond Valley Lake's construction. Water is currently being fed to the Domenigoni Properties from the canal using pumps. During high algae bloom, the system gets clogged and must be cleaned every few hours. If the system is not cleared, water is provided to the property through an Eastern Municipal Water District (EMWD) connection. Metropolitan is responsible for the EMWD water bill, which costs up to \$20,000 monthly. This project will construct an interconnection with the San Diego Canal and a pipeline with a gravity-fed system to deliver water to Domenigoni Properties.

Lake Perris Bypass Pipeline Relining - Stage 2

The Lake Perris Bypass Pipeline is a 2.44 mile-long, 120-inch diameter prestressed concrete cylinder pipeline constructed in 1981 that extends from the Department of Water Resources' Santa Ana Valley Pipeline to Metropolitan's Lake Perris Pressure Control Facility. The Lake Perris Bypass Pipeline conveys water directly around Lake Perris Reservoir to downstream facilities and pipelines. This pipeline can be over pressurized when delivering water from DVL to Mills. In addition, if the Perris Pressure Control Structure is modified to accommodate Devil Canyon's head, this pipeline must also be capable of withstanding that pressure. This relining project will install a liner designed to resist Devil Canyon's head. Rehabilitation work includes relining of the existing PCCP segments with new steel pipe, relocating all below-grade air release and vacuum valves to above-ground for cross-connection prevention, replacing aging valves, and rehabilitating appurtenances as needed.

Lakeview Pipeline Relining - Stage 2

The Lakeview Pipeline was originally constructed in 1973 and has experienced extensive deterioration over the years, including joint leaks, mortar lining loss, and significant pipe deformation. These issues have compromised the structural integrity of the pipeline, creating a high potential for corrosion and failure. The Stage 2 work includes lining 3.7 miles of the Lakeview Pipeline between the Inland Feeder's PC-1 control structure and the Perris Control Facility, along with installation of a 1,000-foot-long reach of 9.5-foot-diameter pipe to bypass the Perris Control Facility. Upon completion of the Stage 2 work, the Lakeview Pipeline will be capable of delivering up to 340 cfs from Devil Canyon through the Inland Feeder to the Mills plant, providing an alternate delivery route to the plant as backup to the Santa Ana Valley Pipeline.

Lakeview Pipeline Relining - Stage 3

The Lakeview Pipeline, originally constructed in 1973, has experienced extensive deterioration over the years, including joint leaks, mortar lining loss, and significant pipe deformation. These issues have compromised the structural integrity of the pipeline, creating a high potential for corrosion and failure. Rehabilitation is being accomplished in stages. The Stage 3 work includes lining 6.7 miles of the Lakeview Pipeline between the Inland Feeder's PC-1 control structure to the San Diego/Casa Loma Canal junction structure. This work will complete the full relining of the Lakeview Pipeline, ensuring long-term reliability and enhancing Metropolitan's ability to deliver water from Devil Canyon through the Inland Feeder to the Mills plant.

Orange County Feeder Dewatering Improvements

The Orange County Feeder originates at the Weymouth Water Treatment Plant in La Verne and travels 41-miles south to its terminus in the City of Newport Beach. Operations staff have struggled to dewater the pipeline after some segments were relocated due to real estate and infrastructure development and aging infrastructure. This project will examine the existing pipe, structures, and equipment and implement improvements that will resolve the current dewatering challenges.

Orange County Feeder Flushing Upgrades

Service Connection CM-01 is located on a narrow, heavily populated street in Corona Del Mar in Orange County. The service connection is used as a primary location to release water when the Orange County Feeder is dewatered. When dewatering, the water is currently discharged directly onto the roadway and has resulted in community inquiries and concerns. This project will install a dewatering pipe that discharges directly to the storm drain and eliminates the community impacts.

Rehabilitation of Metallic and Concrete Pipelines Phase 1 - Select High Priority Feeders

Metropolitan's water delivery system consists of 830 miles of pipelines, of which 670 miles are comprised of reinforced concrete, welded steel, and cast-iron pipe. The majority of these pipelines were installed over 50 years ago. This project will install permanent access points and appurtenances needed to inspect distribution system pipelines. This project will include risk assessment and prioritization of pipeline inspections and condition assessments. This project will also include rehabilitation of pipelines identified as at-risk to reduce the risk of failure, minimize repair costs, and prevent unplanned shutdowns.

Rialto Pipeline Cement Mortar Lining Rehabilitation

The Rialto Pipeline supplies water from the East Branch of the State Water Project to the Weymouth Water Treatment Plant and directly services three member agencies through 11 service connections. The size of the pipeline ranges in diameter from 96 to 120 inches. This project will mitigate risks of corrosion and extend the life of the Rialto Pipeline by rehabilitating existing deteriorated cement mortar lining throughout the steel portions of the pipeline, and installing a dewatering pipeline from the Rialto Pipeline Station 3875+33 Blow-off to Lytle Creek

San Diego Canal Concrete Liner Rehabilitation

The scope of this project is a comprehensive rehabilitation of damaged or degraded areas of the concrete liner within the San Diego and Auld Valley Canals. Areas for liner rehabilitation will be identified during inspections that will occur routinely when the San Diego Canal is shut down for maintenance work. Each new area of liner rehabilitation will be a separate project to be split from this parent project. All work on the concrete liner will need to be performed during shutdown periods within the two canals. To the extent possible, the shutdowns may need to be extended from their normal duration of approximately 10 days, if the downstream demands and storage can be accommodated. Priority locations within the canals have been rehabilitated over the last three years. Failure of the liner in either canal will interrupt or reduce raw water deliveries to the Skinner plant and to various downstream member agencies and sub-agencies. The canals are the sole conveyance route for Colorado River water and State Project water to the Skinner plant.

San Diego Pipeline Nos. 1 and 2 Rehabilitation

San Diego Pipelines Nos. 1 and 2 were built in the 1940s. They were designed using multiple diameter sizes and multiple pipe materials. Some sections are constructed with steel, some sections with precast concrete cylinder pipe, and others with precast non-cylinder pipe. At certain locations, the steel sections have cement mortar lining, and the remaining sections have a coal tar lining. The Rainbow Tunnel section was designed with a horseshoe-shaped cross-section and has an approximate diameter of 72 inches. A recent inspection of the tunnel identified sections where the lining is beginning to crack and needs replacement. The most serious cracks have been patched, but these patches were only an interim solution. At multiple service connections along the pipelines, several turnout valves have reached the end of their service lives and require replacement. This project will perform a detailed evaluation of the pipelines, tunnel, and structures to identify any additional locations in need of rehabilitation. The scope includes replacement of the damaged lining, and refurbishment or replacement of mechanical equipment, electrical components, and other appurtenant elements.

Upper Feeder Santa Ana River Bridge Lining Replacement

The Upper Feeder was constructed between 1933 and 1941 with a 116-inch-diameter steel pipe and lined with coal tar enamel liner (CTE). This portion of the Upper Feeder is located above ground and crosses the Santa Ana River via a bridge. Exposure to the sun subjects the pipeline to a thermal cycle that is continuous heating and cooling of the pipe material. Over the past nine years, staff have performed inspections on this segment of the Upper Feeder and determined that approximately 90% of the pipe's internal lining has failed. Mild to moderate pitting on the interior of the pipe indicates rust tuberculation and corrosion. This project will reline approximately 1,040 feet of the 116-inch diameter pipeline with an approved liner material.

Upper Feeder Santa Ana River Crossing Stainless Steel Slip Joint Upgrade

The bellows-style expansion joint on the Upper Feeder where it crosses over the Santa Ana River via a steel bridge was replaced with a new expansion joint in September 2022 after the bellows joint developed a leak. The new expansion joint was designed for an expedited fabrication and construction schedule, so readily available materials were used, and the design was simplified to meet the emergency replacement schedule. The emergency expansion joint will now be replaced with an upgraded joint that will be fabricated with corrosion-resistant materials and designed to accommodate multi-directional movements in the bridge structure. Alternative locations and expansion joint types will be considered to optimize the placement and configuration of the new upgraded joint. The project will also address any nuisance water leakage from the existing or upgraded joint and make any structural upgrades necessary to the bridge structure itself to preserve the service life of the pipeline and bridge system.

Pump Stations/PCSs/HEPs/Service Connections/Flow Meters/Valves & Gates Project Group**108th Street Pressure Control Structure Rehabilitation**

The 108th Street Pressure Control Structure (PCS) located on the Palos Verdes Feeder was constructed in 1941. The pipeline has a design capacity of 80 CFS in this area and provides the flexibility to deliver water through the Inglewood Lateral and Culver City Feeders to member agencies, including the city of Los Angeles, Central Basin Municipal Water District, and West Basin Municipal Water District. This project will rehabilitate the control structure, including replacing valves, a corroded ladder, and catwalk grating; restoring electrical components to new condition; installing an emergency backup generator and security features; and refurbishing or replacing other appurtenances. Electrical components consist of electrical panel boards and grounding, sump pumps, and associated instrumentation.

108th Street Pressure Control Structure Valve Replacement

The 108th Street Pressure Control Structure (PCS) located on the Palos Verdes Feeder was constructed in 1941. The pipeline has a design capacity of 80 CFS in this area and provides the flexibility to deliver water through the Inglewood Lateral and Culver City Feeders to member agencies, including the city of Los Angeles, Central Basin Municipal Water District, and West Basin Municipal Water District. This project replaces deteriorated relief valves and piping at the 108th St Pressure Control Structure.

Appian Way Valve Replacement

The Appian Way Valve is a sectionalizing valve along the southern portion of the Palos Verdes Feeder. This valve would typically be used to isolate a portion of the feeder for routine maintenance or repairs, but this original construction valve can no longer be fully closed. This worn-out valve has exceeded its life expectancy and requires replacement. This project will replace the valve, upgrade electrical power systems and instrumentation, and rehabilitate appurtenances, including structural modifications of the vault as necessary.

Auld Valley and Red Mountain Control Structures Upgrades

The Red Mountain and Auld Valley PCS facilities control flows in pipelines to the San Diego area. The existing sleeve valves are worn and in need of refurbishment or replacement. Due to a lack of isolation, the pipelines must be shut down to perform work on the sleeve valves. This project will include procurement or replacement of sleeve valves for the Red Mountain PCS and the Auld Valley PCS. The scope will also include adding isolation butterfly valves upstream and downstream of the sleeve valves at the Auld Valley and Red Mountain PCSs to make future maintenance possible without taking their respective pipelines out of service.

B-01 Venturi Flow Meter Replacement

Service Connection B-01 is located on the Santa Monica Feeder and supplies treated water to the City of Burbank. This project will rehabilitate the original 1940's-construction flow meter structure. The work includes replacement of a Venturi flow meter and associated isolation and check valves, replacement of associated piping and couplings, replacement of a water sampling tap and station, and other ancillary safety and structural improvements to ensure continued reliable operation of the service connection.

CB-12 Acoustic Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will replace the acoustic flow meter, transducer, and all associated equipment at Service Connection CB-12.

CB-16 Acoustic Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will replace the acoustic flow meter, transducer, and all associated equipment at Service Connection CB-16.

CB-18 Magnetic Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project replaces a deteriorated flow meter at Service Connection CB-18, which serves untreated water off the Etiwanda Pipeline. In addition to replacing the flow meter, this project will replace or rehabilitate appurtenant components necessary to restore the flow meter structure to current standards. Rehabilitation of this facility is necessary to ensure the continued reliability of the distribution system.

CENB-54 Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will replace the existing flow meter at Service Connection CENB-54.

Conveyance and Distribution System Hydraulic Pilot Valve Standardization

There are approximately 265 pilot valves throughout the conveyance and distribution system, located at pressure relief or pressure control structures. A pilot valve works together with a control or relief globe valve to set pressures within the distribution system. Currently, several different types of valves and superstructure assemblies exist throughout the system, and as they age, the lack of a common design makes replacement difficult. This project will develop, fabricate, and install a standardized hydraulic control/relief pilot valve and superstructure at pressure control structures District-wide across the conveyance and distribution system. Utilizing a standardized valve and superstructure assembly will increase productivity and reliability.

Corona Hydroelectric Plant Rehabilitation

This project will restore the operational integrity of the Corona Hydroelectric Plant, which has experienced progressive mechanical and electrical deterioration since its commissioning in 1983. Mechanical rehabilitation will include disassembly and refurbishment of the turbine and valve systems. Electrical work involves modernization of outdated components and integration of programmable logic controls. Upon completion, the plant will meet current safety and operational standards, continuing to provide renewable energy in support of Metropolitan's long-term sustainability goals.

Covina PCS Rehabilitation – Stage 1

The Covina Pressure Control Structure (PCS) controls flow in the Middle Feeder North and multiple service connections. It has experienced numerous valve failures, pin-hole leaks, cavitation, and excessive corrosion. The rehabilitation of the PCS will be performed in stages to allow for the replacement of the most critical flow control valves in advance of the remaining improvements. This project will replace valves, pipes, control and electrical systems, and other work necessary to restore reliability of the pressure control structure since the Garvey Reservoir is out of service for an extended period of time.

Covina PCS Upgrades

The Covina Pressure Control Structure (PCS) controls flow in the Middle Feeder North and multiple service connections. It has experienced numerous valve failures, pin-hole leaks, cavitation, and excessive corrosion. This project will evaluate and analyze the PCS system as a whole based on current valve standards and replace/upgrade valves, pipes, and control and electrical systems; rehabilitate the restroom and structural components; install security features and other work necessary to restore reliability of the pressure control structure. Replacement of critical flow control valves will be performed under a separate project in advance of the remaining improvements.

Coyote Creek HEP and PCS Emergency Standby Generator Replacement

The existing emergency stand-by generator at the Coyote Creek Hydroelectric Plant (HEP) and Pressure Control Structure (PCS) facility was installed when it was constructed in 1982. The emergency generator is 43 years old and has deteriorated with age. This project will replace the existing emergency generator and construct an additional manual transfer switch outside the stationary generator room to provide for a secondary portable generator hookup. This project will also upgrade the electrical and mechanical systems for the generator building to meet current emission and fire code regulations under the Environmental Protection Agency's Tier 3 Emission and Fuel Standards Program.

Coyote Creek HEP and PCS Perimeter Security Upgrade

Metropolitan's facilities have been experiencing an increase in trespass incidents. This project will install new security fencing and lighting at the Coyote Creek Hydroelectric Plant (HEP) and Pressure Control Structure (PCS) facility. The work includes installing new access gates, multiple network security detection systems, and clearing and grubbing as needed.

Diamond Valley Lake and Skinner Area Flow Meter Replacement

The flow meters at the Lake Skinner Inlet, Diamond Valley Lake (DVL) Inlet/Outlet Tower, DVL Connection Canal, DVL Secondary Inlet, and DVL North and South siphons are critical to the operation of Metropolitan's distribution network in the vicinity of DVL and the Skinner plant. The existing meters have been in need of replacement due to failed transducers and cables. Failed or inaccurate flow meters leave the operators without reliable data for canal flows. This creates challenges in balancing flow across the system and increases the risk of canal lining damage due to overtopping. Without accurate data, operators must rely on estimates and manual verification, which introduces error and adds to staff workload. This project will either replace or refurbish these aging flow meters to ensure continued distribution system reliability.

Districtwide Valve Rehabilitation and Improvements

Increasing number of Metropolitan distribution system valves are approaching, or have reached, the end of their service lives. There is an inability to operate an increasing number of motor-operated valves and gates due to the failure of obsolete electric motors, which cannot be repaired due to the lack of available spare parts. Failures of valves often do not have visible indications or warnings that can be observed before an incident. Staff is currently operating in a reactive mode, replacing valves as they fail, which causes unplanned shutdowns and obstacles in operating the distribution system. This project will replace or upgrade valves along various pipelines or feeders in the Conveyance and Distribution System.

Dominguez Channel Pressure Relief Structure Improvements

The Dominguez Channel Pressure Relief Structure is located on the Palos Verdes Feeder near the Harbor Freeway and Hoover Street at the Dominguez Channel Crossing. Recent inspections have found leaking valves, inoperable needle valves, failed electrical services, and failed communication cables. This project will replace valves, modify piping and concrete, and construct new underground electrical and communication service as necessary to restore reliability of the relief structure.

DWCV-4 Acoustic Flow Meter Replacement

Metropolitan has an ongoing exchange agreement with Desert Water Agency and Coachella Valley Water District. Under this agreement, flows are measured at Service Connection DWCV-4; however, the existing flow meter console has failed and needs to be replaced. This project will replace the failed 78-inch acoustic flow meter console at Service Connection DWCV-4

Eagle Rock Tower Distribution System Upgrades

Eagle Rock Tower diverts the flow of water from the Weymouth plant into the Palos Verdes Feeder, Santa Monica Feeder, and the Eagle Rock Lateral. The tower is also used to maintain the required hydraulic grade to the service connections upstream of the tower. This project addresses the deterioration of critical equipment within the Eagle Rock Tower area. The project will rehabilitate the following items: slide gates and associated equipment; tower access and equipment related to access; drop gates; valves; interconnection blow-off structures; and corroded platforms and ladders. The project will also install an isolation valve and construct a new access road from the main access road to the Palos Verdes/Eagle Rock Interconnect structure (Sta. 3+22) at the interconnection structure between Palos Verdes Feeder and Eagle Rock Lateral to facilitate safe access to the structure.

East Lake Skinner Bypass Line Valve Replacement

The distribution system in the Lake Skinner area was expanded in the 1980s. As part of the expansion, two 96-inch butterfly valves were installed. One is currently located at the Skinner Plant Influent at station 0+31, and the other is located on the East Lake Skinner Bypass Line at station 1163+25. The valves have been in service since they were installed and require replacement because they no longer seal. The large amount of leaking water is resulting in safety issues. This project will design, procure, and replace the butterfly valves.

East Orange County Feeder No. 2 Service Connection OC-44A Valve Replacement

The East Orange County Feeder No. 2 delivers treated water from the Diemer plant to the cities of Anaheim, Orange, Santa Ana, and Irvine. Service Connection OC-44A, located in Newport Beach, was constructed in 1967 and delivers water to the Municipal Water District of Orange County. Gradual corrosion and wear from over 52 years of operation have led to the deterioration of the 16-inch plug valve. The valve is currently leaking and needs to be replaced. The plug valve shaft was installed in a horizontal position to allow placement of the valve within the vault. This unconventional position may have accelerated the deterioration of the valve. This project will replace the existing 16-inch-diameter plug valve, flow meter, and appurtenant piping and equipment as required in the Service Connection OC-44A Structure. This project will also identify and restore all electrical components to a new condition.

EM01 Service Connection Relocation

Service Connection EM-01A supplies raw water to Eastern Municipal Water District. The connection is located downstream from an open CRA canal section. Over time, debris like tumbleweeds land in the water and break into smaller pieces inside the EM-01A service connection piping. The debris flows into the valves, causing them to get clogged, which blocks water from entering the service connection. The clogging increases in frequency in the summer and fall when the heat dries out tumbleweeds and other vegetation in the area. During these times, crews must remove debris blockages in the valves several days a week. Returning the service connection to service after it is clogged can take up to eight hours. This project will relocate Service Connection EM-01A to a debris-free area of the CRA.

EM-20 Magnetic Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will replace the electromagnetic flow meter, transducer, and all associated equipment at Service Connection EM-20.

Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will replace deteriorating meters in critical services, including associated equipment, but not limited to valves, piping, supports, and electrical systems. A comprehensive, risk-based approach will be implemented to replace the flow meters.

Foothill Feeder Blow Off Valves Replacement

The Foothill Feeder conveys untreated water from the West Branch of the State Water Project into the western portion of Metropolitan's service area. To maintain delivery reliability and identify any prestressed concrete cylinder pipe (PCCP) segments that may become distressed, the pipe is inspected every five to seven years. Current state-of-the-art inspection techniques require dewatering of the pipe using seven blowoff structures. Each blowoff structure has two valves, one for isolation and the other to control flows. The existing blowoff valves are from the original construction and have been in service continuously since 1968. Although the valves have been maintained, they have deteriorated to the point that they are no longer repairable, are unable to provide a positive seal, and, as a result, leak. This project will replace the blowoff valves and associated appurtenances.

Foothill Feeder PCS Butterfly Valve Structure Fall Protection Improvements

Working at elevated areas requires fall protection per California Occupational Safety and Health Administration (Cal-OSHA) regulations. This project will replace existing grating platforms and ladders inside Foothill Feeder PCS Butterfly Valves Structure. In addition, new platforms and ladders in areas needed for staff maintenance will be added. The replacement and new will provide the highest level of protection, ensuring safety, limiting liability, improving staff productivity, and ensuring compliance with the latest Cal-OSHA requirements.

Foothill Feeder PCS Valve Replacement

Foothill Pressure Control Structure (PCS) is located at Castaic Lake in northern Los Angeles County. The structure takes untreated water from the west branch of the State Water Project system and controls all untreated water flows into the Jensen plant. Foothill PCS consists of two turbines, two 60-inch inline sleeve valves, and three parallel trains of conical plug valves. Each plug valve train consists of three 48-inch conical plug valves in series that are throttled to dissipate pressure. Although the conical plug valves are currently used to control flow, these types of valves are not well-suited for this application. In addition, recent valve inspections have identified leaks, cracks, and corrosion. This project will replace the conical valves with valves that are better suited for flow control and will replace all other valves that are at the end of their service life and make other facility improvements.

Foothill Hydroelectric Power Plant Discharge Elimination

The Foothill Hydroelectric Plant (HEP) uses raw water from Castaic Lake to lubricate and cool the plant's turbine shaft seals. The cooling water is then discharged from the plant into the storm drain under an NPDES permit regulated by the Regional Water Quality Control Board (RWQCB). Metropolitan has received multiple discharge permit violations for releasing contaminants into the storm drain that are introduced into the cooling system by the raw water withdrawn from the lake. However, the presence of the contaminants in question is due to boating activities on the Lake, which are outside of Metropolitan's control. This project will reduce or eliminate discharge into the storm drain by sending it to the sewer system to prevent future permit violations, avoid future fines, and reduce the probability of unplanned outages.

Foothill Power Plant Rehabilitation and Control System Upgrade

The Foothill Power Plant Rehabilitation comprises two interrelated projects focused on enhancing system performance, reliability, and longevity. The Control System Upgrade replaces outdated control hardware and software with modern, SCADA-integrated systems, providing improved automation, monitoring, and cybersecurity. The Mechanical Upgrade for Units 1 and 2 addresses critical wear and aging of major mechanical components, restoring efficiency, minimizing unplanned outages, and ensuring safe, sustained operations. Together, these upgrades support Metropolitan's strategic objective of maintaining resilient and high-performing hydroelectric infrastructure.

Hollywood Tunnel North Portal Control Structure Upgrades

Built as part of the Santa Monica Feeder in 1937, the North Portal of the Hollywood Tunnel is one of three control points along the feeder, which delivers water to the cities of Burbank, Beverly Hills, Los Angeles, and Santa Monica. The valves and mechanical control system at the North Portal of the Hollywood Tunnel are obsolete. Repair parts are not available and must be fabricated at a machine shop. This project will replace the existing sleeve valves and hydraulic actuators at the North Portal of the Hollywood Tunnel with new control valves with electric actuators. The upgrade includes replacing the isolation valves and the mechanical controls with electronic PLC/SCADA controls, which will allow the facility to be monitored and controlled from the Eagle Rock Operations Control Center. This project will also replace control valves for the bypass, install new electrical service to support the load necessary for the new control systems, and make other improvements necessary to upgrade and rehabilitate the equipment and support systems.

Hydroelectric Plant Rehabilitation

This project entails a comprehensive assessment and phased rehabilitation of 16 Metropolitan hydroelectric power plants to ensure long-term reliability, operational performance, and sustained generation revenue over the next 30 years. The scope includes high-level financial and technical evaluations to determine cost-effective investment strategies for each facility, along with targeted assessments of turbines, generators, control systems, auxiliary systems, protection equipment, and structural components. Initial planning efforts involve site investigations, review of service records and prior reports, and the development of a preliminary design scope for each plant. The program will also address seismic upgrades, modernization of obsolete systems, and identification of pilot opportunities to test emerging technologies. The outcome will be a prioritized implementation plan that supports operational flexibility and extends the useful life of Metropolitan's hydroelectric generation assets.

LA-17A and LA-17C Venturi Flow Meters Replacement

Service Connection LA-17 is located at the Eagle Rock facility and provides treated water to the City of Los Angeles. There are three flow meters at LA-17 to measure flows for billing. Multiple meters are needed at this connection to span the large range of flows. One of the meters has been previously replaced and is in good condition. The two remaining meters are corroded, leaking, and in need of replacement. This project will replace the two remaining LA-17 flow meters and appurtenances.

LADWP Connection in Magazine Canyon

In 1976, Metropolitan added an optional backup water source to the Jensen plant with the construction of a connection to the Los Angeles Department of Water and Power (LADWP) Aqueduct No. 1 (LA-1). The turnout structure is located directly underneath LA-1, approximately 900 ft east of the Magazine Canyon Shaft. When the intertie is in operation, a metal screen filters out debris in the untreated water. However, the screen is regularly obstructed, and the flow is not captured. Clearing the screen requires an unplanned shutdown, labor by Metropolitan staff, and coordination with LADWP staff to enter the pipeline and clear the blockage. This process is cumbersome, expensive, requires significant coordination, creates numerous time delays, and makes the connection unreliable, especially as a backup for emergencies, as intended. This project will resolve the existing issues, and in the event that SWP deliveries are reduced or temporarily paused, this project will secure a secondary source of water to the Jensen plant and limit disruptions to member agencies.

Lake Mathews Hydroelectric Plants Rehabilitation

The proposed project involves a two-phase rehabilitation of the Lake Mathews Hydroelectric Plant (HEP), originally commissioned in 1980. Phase 1 will be led by Metropolitan Forces and involves a full mechanical overhaul, including disassembly and inspection of the turbine components—head cover, wicket gates, runner, stay ring, and draft tube—followed by targeted refurbishment such as wicket gate bushing replacement, bearing seal upgrades, turbine seal renewal, corrosion mitigation in the scroll case, and wear ring restoration. A new high-lift bearing support system will be installed to improve startup lubrication and reduce long-term wear. Cooling water system components will also be replaced or standardized, including piping, strainers, and valves. Phase 2 encompasses comprehensive electrical and control system modernization. This includes replacing the 35 kV circuit breaker and oil circuit recloser with vacuum breakers, upgrading inoperable switchyard disconnects, and integrating a new PLC/HMI platform to enhance SCADA monitoring. The existing control logic will be preserved using in-kind electro-mechanical relays, while outdated systems such as the annunciator panel, vibration monitoring, speed controller, and protective relays will be replaced with modern, maintainable alternatives. Additional improvements include transformer and switchgear upgrades, along with advanced instrumentation for the cooling water loop to enhance operational visibility and preventive maintenance capabilities.

Lakeview Delivery Structure Isolation Gates

The Lakeview Delivery Structure diverts water from the Lakeview Pipeline to the San Diego Canal or the Casa Loma Canal. Isolation and diversion are done manually by staff working over open and active canals, installing wooden weirs. The installation of the weirs is cumbersome and time-consuming. Furthermore, the weirs leak excessively, which means they allow water to enter work zones when used as an isolation. This project will fabricate and install four new isolation gates for the Lakeview Delivery Structure.

Los Angeles County North C&D Region Electrical Structures Rehabilitation

Metropolitan's distribution system includes over 3,000 structures which house equipment used to measure pipeline flow, control pipeline flow and/or pressure, relieve pressure or vacuum, and isolate or sectionalize a pipeline. The conduits and electrical equipment inside the structures have corroded and no longer provide adequate grounding. In addition, the wiring inside the conduits may be compromised. These electrical components have been in continuous service in a damp, underground environment for over 50 years and need to be upgraded. The precise number of structures to be improved may vary depending on condition assessments. The planned work includes identification and restoration of all electrical components to new conditions, including service panels, conduits, wiring lights, and receptacles; and providing new grounding systems, sump pumps, exhaust fans, remotely monitored flood alarms at each structure, and other appurtenances.

Los Angeles County South C&D Region Electrical Structures Rehabilitation

Metropolitan's distribution system includes over 3,000 structures which house equipment used to measure pipeline flow, control pipeline flow and/or pressure, relieve pressure or vacuum, and isolate or sectionalize a pipeline. The conduits and electrical equipment inside the structures have corroded and no longer provide adequate grounding. In addition, the wiring inside the conduits may be compromised. These electrical components have been in continuous service in a damp, underground environment for over 50 years and need to be upgraded. The number of structures to be improved may vary depending on condition assessments. The planned work includes identification and restoration of all electrical components to new conditions, including service panels, conduits, wiring lights, and receptacles; and providing new grounding systems, sump pumps, exhaust fans, remotely monitored flood alarms at each structure, and other appurtenances.

Oak Street PCS Rehabilitation

The Oak St. Pressure Control Structure (PCS) is one of two control facilities on the Second Lower Feeder (SLF) and provides water to the Palos Verdes Reservoir and several service connections. Recent inspections have identified various work to be performed to restore the reliability of the pressure control structure. This project will upgrade security, mechanical, electrical, and structural components. All equipment and appurtenances will be rehabilitated and upgraded to meet Metropolitan's standards.

OC-13A Flow Meter Replacement Upgrade

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distributions, and for process control. Many flow meters have been in operation over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will address measurement of low flows in the Santiago lateral to Irvine Lake.

OC-76 Flow Control Facility

The OC-76 flow control facility is located in a residential neighborhood in Lake Forest. The structure was designed and built with an 8-inch valve for low-flow scenarios. The 8-inch valve was removed at some point, leaving only the pedestal. This project will procure and install a new 8-inch flow control valve at the OC-76 flow control facility. The project will also include additional piping and SCADA to return the pressure control structure to its original design.

OC-88 Pumping Plant Rehabilitation

The OC-88 Pumping Plant is located in the city of Lake Forest and serves the Municipal Water District of Orange County (MWDOC). The plant includes seven 1,500-horsepower variable-speed pumps capable of delivering a total of 200 cubic feet per second of treated water. The plant is a closed-suction system that pumps water directly from the Allen-McColloch Pipeline (AMP) into MWDOC's South County Pipeline. A recent inspection identified necessary upgrades to remedy deficiencies, address regulatory compliance issues, improve plant efficiency, and facilitate safe and efficient maintenance. The full rehabilitation of the plant will include replacement of all pump unit variable frequency drives and motors, replacement of eight ultrasonic flow meters, relocation of the overhead crane, upgrade of the fire protection system, and upgrades to the electrical system.

OC-88 Pumping Plant Surge Tank Upgrades

The OC-88 Pumping Plant, consisting of the OC-88 and OC-88A pump stations, was constructed in 1990 and is located in the city of Lake Forest. Treated water from the Diemer plant is conveyed through the Allen-McColloch Pipeline (AMP) to the OC-88 Pumping Plant, which in turn pumps water directly into the Municipal Water District of Orange County's South County Pipeline. A surge tank system protects the AMP and the South County Pipeline from pressure surges. Two new surge tanks were added when the OC-88 Pumping Plant modifications were completed in 2005. However, the air compressor was not upgraded at that time. A recently completed high-flow test at the OC-88 Pumping Plant identified that a second air compressor should be installed to adequately protect the AMP and the South County Pipeline. This project will include the installation of an additional air compressor, its new piping, control system, and relevant appurtenances to support the operations of the existing surge tank at the OC-88 pump station.

OC-88 Pumping Plant Surge Tanks Rehabilitation

The OC-88 pump station is a closed-suction system that pumps water directly from the Allen-McColloch Pipeline (AMP) into the South County Pipeline. The pump station has a surge protection system to mitigate unanticipated surges. The surge protection system consists of two surge tanks, seven surge anticipation valves (SAV), and one backup SAV (for a total of eight SAVs) on the upstream side. The surge system also includes five surge tanks designed to absorb all of the downsurge and upsurge caused on the discharge side of the pumps when a pump unexpectedly stops pumping. If the entire pump station loses power, one SAV opens for each pump, up to a maximum of seven pumps. In addition, all surge anticipation valves will open if the hydraulic grade line (HGL) in the AMP reaches 830 feet. This pressure relief is intended to protect the AMP from any unanticipated surge-related events that do not open the SAVs. This project will rehabilitate the aging and deteriorated surge protection system needed for the OC-88 pump station.

OC-88A Pump Station Upgrades

The OC-88 Pumping Plant, consisting of the OC-88 and OC-88A pump stations, was constructed in 1990 and is located in the city of Lake Forest. Treated water from the Diemer plant is conveyed through the Allen McColloch Pipeline (AMP) to the OC-88 Pumping Plant, which in turn pumps water directly into the Municipal Water District of Orange County's South County Pipeline. Southern California Edison performed an efficiency test on the three existing pump motors located at the OC-88A pump station and found that improvements in motor efficiency could result in annual savings of approximately \$25,000 in electricity costs and an estimated 235 tons of CO2 emissions. This project will upgrade the OC-88A pumps with ones that have high-efficiency motors equipped with variable frequency drives and perform other associated facility improvements.

OC-88 Surge Tank Recirculation System Upgrade

Service Connection OC-88 uses a pump station to deliver water to MWDOC's South County Pipeline. The pump station has several tanks to mitigate surge pressures. Water that is held in the five discharge surge tanks and two upstream surge tanks at OC-88 is normally returned to the Allen McColloch Pipeline (AMP) via an underground 1-inch pipeline. However, the existing piping configuration does not turn over the water in the tanks quickly enough, which can potentially cause a water quality issue. When the water is not turned over quickly, the chlorine residual in the tanks can fall below regulatory threshold values, which means the water cannot be returned to the AMP and must be manually drained from the tanks to prevent further stagnation. The scope of this project is to install a recirculation pump and make minor modifications at the outlet manifolds of the discharge and upstream surge tanks to increase the frequency of water turnover in the tanks at the OC-88 Pumping Plant facility.

Olinda Pressure Control Structure Modifications

The Olinda Pressure Control Structure was constructed in 1969 to provide regulation of flows in the Lower Feeder between the Santiago Control Tower and Diemer Water Treatment Plant. This project will replace two conical plug valves to increase efficiency, reliability, and mitigate the vibrations caused by operating the valves. The structure's electrical and instrumentation components and other facility components will also be evaluated and refurbished or replaced. Replacing the existing 55-year-old valves will improve operational control of the Lower Feeder between the Santiago Control Tower and the Diemer plant. If cost-effective, relocation of the PCS will also be considered.

Orange and Riverside/San Diego County Operating Regions Valve Replacement

Metropolitan's distribution system relies on functioning appurtenant valves that provide air release or vacuum pressure control, dewatering control, isolation of a pipeline appurtenant structure, or reduce or regulate pipeline pressures. These valves are not in-line with the feeder but connect to appurtenant structures and facilities such as blow-off structures and pressure control facilities. This project will remove and replace approximately 120 deteriorated appurtenant pipeline valves ranging in size from 1 to 12 inches in diameter on various pipelines in the Orange County and Lake Skinner regions of Metropolitan's distribution system. Fabricated fittings may be needed during the installation of valves and will be determined on a case-by-case basis. A portion of the valves can be installed without a pipeline shutdown, and the remaining valves that need to be installed during a shutdown will be completed at the next scheduled shutdown.

Orange County Region C&D Electrical Structures Rehabilitation

Metropolitan's distribution system includes over 3,000 structures which house equipment used to measure pipeline flow, control pipeline flow and/or pressure, relieve pressure or vacuum, and isolate or sectionalize a pipeline. The conduits and electrical equipment inside the structures have corroded and no longer provide adequate grounding. In addition, the wiring inside the conduits may be compromised. These electrical components have been in continuous service in a damp, underground environment for over 50 years, and need to be upgraded. The rehabilitation of the Conveyance and Distribution System Electrical Structures has been prioritized and will be completed in five stages. Upgrades of the first 15 highest priority service connection structures within Orange County have been completed as Stage 1. Stage 2 improvements will upgrade the remaining structures within Orange County. The planned work includes identification and restoration of all electrical components to new conditions, including service panels, conduits, wiring lights, and receptacles; and providing new grounding systems, sump pumps, exhaust fans, remotely monitored flood alarms at each structure, and other appurtenances.

Palos Verdes Feeder - Long Beach Lateral Turnout Structure Station 1442+15 Valve Replacements

The Palos Verdes Feeder - Long Beach Lateral turnout structure, located in the County of Los Angeles, was constructed in 1938. The Long Beach Lateral turnout structure consists of seven valves that allow Metropolitan to continue delivering water upstream and downstream to member agencies during preventive maintenance, shutdowns, and emergencies. This project will replace the seven valves on the Palos Verdes Feeder/Long Beach Lateral Turnout Structure that are 84 years old. The structure will also be refurbished and include replacing the existing catwalk grating, a new precast concrete roof slab, a lifting mechanism, security-type entry hatches, and identifying and restoring all electrical and instrumentation components to like-new condition. Electrical components consist of electrical panel boards and a grounding system, a sump pump, and associated instrumentation.

Palos Verdes Feeder WB-06 Service Connection Fall Protection Improvements

This project will replace existing grating platforms and ladders inside Service Connection WB-06 structure. The replacement will provide the highest level of protection, ensuring safety, limiting liability, improving staff productivity, and ensuring compliance with the latest Cal-OSHA requirements.

PC-1 Pressure Control Structure Rehabilitation

Inland Feeder Pressure Control Structure (PC-1) is located along the Inland Feeder pipeline. PC-1 connects three major feeders on the east side of Metropolitan's system: the CRA, Inland Feeder, and Lakeview Pipeline. The structure allows for numerous configurations and flow paths, most notably it connects DVL to Mills, Diemer, and Weymouth, and is integral to filling DVL during high state water allocation years. In 2023, PC-1 began having issues with one of the six flow control valves sticking in place while operating. The scope of this project includes inspection and rehabilitation of the six 36-inch diameter stainless-steel sleeve valves, actuators, and appurtenant piping.

Perris Control Facility Bypass & PCS Upgrade

The Lake Perris Control Facility (LPCF) includes a pressure control structure, pump back system with four electric and two diesel pumps, and a hydroelectric plant. This facility controls flows from the Department of Water Resources Silverwood Reservoir located at Devil's Canyon, and Lake Perris to the Lakeview Pipeline. To improve Mills plant reliability, water from Diamond Valley Lake and Inland Feeder can be delivered to Mills plant by gravity flow but would require some modifications to the Lake Perris Control Facility's pressure control structure and hydroelectric plant. The project will upgrade the LPCF Bypass systems to handle the maximum head of 1934 feet (from the Inland Feeder) by upgrading components of the pressure control structure.

Perris Control Facility Hydroelectric Plant Relocation

The Lake Perris Control Facility (LPCF) includes a pressure control structure, pump back system with four electric and two diesel pumps, and a hydroelectric plant. This facility controls flows from the Department of Water Resources Silverwood Reservoir located at Devil's Canyon and Lake Perris to the Lakeview Pipeline. To improve Mills plant reliability, water from Diamond Valley Lake and Inland Feeder can be delivered to Mills plant by gravity flow but would require some modifications to the Lake Perris Control Facility's pressure control structure and hydroelectric plant. The project will upgrade the LPCF systems to handle the maximum head of 1934 feet (from the Inland Feeder) by upgrading components of the pressure control structure and replacement of the hydroelectric plant.

Perris Control Facility Pumpback Upgrade

The Lake Perris Control Facility (LPCF) includes a pressure control structure, pump back system with four electric and two diesel pumps, and a hydroelectric plant. This facility controls flows from the Department of Water Resources Silverwood Reservoir located at Devil's Canyon, and Lake Perris to the Lakeview Pipeline. To improve Mills plant reliability, water from Diamond Valley Lake and Inland Feeder can be delivered to Mills plant by gravity flow but requires some modifications to the Lake Perris Control Facility's pressure control structure. The project will upgrade the LPCF Pumpback systems to handle the maximum head of 1934 feet (from the Inland Feeder) by upgrading components of the pressure control structure.

Perris PCS Perimeter Security Upgrades

The current fencing at the Perris Pressure Control Structure (PCS) is inadequate, evidenced by a recent intrusion. This project will install approximately 2,500 feet of new chain link security fencing and LED lighting around the perimeter of the Perris Pressure Control Structure facility. The work also includes installing new access gates and multiple network security detection systems, and clearing and grubbing as needed.

Perris Pressure Control Structures Rehabilitation

The Perris Pressure Control Structure (PCS) provides the mechanism to regulate the flow of water through the Lakeview Pipeline. The Perris PCS was built in the 1970s and is located at the base of Lake Perris Dam. The pressure control structure has been in operation non-stop since it was put into service and is due for rehabilitation. The scope of this project will include the rehabilitation of the existing stainless steel sleeve valves, piping, and all appurtenances at Perris PCS.

PM-21 Venturi Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will replace the existing flow meter at Service Connection PM-21.

Prevention of CRA Water Migration to SPW at Weymouth Junction Structure

Quagga mussel veligers were discovered at the USG-03 service connection, necessitating coordination with local water agencies and implementation of a control and mitigation plan. The affected areas were flushed and chlorinated, groundwater recharge basins were desiccated, and no additional veligers were found. It was determined that Colorado River Water (CRW) was able to inadvertently migrate through the Weymouth Water Treatment Plant (WTP) Junction Structure's sectionalizing valves into the La Verne Pipeline and travel through the Glendora tunnel to Service Connection USG-03. This project will install pressure monitoring devices connected to nearby existing remote terminal units at key locations along the La Verne Pipeline. Pressure ranges and set points for alarms will be determined to provide adequate time for operations and field staff to respond to abnormal conditions in the system to detect CRA water intrusion. This project would minimize the potential for CRW to enter unaffected facilities that normally move State Water Project (SWP) water.

Ramona Pressure Control Structure Rehabilitation - Stage 1

The Ramona Pressure Control Structure (PCS) is located on the Middle Feeder and controls the pressure in the pipeline. Staff is no longer able to repair the aging electrical equipment because replacement parts are no longer available. Stage 1 will replace the electrical system in the PCS by replacing the DC-powered electrical motor actuators and controls on the regulating valves with new AC-powered equipment. Stage 1 will also rehabilitate and/or replace the most urgent/critical valves, pilot valve rack, and associated electrical/mechanical appurtenances that correspond with the valves.

Ramona Pressure Control Structure Rehabilitation - Stage 2

The Ramona Pressure Control Structure (PCS) is located on the Middle Feeder and controls the pressure in the pipeline. The original equipment has reached the end of its service life and is in need of replacement. There has also been a dramatic increase in vandalism and theft at the facility. This project will rehabilitate the Ramona PCS facility, including replacement of valves, associated mechanical/electrical components, control systems, security, safety, and other facility improvements and appurtenances.

Rio Hondo Pressure Control Structure Valve Replacement - Stage 1

Rio Hondo Pressure Control Structure (PCS) is located on the Middle Feeder and regulates pressure in the central pool portion of the distribution system. It has been in operation since its completion in 1953, and all piping and equipment within the structure are original. All the valves in the PCS have suffered extensive wear over 70 years of operation. Moreover, due to the age of these valves, replacement parts are challenging to find. This project will replace in-kind the hydraulically operated globe valves that are critical to operation of the facility and its continued service.

Rio Hondo Pressure Control Structure Valve Replacements

The Rio Hondo Pressure Control Facility is located on the Middle Feeder and regulates pressures into the central pool portion of the system. The valves within the facility have been in continuous operation since originally installed in 1953. Many of these valves require more frequent (monthly) preventive maintenance to slow down continuing deterioration. An engineering inspection report identified that the control valves should be replaced due to their deteriorated condition. This project will include full rehabilitation of the Rio Hondo PCS to maintain reliability of the delivery system and to improve the aging facility to meet current standards.

Riverside, San Bernardino, and San Diego Regions C&D Electrical Structures Rehabilitation

Metropolitan's distribution system includes over 3,000 structures which house equipment used to measure pipeline flow, control pipeline flow and/or pressure, relieve pressure or vacuum, and isolate or sectionalize a pipeline. The conduits and electrical equipment inside the structures have corroded and no longer provide adequate grounding. In addition, the wiring inside the conduits may be compromised. These electrical components have been in continuous service in a damp, underground environment for over 50 years, and need to be upgraded. The number of structures to be improved may vary depending on condition assessments. The planned work includes identification and restoration of all electrical components to new conditions, including service panels, conduits, wiring lights, and receptacles; and providing new grounding systems, sump pumps, exhaust fans, remotely monitored flood alarms at each structure, and other appurtenances.

San Diego Canal Radial Gates Rehabilitation (V-06 & V-08)

Radial gates are used to control flows in the San Diego Canal. The protective coatings on the radial gates and their operating components have begun to fail, and significant metal loss has occurred. In addition, the performance of the existing motor actuators used to open and close the gates has diminished. This project will replace the San Diego Canal Radial Gates V-06 and V-08. The rehabilitation includes replacing the radial gate actuator and controls, replacing the seals and guide rails, and adding sensors and software to report the elevation of the gates relative to the water elevation and the percent opening of the gate.

San Dimas and Red Mountain Hydroelectric Plants Standby Diesel Engine Generator Replacements

The emergency generator at Red Mountain Hydroelectric Plant was installed during the original plant construction in 1983. The generator at the San Dimas Hydroelectric Plant was installed during the original plant construction in 1975. These generators are necessary to ensure all operating equipment performs the required flow transfers between the hydroelectric plant (HEP) and the pressure control structure (PCS) during unscheduled HEP interruptions and San Diego Gas & Electric (SDGE) station-power failures. The scope of work is to design, procure, install one standby diesel engine generator, and provide other improvements at each of the hydroelectric plants. The project scope includes removal of the existing generators and fuel tanks, construction of a new unloading facility with spill containment, steel overhead canopies, and electrical and mechanical system upgrades to the replacement generator to meet current emission and fire code.

San Dimas Hydroelectric Plant Rehabilitation

This project will upgrade the aging infrastructure and enhance operational safety and efficiency. The project scope includes turbine-generator equipment refurbishment, control system replacement, switchgear modernization, cable and lighting upgrades, and installation of updated SCADA and HMI panels. Mechanical and structural enhancements will ensure equipment reliability and compliance with current safety standards.

San Jacinto Diversion Structure Slide Gates V-01, V-02, and V-03 Replacement

The San Jacinto Diversion Structure, located at the Randy Record outlet portal of the San Jacinto Tunnel, distributes incoming flows from the Colorado River Aqueduct to the Casa Loma Siphon First Barrel, San Jacinto Pipeline, and Casa Loma Siphon Second Barrel by way of three slide gates and one radial gate. This project will replace the facility's existing 1940s-era cast-iron slide gates, which are severely deteriorated and at risk of failure. One of the gates failed in 2019 and is currently operating with a temporary gate. Work includes replacing slide gates V-01 and V-02, which control flows into the Casa Loma Siphon First Barrel, and slide gate V-03, the failed one, which controls flows into the San Jacinto Pipeline, with new stainless-steel slide gates. Work also includes replacing the gates' actuators and appurtenant power and control systems. The radial gate that controls flow into the Casa Loma Siphon Second Barrel was rehabilitated in 2009 and is still serviceable. This project will increase the reliability of the CRA and the pipelines it serves at this facility.

Santa Monica Feeder and East Valley Feeder Bypass for Sectionalizing Valves

Large sectionalizing valves normally have a small bypass line that allows for equalization of pressure on both sides of the sectionalizing valve prior to operating. The lack of bypass lines at the Santa Monica Feeder and East Valley Feeder creates the potential for damage to the valves and their operators due to the inability to equalize pressure across the valves before operating. Further operation of these valves, without installing a bypass, will continue to place the valves and pipeline at risk for damage and potential emergency or unplanned shutdown. This project will design, fabricate, and install bypass lines at three sectionalizing valve locations that currently do not have a bypass line, and replace the existing sectionalizing valves.

Santiago Lateral Butterfly Valve Replacement at Station 216+40

The Santiago Lateral is a pre-cast concrete pipeline, ranging in size from 60-inch to 72-inch in diameter, and was constructed in 1955. It extends southerly from the Santiago Control Tower in the Anaheim Hills approximately 7.4 miles to Irvine Lake. The pre-cast concrete pipeline provides raw CRA water to Anaheim, Irvine Ranch Water District (IRWD), and Irvine Lake. The 42-inch sectionalizing butterfly valve currently leaks, resulting in unwanted flows to the south portion of the Santiago Lateral. This project will replace the existing 42-inch sectionalizing butterfly valve (BFV) and motor at Station 216+40 Weir Canyon on Santiago Lateral, and install necessary appurtenances.

Sepulveda Canyon Control Facility Electrical and Mechanical Rehabilitation

This project will restore reliable operation and revenue generation capacity at this 8.6 megawatt (MW) facility by upgrading aging mechanical and electrical systems, which have reached the end of their service life. The project scope includes rehabilitation of the turbine runner and needle valves, recoating of the turbine water passages, and replacement of obsolete components such as the protection relays, auto-synchronizer, speed controller, and automatic voltage regulator. Control panel relays will be upgraded, and outdated monitoring systems will be replaced with a modern PLC and HMI interface to improve plant automation and operational oversight. This work is essential to bring the currently offline plant back into service, address identified equipment failures, and support Metropolitan's long-term goals for energy reliability, sustainability, and cost-effective operation of its hydroelectric assets.

Sepulveda Canyon Facility Water Tanks Seismic Upgrades

The Sepulveda Canyon Facility controls flow and pressure in the Sepulveda Feeder and consists of a pressure control structure, hydroelectric plant, and two water storage tanks. The two water tanks have a combined capacity of 18 million gallons of water and are used to regulate flows through the pipeline. The facility is located on top of a large pad that was constructed by filling a steeply sloped V-shaped ravine. The pad is approximately 120 feet above the toe of the slope. The site is located within one mile of the Santa Monica Fault, which is capable of generating a 6.8 magnitude earthquake. Preliminary slope analyses indicate that the fill could slide down the slope during a major earthquake, causing significant damage. As part of the Sepulveda pump station project, the slope will be remediated, and the larger water storage tank will be replaced. The scope of the seismic upgrade project will be re-evaluated after completion of the pump station project to determine the seismic upgrades needed for the remaining structures (PCS, HEP, small tank, electrical substation) at the site.

Sepulveda-Culver City Feeder Intertie Valve Replacement

The Sepulveda-Culver City Feeder Intertie Structure provides isolation between the two pipelines. The facility and its equipment are over 57 years old, are no longer operable, and cannot be repaired. This project will replace valves at the Sepulveda-Culver City Feeder Intertie Structure, including valves, actuators, motors, control systems, electrical components, corroded piping, platforms, ladders, sump pumps, buried roof slabs, and other facility appurtenances.

Sepulveda HEP Flow Transfer System Upgrade

Automatic flow transfer is needed whenever the hydroelectric plant (HEP) trips offline. Due to current limitations, the Sepulveda Canyon HEP is unable to operate in low-flow conditions. This project will modify the flow transfer system to increase the operational flexibility of the facility. The modification will include the installation of altitude pilot valves and associated piping.

Sepulveda-West Basin Interconnection Valve Replacement

The Sepulveda-West Basin Interconnection was constructed in 1970. The interconnection allows Metropolitan's Sepulveda Feeder the flexibility to convey supplemental flow to the West Basin Feeder. The structure includes two 16-inch lines with sleeve valves and one 12-inch line with a globe valve. Each line may be isolated at either end with plug valves. This project will replace failing valves at the Sepulveda-West Basin Interconnection structure. The work will include replacing associated dresser couplings, pipe spools, and pipe supports. Additionally, work on the structure will include installing a new precast concrete roof slab, providing adequate ventilation for the structure, replacing a sump pump, structure modifications to address algae accumulation on the adjacent sidewalk due to frequent water discharge from the sump pump, identifying and restoring all electrical components to new condition, and refurbishing other facility components. Electrical components will consist of electrical panel boards and grounding, sump pumps, and associated instrumentation.

Service Connection A-02 Rehabilitation

Service Connection A-02 is located on the Orange County Feeder and supplies treated water to the City of Anaheim. A recent inspection revealed that piping in the meter vault had been displaced, likely due to increased thrust in the piping. This resulted in a misalignment of a coupling and damage to the pedestal supporting the check valve. If not corrected and reinforced, continued movement of the piping could result in a pipe leak, which could flood the vault structure, disrupt service, and add unplanned repair costs. This project will refurbish or replace the Service Connection A-02 Meter Vault piping, thrust restraint(s), meter, coupling, check valve, and plug valve in the adjacent isolation valve vault.

Service Connection CENB-36 Rehabilitation

This project will rehabilitate Service Connection CENB-36, including replacement of valves, actuators, motors, control systems, lighting, electrical components, corroded piping, platforms, ladders, sump pumps, and other facility appurtenances. This project will also perform security upgrades. This project will rehabilitate the chemical injection system, including replacement of the chemical tank, chemical unloading pad, pumps, injection lines, containment systems, control systems, electrical components, eye wash stations, and associated appurtenances.

Service Connection EM-04B Meter Replacement

The meter structure at EM-4 was designed and constructed in 1956. The meter structure itself is very narrow and does not allow for the installation of a new magnetic type of meter due to limited space. The existing propeller flow meter manufacturer has informed Metropolitan that they no longer support this equipment, as the model is obsolete. The meter began reporting inaccurate flow on a consistent basis around 2019, and a temporary meter has been in use since. This project will conduct a study and preliminary design to determine the most accurate and cost-effective meter to replace the existing saddle-type propeller flow meter at EM-04B service connection. The project will include the design and construction work to remove and replace the existing meter with the meter chosen per the recommendation of the study and preliminary design.

Service Connection P-01 Valve Replacement

Service Connection P-01 is located on the Upper Feeder and supplies treated water to the City of Pasadena. The isolation valve for P-01 is unable to properly isolate flows. Positive isolation is needed for planned work by the member agency. This project will replace the service connection isolation valve, check valve, and associated appurtenances at Service Connection P-01. Appurtenances include piping, bypass system, air release, vacuum, and lubricated plug valves. The study phase will also evaluate whether the existing flow meter will be replaced.

SMN-01 Venturi Flow Meter Replacement

Metropolitan has over 500 flow meters used for water revenue metering at service connections, operation of the conveyance and distribution systems, and for process control. Many flow meters have been in operation for over 50 years. Some of these meters are exhibiting signs of deterioration. Spare parts for older meters are increasingly difficult to procure. This project will replace the venturi flow meter, transducer, and all associated equipment at Service Connection SMN-01.

T-01 Venturi Flow Meter Replacement

Service Connection T-01 is located on the Torrance Lateral and supplies treated water to the City of Torrance. The meter at T-01 has failed and is no longer able to measure flow. This project will replace the venturi flow meter, pressure transmitters, and all associated equipment at the T-01 service connection.

Temescal Canyon HEP Rehabilitation

This project covers the phased rehabilitation of the Temescal Canyon Hydroelectric Plant. The effort includes mechanical system rehabilitation to replace and enhance critical infrastructure and electrical/control system rehabilitation to integrate modern technology and meet current regulatory standards.

Upper Feeder Blowoff Structure Replacement at Station 2858+91

Blowoff facilities are needed to dewater low points in pipelines. This project will rehabilitate the existing Upper Feeder blow-off structure at station 2858+91. Work includes replacement of deteriorated or failed 8-inch to 16-inch diameter blowoff valves and appurtenances, and installation of new access features, including ladders, landings, and platforms.

Upper Feeder Blowoff Structures Valve Replacement - Stage 1

Blowoff structures provide a means to completely drain a pipeline for emergencies, inspections, repairs, and general maintenance. This project will rehabilitate priority six blowoff structures along the Upper Feeder. Work includes replacement of deteriorated or failed blowoff valves and appurtenances, including but not limited to butterfly and lubricated plug valves, spools, reducers, and thimbles, and rehabilitation or replacement of vaults per current standards, as needed.

Upper Feeder Raw Vacuum Valves and Blowoff Improvements

The Upper Feeder was constructed in the late 1930s and is part of Metropolitan's original distribution system. This project improves pipeline reliability by replacing deteriorated isolation valves, vacuum valves, and blowoffs, and rehabilitates other pipeline appurtenances throughout the Riverside and La Verne operational areas of the pipeline. This project also replaces the Etiwanda bypass channel's deteriorated isolation gates, potentially with an inflatable dam, to facilitate diversion of flows to the Upper Feeder.

Valley View Hydroelectric Plant Rehabilitation

The Valley View Hydroelectric Plant was constructed in 1986. The mechanical components were rehabilitated in 2019. The electrical and control systems are yet to be rehabilitated and have been requiring increased maintenance. Many of the components are no longer manufactured or supported. This project will replace the electrical protection and control relays, data acquisition equipment, electrical panels, annunciator, vibration system, automated voltage regulator, governor and speed controller, switchyard circuit breakers, and other improvements to extend the service life and improve reliability.

Valley View PCS HEP Perimeter Security Upgrades

The Valley View Pressure Control Structure (PCS) and Hydroelectric Plant (HEP) facility falls under North American Electric Reliability Corporation (NERC) and Federal Energy Regulatory Commission (FERC) oversight and must adhere to critical infrastructure regulations set by these agencies. Upgrades to perimeter security fencing and security measures are needed to comply with NERC/FERC security standards. This project will install new chain link security fencing and LED lighting around the perimeter of the facility. The work also includes new access gates and clearing and grubbing as needed.

Venice PCS Valve Refurbishment

The Venice Pressure Control Structure (PCS) is located along the Sepulveda Feeder and regulates pressures entering the central pool portion of the system. The PCS consists of multiple control valves and associated piping. The valves are almost 52 years old and have been experiencing increased failures over the last 14 years. This project will refurbish the control valves and other appurtenances. This project will also install multi-hazard security features for facility infrastructure protection.

Wadsworth HEP Pump Rehabilitation

The Hiram Wadsworth Pumping Plant (Wadsworth) was designed and constructed in the 1990s to provide an inlet/outlet to fill and deliver water from Diamond Valley Lake (DVL). The pump house consists of twelve 6,000-horsepower reversible turbine pump units. Each pump unit is designed to pump approximately 175 cfs. Each unit has its own load-commutated inverter (LCI). The 6.9 kV and 480V switchgear, LCIs, motor control centers, and unit control panels are contained within the pump house. In the turbine/generation mode, the units can flow up to 190 cfs at a full DVL elevation of 1756 feet. In early 2024, one pump started exhibiting issues, and it no longer operates. The pump was inspected using a camera, and it was discovered that there were scraps of metal in the bottom bowl. Since all the pumps were put in service at the same time, it is anticipated that similar issues will occur for the remaining pumps. One pump will be taken apart in order to determine the root cause of the major issues and determine the scope of rehabilitation for the rest of the units.

Wadsworth Pumping Plant Fire Protection System Upgrades

The Wadsworth Pumping Plant is located at Metropolitan's Diamond Valley Lake (DVL). The pumping plant includes 12 vertical turbine pumps that are used to pump water into DVL or to generate electricity when water flows out of DVL. Each pump/generator has a dedicated CO2 fire suppression system to prevent fires from spreading from one unit to another. However, the system is designed so that if the fire suppression system is inactive, the pump/generator will not operate. Some components of the current fire suppression system and control panels have been in service for almost 24 years and need to be replaced. In addition, the fire alarm system for the Wadsworth building is antiquated, and replacement parts are no longer available. This project will upgrade Wadsworth's fire suppression system by replacing the existing system and upgrading the Wadsworth building fire alarm system.

Wadsworth Pumping Plant Fixed Cone Valves Rehabilitation

The Wadsworth Pump Plant was built in the 1990s as an inlet/outlet to fill and deliver water from Diamond Valley Lake (DVL). Water is discharged into the forebay through two 78-inch fixed cone valves. The fixed cone valves are normally closed and are opened to allow discharges from DVL to the forebay during emergency drawdown operations. In 2017, staff inspected the low-level outlet conduit pipelines and documented coating and corrosion issues on the pipeline and with the fixed cone valves. Since that time, the issue has gotten to the point where the valves leak constantly, and there is an increased risk of them failing, which would not allow Metropolitan to properly draw down DVL in an emergency. This project will rehabilitate or replace the fixed cone valves, as well as any appurtenant issues discovered, such as mechanical and electrical operating equipment, instruments, and required structural modifications.

Wadsworth Pumping Plant Stop Logs

The Wadsworth Pumping Plant was built with 12 pump/generation units. Units 1, 5, and 9 were decommissioned to allow the power generation to be certified as renewable energy by the California Energy Commission. Hydroelectric plants are required to have a nameplate capacity of 30 megawatts or less to be certified. The stop logs would provide a means to isolate the three decommissioned pumps from the forebay, keeping them out of the water and dry. Isolating the pumps from water contact reduces corrosion damage to the pumps and provides flexibility in the event that pump/generation units need to be re-commissioned or repaired. This project will fabricate stop logs to isolate three decommissioned generation/pumping units from the forebay.

Walnut PCS Drainage Improvements

The top of the Walnut Pressure Control Structure (PCS) is about five feet below the surrounding grade. Water ponds in this depression and leaks into the structure, which may leak onto electrical and control systems. This project will construct drainage improvements at Walnut PCS to prevent ponding over the structure.

Washington Street Pressure Control Structure Valve Replacement & Security Upgrades

The Washington Street Pressure Control Structure regulates pressure in the Palos Verdes Feeder. The original equipment has reached the end of its service life and is in need of replacement. This project will: replace failing hydraulically operated globe valves, replace failing electrically operated globe valves, replace all block valves, replace electrical components, upgrade security features and the existing entrance of the above-ground structure, move the existing electric meter indoors, increase existing fence height, and upgrade the fence material.

West Coast Feeder WC-0 Interconnection Structure Upgrades

The WC-0 interconnection structure controls flow from the Lower Feeder into the West Coast Feeder. Stagnant flows in this area cause water quality issues. Installation of a bypass line at this location will improve water quality. This project will upgrade the West Coast Feeder WC-0 structure and install a new bypass line. Upgrades will include valves, actuators, motors, control systems, electrical components, piping, platforms, ladders, sump pumps, and other facility appurtenances.

West Orange County Feeder Service Connection OC-09 Rehabilitation

The West Orange County Feeder was constructed in 1956 as a component of the Lower Feeder system. It delivers treated water from the Diemer plant in Yorba Linda to the northwestern portion of Orange County. Service Connection OC-09 on the West Orange County Feeder consists of a turnout tee, a venturi meter, and a shutoff valve. The turnout tee is encased in concrete and is located beneath the traffic lanes of Katella Avenue in the city of Garden Grove, adjacent to the boundary line with the city of Stanton. The meter vault is located below Dale Street. This structure contains a 14-inch conical plug valve, a venturi meter, and associated piping and electrical systems. Gradual corrosion from over 64 years of operation in a damp underground environment has led to deterioration of the equipment within the vault. The existing single-vault meter structure and its components need to be replaced or rehabilitated to maintain reliable deliveries from the service connection.

West Orange County Feeder Valve Replacement

The West Orange County Feeder was constructed in 1956 as a component of the Lower Feeder system. It delivers treated water from the Diemer plant in Yorba Linda to the northwestern portion of Orange County. A recent condition assessment identified that 13 structures require rehabilitation, including the replacement of air release/vacuum valve assemblies and adjacent plug valves. These valves were installed during the original construction of the feeder and have been in service for over 66 years. Six of the air release/vacuum valves will also be relocated from a manhole to an above-ground cabinet within the street-side parkway zone to prevent the potential of treated water in the distribution system becoming exposed to stormwater under certain operating conditions. Refurbishment or replacement of other facility components, including meter replacement or relocation, may be implemented based on the additional site evaluations.

West Valley Feeder No. 1 Access Road & Valve Structure Improvements - Stage 3

The West Valley Feeder No. 1 and appurtenant valves were constructed and installed by Calleguas Municipal Water District in 1962. Metropolitan acquired the feeder in 1970. This project will replace the deteriorated valves located in Chatsworth Park, add new valve structures to house isolation valves that are presently directly buried, install enclosures for air release/vacuum valves, and perform grading of an all-weather access road to support maintenance activities.

Western Region Security Camera System Upgrade - Area 11

The existing security camera system used throughout Metropolitan's system has reached the end of its life and is no longer supported. The replacement of cameras and related security systems is crucial at this time to increase operational flexibility, improve security, lower maintenance costs, and ensure regulatory compliance. Delays will result in: 1) undetected incidents such as vandalized, stolen, and damaged equipment, 2) an increase in the yearly maintenance cost, 3) possible penalties, and 4) potential non-compliance with future critical infrastructure security legislation. This project will improve the security control system at San Dimas Hydroelectric Plant and Pressure Control Structure.

Western Region Security Camera System Upgrade - Area 2

The existing security system that serves the Western Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage the available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the West Region Area 2: Foothill HEP-PCS, Sepulveda Canyon HEP, Sepulveda Canyon Water Quality Facility, Venice HEP-PCS, and Ballona Creek PCS.

Western Region Security Camera System Upgrade - Area 3

The existing security system that serves the Western Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage the available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the West Region Area 3: Hollywood Portal North, Hollywood Portal South, Washington St PCS, Soto Street, Greg Ave HEP, Fenton Maclay, Ascott North, Ascott South, San Fernando Gate Structure, and Scholl Canyon Spillway.

Western Region Security Camera System Upgrade - Area 4

The existing security camera system used throughout Metropolitan's system has reach end of life and is no longer supported. The replacement of cameras and related security systems is crucial at this time to increase operational flexibility, improve security, lower maintenance costs, and ensure regulatory compliance. Delays will result in: 1) undetected incidents such as vandalized, stolen, and damaged equipment, 2) an increase in the yearly maintenance cost, 3) possible penalties, and 4) potential non-compliance with future critical infrastructure security legislation. This project will replace all existing cameras and related security equipment in the West Region Area 4: Carbon Creek PCS, Coastal Junction PCS, Irvine Regulating, OC-88, and Santiago Creek HEP.

Western Region Security Camera System Upgrade - Area 7

The existing security system that serves the Western Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage the available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the West Region Area 7: Covina PCS, Garvey Reservoir, Puddingstone Spillway, Ramona PCS, and San Gabriel PCS.

Western Region Security Camera System Upgrade - Area 9

The existing security system that serves the Western Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage the available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment in the West Region Area 9: Rio Hondo HEP and CB-14.

Whitewater DWCV-1 Flow Control Valve Replacement

The existing 36-inch butterfly valve has been in service at the DWCV-1 service connection since 1973 when the structure was constructed. The valve is used to throttle, which is not the correct application for a butterfly valve. A sleeve valve is preferable. The valve is also leaking, so not all the water that is being delivered is metered. This project will remove and replace the existing butterfly control valve at the Whitewater DWCV-1 service connection and update the electrical components to operate the valve remotely.

Willits Street Pressure Control Structure Rehabilitation

The Willits Street Pressure Control Structure (PCS), located in the city of Santa Ana, was built in 1944. This pressure control structure, located on the Orange County feeder, regulates pressure and conveys treated water to the Irvine Regulating Structure. This PCS is an underground structure consisting of three parallel trains of pressure control valves. At full capacity, two trains are in operation while the third train acts as a stand-by. The existing structure is congested and does not provide suitable access for maintenance, repairs or the replacement of valves. The maintenance access was impacted during street widening, which required the size of the structure to be reduced. The modified structure configuration does not have a lifting mechanism to remove or transport these valves out of the structure for replacement or repairs. Additionally, the existing catwalk does not have adequate coverage. This project will construct a new pressure control structure to replace the existing Willits Street PCS. The work includes a new concrete substructure, replacing the control and isolation valves, new sampling connections for water quality, and all necessary electrical and ventilation equipment. Once the new structure is complete, the older structure will be abandoned, and the pipeline will be connected to the new structure during a brief outage.

Yorba Linda PCS Rehabilitation

The Yorba Linda PCS is located at the Diemer plant and was designed and built in the 1970s. The Yorba Linda PCS was inspected in October 2020, and extensive corrosion was found on the valves and in the appurtenant piping. This project will perform rehabilitation of the butterfly valves, the sleeve valves, the actuators, and appurtenances.

Yorba Linda Power Plant Control System Improvements

The Yorba Linda Power Plant is located on the Yorba Linda Feeder at the inlet to the Diemer plant and can generate up to 5 megawatts. Installation of a new turbine generator was completed in November 2015, and the generator enclosure was completed in May 2020. This project improves the safety, control, and noise abatement systems at the Yorba Linda Power Plant by upgrading emergency and SCADA systems. Enhancements include automated actuation, improved audio alert capabilities, modernized HMI and SCADA integration, and facility noise mitigation.

Right-of-Way & Infrastructure Protection Project Group**Colorado River Aqueduct Right of Way Infrastructure Protection Improvements**

This project identifies and addresses right-of-way, access, and security issues; identifies and executes needed improvements along the Colorado River Aqueduct; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies following completion of construction.

Los Angeles County Region Right of Way Infrastructure Protection Improvements - Stage 1

This project identifies and addresses right-of-way and security issues; identifies and executes needed improvements within the Los Angeles County Operating Region; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped, prioritized, and staged for construction depending on the site requirements. Stage 1 will address sites that are located within Metropolitan's existing right-of-way and do not require any additional environmental permitting. This work will enhance distribution system reliability by providing year-round unobstructed access to facilities such as installation of gates, manhole accessway rehabilitation, erosion protection, rehabilitation of access roads, pump wells, blowoff structures, and valve installations, thereby enabling needed pipeline repairs and routine maintenance to move forward.

Los Angeles County Region Right of Way Infrastructure Protection Improvements - Stage 2

This project identifies and addresses right-of-way and security issues; identifies and executes needed improvements within the Los Angeles County Operating Region; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped, prioritized, and staged for construction depending on the site requirements. Stage 2 will address sites that are within Metropolitan's existing right-of-way but require additional temporary easements or environmental permitting.

Los Angeles County Region Right of Way Infrastructure Protection Improvements - Stage 3

This project identifies and addresses right-of-way and security issues; identifies and executes needed improvements within the Los Angeles County Operating Region; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped, prioritized, and staged for construction depending on the site requirements. Stage 3 will address sites that require the acquisition of additional permanent right-of-way or extensive environmental permitting.

Orange County Reliability Improvements

This project will assess, design, and construct erosion and security-related improvements for pipeline structures and facilities in the Orange County region. It will include acquisition and permitting of rights of way to protect and improve access to pipelines. The improvements will enhance reliability by providing year-round unobstructed and safe access to facilities such as manholes, pump wells, and blowoff structures; enhance security; and maintain cover over the pipelines.

Riverside and San Diego County Region Right of Way Infrastructure Protection Improvements - Stage 1

This project identifies and addresses right-of-way, access, and security issues; identifies and executes needed improvements within the Riverside and San Diego County Operating Region; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped, prioritized, and staged for construction depending on the site requirements. Stage 1 will address sites that are located within Metropolitan's existing right-of-way and do not require any additional environmental permitting.

Riverside and San Diego County Region Right of Way Infrastructure Protection Improvements - Stage 2

This project addresses needed improvements within the San Diego County Operating Region; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped, prioritized, and staged for construction depending on the site requirements. Stage 2 will address sites that are within Metropolitan's existing right-of-way but require additional temporary easements or environmental permitting.

Western San Bernardino County Region Right of Way Infrastructure Protection Improvements - Stage 2

This project addresses needed improvements within the Western San Bernardino County Operation Region; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped, prioritized, and staged for construction depending on the site requirements. Stage 2 will address sites that are within Metropolitan's existing right-of-way but require additional temporary easements or environmental permitting.

Western San Bernardino County Region Right of Way Infrastructure Protection Improvements - Stage 3

This project identifies and addresses right-of-way, access, and security issues; identifies and executes needed improvements with the Western San Bernardino County Operation Region; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped, prioritized, and staged for construction depending on the site requirements. Stage 3 will address sites that require the acquisition of additional permanent right-of-way or extensive environmental permitting.

Upper Feeder and Lower Feeder Right of Way Infrastructure Protection Improvements – UF Station 42+06, Station 90+08, and LF Station 919+54

This project identifies and addresses right-of-way, access, and fall protection; identifies and executes needed improvements within the Riverside and San Diego County Operating Region at three locations on the Upper and Lower Feeders; prepares environmental documentation; acquires regional environmental permits; and monitors and reports to permitting agencies for ten years following completion of construction. To expeditiously complete this project, sites within this region are grouped into Lower Feeder and Upper Feeder.

Distribution System - Other Project Group**Chloramine Booster Stations within the Treated Water Distribution Systems**

During the summer of 2023, the distribution system experienced a significant nitrification event that led to the flushing of millions of gallons of water at multiple locations. It was determined that low flows and increased temperatures significantly contributed to the elevated nitrification levels. This project will install chlorine injection points at multiple locations in the distribution system to mitigate future nitrification events.

Diemer Area Distribution System Online Analyzers Replacement

Online analyzers continuously monitor water quality in the treated water distribution system and help ensure that safe and reliable water reaches our member agencies. They provide prompt indication of water quality issues and an early warning to allow actions to be taken to minimize impacts. The existing online analyzers are almost 25 years old and have exceeded their typical service life. They are outdated, no longer sold or supported by vendors, and replacement parts are becoming increasingly difficult to obtain. At approximately 10 locations within the Diemer area, this project will (depending on the location): decommission existing analyzers, install analyzers that measure various water quality constituents, and install prefabricated sheds.

Distribution System Online Analyzers Replacement

Online analyzers continuously monitor water quality in the treated water distribution system and help ensure that safe and reliable water reaches our member agencies. They provide prompt indication of water quality issues and an early warning to allow actions to be taken to minimize impacts. The existing online analyzers are almost 20 years old and have exceeded their typical service life. They are outdated, no longer sold or supported by vendors, and replacement parts are becoming increasingly difficult to obtain. At approximately 12 locations in the Jensen service area, this project will: decommission existing analyzers and install analyzers that measure various water quality constituents.

Distribution System Structure Security Improvements

The western region has seen an increase in break-ins at conveyance and distribution structures and vandalism of Metropolitan property in recent years. Security upgrades are needed to deter break-ins and vandalism. This project includes physical security improvements to all conveyance and distribution system access hatches, access covers, AMR cabinets, air release vacuum valve cabinets, and other secured enclosures. This project will identify hatches that require security upgrades and implement a replacement plan. The project will be completed in multiple stages.

East Lake Skinner Bypass Screening Structure Upgrades

The East Lake Skinner Bypass allows flows from the San Diego Canal to bypass Lake Skinner. Slide gates are used to isolate the facility. These gates were built nearly 60 years ago and are in need of replacement due to heavy corrosion observed during recent inspections. Additionally, the gates bind during normal operation, which is rendering them inoperable without manual intervention by Metropolitan staff. The project scope is to remove the existing slide gates along with appurtenant equipment attached to and embedded in the surrounding structure and install three new stainless steel slide gate assemblies with new actuators and appurtenances.

East Orange County Feeder No. 2 Cathodic Protection System Rehabilitation

Cathodic protection systems are used to protect underground pipelines from stray electrical currents that may cause corrosion. The existing cathodic protection systems for East Orange County Feeder No. 2 were installed in 1994. Recent surveys of the existing systems have indicated that they no longer provide adequate protection due to the gradual deterioration of their anodes after years of service. The typical design life of an impressed-current cathodic protection system is 25 years. Therefore, the time in service and recent surveys indicate the systems have reached the end of their useful life and require rehabilitation. This project will rehabilitate the impressed-current cathodic protection anode wells and rectifiers and demolish the existing anode wells per California Well Standards.

East Orange County Feeder No. 2 Seismic Retrofit at Diemer Water Treatment Plant

An assessment identified a slope near the south-western pad at the Diemer plant as having the potential to damage the East Orange County Feeder No. 2 pipeline during a significant earthquake. This structure requires further analysis to ensure that it meets Metropolitan's current structural standards and that the facility is reliable in the event of seismic activity. This project will assess, design, and complete seismic retrofit construction near the south-western pad at the Diemer plant.

Foothill Feeder Erosion Protection at Newhall Creek

Newhall Creek crosses over the Foothill Feeder. Storm events have eroded the soil over the pipe, exposing the pipeline. This project will re-direct the flow path of the creek away from the pipeline so that future erosion occurs a safe distance away from the pipeline. This project will permanently retain adequate pipeline coverage through the use of armoring materials that will be added to the soil over the pipeline. This armoring will protect the pipeline and ensure that water is reliably delivered to the Jensen plant. Not taking action will cause further erosion to the area over the pipeline and cause additional exposure and risk of instability.

Holland Road Drainage Modification

Dam seepage and stormwater runoff collect in an open channel in the Metropolitan right-of-way downstream of the west dam embankment at Diamond Valley Lake (DVL). The channel has become overgrown with vegetation. This project will install a drainage pipe to redirect the flows.

Lake Mathews Facility New Office Buildings

Lake Mathews was constructed in 1940. Since the 1960s, the facility has been modified and is centrally used for various disciplines. It contains multiple buildings which house essential large equipment related to water operations. Moreover, the facility has become more critical with the additions of the administration and data center buildings. Most of the Lake Mathews buildings are reclaimed buildings left over from the contractor who completed the second lift of the Lake Mathews dam in 1961. The existing buildings are subject to weather intrusion and have exceeded their useful life. This project will replace the deteriorated 1960s era "temporary" office trailers and buildings at the Lake Mathews Facility with new buildings that include shared conference and training centers housing five teams.

Lake Mathews, Garvey, and Chemical Unloading Facility Support Facilities Improvements

As part of Metropolitan's seismic upgrade program, a rapid evaluation was conducted and identified seismic deficiencies at the Garvey Microwave Station, Garvey Reservoir Building, Lake Mathews Building 3 (heavy equipment shop), Lake Mathews Building 6 (security specialist office/storage), Lake Mathews Building 7 (warehouse/central receiving), Lake Mathews Building 21 (hazardous waste storage), Chemical Unloading Facility Main Office, and other buildings at these locations. This project will construct improvements to address these deficiencies as well as improve non-structural features in each building, such as roofing, insulation, ventilation, and other building characteristics.

Lake Skinner Bypass No. 2 Screening Structure Upgrade

The Lake Skinner Bypass channels are located off the San Diego Canal and allow bypassing of Lake Skinner during water quality events. Bypass No. 2 is the furthest bypass downstream and consists of trash-racks at the forebay to the channel, mechanical screens, and an after-bay trash rack. The forebay trash-racks are connected to an existing manual lifting mechanism that is operated with hand tools, and the configuration of the support beams creates excessive strain and torque on the wire rope, pulleys, and supporting devices during operation. Upgrades will be made to the trash-rack lifting mechanisms, structural support beams, and decking that will improve the wire rope pulley configuration/path for the lifting of the trash rack. Failure of the lifting components during the lifting operation has a high potential of employee injury due to the position of the mechanical operator. Additionally, failure of the lifting mechanisms could lead to algae accumulation on trash racks that would restrict the bypass flow capacity to the Skinner plant. The safety issues associated with raising the trash racks are a major concern that will be eliminated by this upgrade. Trash rack cleaning and algae removal will be much more efficient by easily lifting the trash rack.

Lake Skinner Conveyance and Distribution Building Roof Replacement

The Lake Skinner Conveyance and Distribution (C&D) building was built in the 1980s, and it still has its original roof and gutters from when the building was built. Due to its age, it has developed leaks during the rainy season, causing water damage to the inside of the building. This project will replace the existing roofing system and gutters.

Lake Skinner West Bypass Screening Structure Rehabilitation

The San Diego Canal West Bypass Screening Structure is located at a turnout off the San Diego Canal and is the starting point for raw water supply to San Diego Pipeline No. 3 when Lake Skinner is bypassed. A concrete algae screening structure is located within the channel upstream of the inlet to San Diego Pipeline No. 3, which once contained mechanical screening equipment to screen out algae mats and other debris traveling downstream into the raw water pipeline. Operationally, the existing screening structure was ineffective, and the mechanical screens were removed from service several years ago. The concrete support foundation for the screening equipment still exists within the channel and impedes flow in the bypass channel. This project will demolish the obsolete concrete support structure for the bypass screening structure and remove appurtenant abandoned mechanical equipment to improve flow conditions in the channel and rehabilitate the channel liner in the areas where the concrete foundations have been demolished.

Long Beach Lateral and Inglewood Lateral Cathodic Protection System Replacement

Cathodic protection systems are used to protect underground pipelines from stray electrical currents that may cause corrosion. This project will replace the existing impressed current cathodic protection (ICCP) systems along 2.65 miles of the Inglewood Lateral and along 4.7 miles of the Long Beach Lateral. This project includes decommissioning the existing deep anode wells, design and installation of new ICCP systems that include new deep anode wells, rectifiers, and monitoring equipment.

Lower Feeder Air Entrainment Improvement

Entrained air from the Lower Feeder interferes with the treatment process at the Diemer plant. This project will reduce or eliminate entrained air in the Lower Feeder pipeline through modifications and additions of components along the Lower Feeder, including Corona and Temescal power plants, pressure control structures, pipelines, air stacks, and air release/vacuum valves.

Lower Feeder Cathodic Protection System Rehabilitation

Cathodic protection systems are used to protect underground pipelines from stray electrical current that can cause corrosion. The existing cathodic protection systems for the Lower Feeder were installed in 1995. Recent surveys of the existing systems have indicated that they are no longer providing adequate protection due to the gradual deterioration of their anodes. This project will rehabilitate or replace equipment, such as impressed-current anode wells and rectifiers, and remove or demolish existing equipment and anode wells per California Well Standards.

Middle Feeder North Drainage and Protection Restoration

The Middle Feeder North from Station 1067+00 to Station 1071+00 lies within both a Metropolitan fee parcel and easements between Graves Avenue and Mooney Drive in the unincorporated Los Angeles County community of South San Gabriel. A recent visual inspection and survey of the area determined that the current soil cover over the feeder has eroded to less than the design minimums. This project will restore the design soil cover over the Middle Feeder North conduit and improve drainage features to prevent this problem in the future.

Nitrification Mitigation

During the summer of 2023, the distribution system experienced a significant nitrification event that led to the flushing of millions of gallons of water at multiple locations. This project will identify and implement infrastructure upgrades to alleviate the impacts of nitrification on the system and water supply.

Orange County Feeder Cathodic Protection from Station 1467+15 to Station 2053+97

The Orange County Feeder was completed in 1942 and conveys treated water from the Weymouth plant in La Verne to its terminus in Newport Beach. A portion of the pipeline originally consisted of welded and un-bonded steel pipe. Previously, cathodic protection, commonly applied to steel pipelines, could not be effectively applied to this pipeline due to it being unbonded; however, recent rehabilitation on steel portions of the Orange County Feeder makes cathodic protection a viable option to prevent external corrosion and thus prevent future pipe leaks. Three locations that were identified during routine testing as no longer providing corrosion protection to the pipeline have been replaced. This project will design and install a new cathodic protection system on the remaining portion of the Orange County Feeder.

Palos Verdes Feeder Cathodic Protection System Rehabilitation

Cathodic protection systems are used to protect underground pipelines from stray electrical currents that may cause corrosion. Recent surveys of the existing systems have indicated that they no longer provide adequate cathodic protection due to the gradual deterioration of their anodes after years of service. This project will rehabilitate the existing impressed current cathodic protection system along 32 miles of the Palos Verdes Feeder. This project will include decommissioning five depleting deep anode wells, as well as the design and installation of five new deep anode wells, rectifiers, and monitoring equipment.

Rialto Pipeline Cathodic Protection System Rehabilitation

Cathodic protection systems are used to protect underground pipelines from stray electrical currents that may cause corrosion. The existing cathodic protection systems for Rialto Pipeline were installed between 1988 and 1995. Recent surveys of the existing systems have indicated that they are no longer providing adequate protection due to the gradual deterioration of their anodes. This project will rehabilitate or replace the equipment, such as impressed-current anode wells and rectifiers, and remove or demolish existing equipment and anode wells per California Well Standards.

San Diego Pipeline Nos. 1 and 2 Station 1214+00 Erosion Control

The Temecula area experienced heavy and sustained precipitation on February 14, 2019. Additional storm events over the 2019-2020 storm season served to further exacerbate erosion conditions. The excessive stream flows resulted in the buried San Diego Pipeline Nos. 1 and 2 becoming exposed where the pipelines cross an ephemeral stream channel. This project will develop and construct a permanent erosion control solution for a pipeline exposure at station 1214+00.

San Gabriel Tower and Spillway Improvements

The San Gabriel Tower (SGT) was constructed in 1936, north of the city of Azusa. It sits at the base of the steep and weathered San Gabriel Mountains between the west portal of Monrovia Tunnel No. 1 and the east portal of Monrovia Tunnel No. 2. The tower is surrounded by Angeles National Forest and is adjacent to Morris Reservoir. The function of the SGT is to regulate and isolate flows from the Weymouth plant via the Upper Feeder pipeline to the Eagle Rock Control Facility located in the city of Los Angeles. Planned upgrades to the San Gabriel Tower include: (1) replacement of the slide gates and actuators to restore isolation capability for the Upper Feeder; (2) replacement of damaged concrete, hatch covers, platform and platform access ladders at the existing operating floor of the tower; (3) constructing a concrete enclosure for the existing operating floor of the tower; (4) constructing the steel platform extension inside the venturi meter structure; (5) replacing electrical and gate control equipment at the tower operating floor and venturi meter; (6) improving access to the spillway; (7) constructing an extension of the chain link fence along the access road; and (8) stabilizing the adjacent rocky slope and removing loose rocks/boulders identified to prevent potential falling rock from striking the tower and blocking the access road.

Santa Ana River Discharge Pad

Severe storm events have eroded the north slope of the Santa Ana River near the Upper Feeder crossing. This damage resulted in large voids in the riverbank at the concrete foundation supporting the truss bridge span and the foundation of the emergency discharge bunger valve. The damage was repaired, and a recommendation was made during the repair to construct a concrete pad or energy dissipater to prevent reoccurrence of this type of damage. This project will construct a concrete discharging pad to prevent erosion from stormwater and discharge of the bunger valve.

Santiago Control Tower Seismic Improvements

The Santiago Control Tower is located on the Lower Feeder and provides flow control between the Santiago Lateral and the Lower Feeder, which supplies the Diemer Water Treatment Plant. The Santiago Control Tower Seismic Improvements project would strengthen the control tower to enable continued operation following a major seismic event.

Santiago Lateral Cathodic Protection System Rehabilitation

Cathodic protection systems are used to protect underground pipelines from stray electrical currents that may cause corrosion. This project will rehabilitate the existing impressed current cathodic protection system (ICCP) along 2.1 miles of the Santiago Lateral. This project will include decommissioning the existing deep anode well, design and installation of a new ICCP system that includes a new deep anode well, rectifier, and monitoring equipment.

Sepulveda Feeder West Basin Feeder Interconnect Structure Fall Protection Improvements

Many of Metropolitan's underground vault structures are deep and present potential fall hazards. This project will replace existing grating platforms and ladders inside Sepulveda Feeder West Basin Feeder Interconnect structure. The replacement will provide the highest level of protection, ensuring safety, limiting liability, improving staff productivity, and ensuring compliance with the latest Cal-OSHA requirements.

Skinner Area Physical Security Upgrades

An increase in housing adjacent to the Skinner area has resulted in an increased population and has the potential to increase criminal trespassing events. The Skinner area has many industrial hazards that are properly identified and handled by Metropolitan staff. However, trespassers are not likely to understand hazard signs or have appropriate equipment and training to deal with them. Recently, trespassers have been caught swimming in the San Diego Canal and traversing restricted areas of Lake Skinner. This project will install security upgrades around the Skinner area perimeter, including fencing improvements with view-blocking PVC slats, patrol road improvements, additional signage and safety warnings, and additional lighting.

Skinner Area Platform Improvements

Location 1 – Skinner Plant ORP Inlet Structure: The eight vacuum valves and one air release valve on top of each of the four inlet pipes leading into the Skinner plant ORP inlet control structure are currently inaccessible. During normal maintenance operations or in the event of an emergency, a forklift with a man basket is needed to reach the valves. This project will build a platform and stairs or ladders to provide permanent access for servicing of these valves.

Location 2 – Service Connection SD-07: Significant corrosion at multiple locations inside the SD-07 meter structure of San Diego Pipeline No. 4 has been identified. This project will replace the existing corroded carbon steel platforms with new stainless-steel platforms for safety and reliability.

Soto St. Facility Security and HVAC Replacement

The Soto Street Facility serves as the main headquarters for staff and equipment that support the Western Region Unit (WRU) Conveyance and Distribution System. The WRU Incident Command Post, located in the Administration Building, also serves as the backup Emergency Operations Center for the Eagle Rock Operations Center. There have been multiple recent security events at this facility. Also, the existing air handling unit that serves the Soto Street Administration Building has been in service since the 1960s, when the building had a different configuration. The current HVAC system does not provide adequate airflow to all parts of the building. This project will improve the security of the Soto Street Facility and upgrade the HVAC system for the Administration Building.

Upper Feeder Cathodic Protection System Rehabilitation

Cathodic protection systems are used to protect underground pipelines from stray electrical currents that may cause corrosion. Recent surveys of the existing systems have indicated that they no longer provide adequate cathodic protection due to the gradual deterioration of their anodes after years of service. This project will design and construct an impressed current cathodic protection (ICCP) system. This project will replace the existing ICCP system with a more efficient system designed for high-resistance environments. The project includes decommissioning the existing deep anode wells and installing new deep anode wells, rectifiers, and remote monitoring equipment.

West Orange County Feeder Cathodic Protection

The Dominguez Channel Pressure Relief Structure is located on the Palos Verdes Feeder near the Harbor Freeway and Hoover Street at the Dominguez Channel Crossing. Recent inspections have found leaking valves, inoperable needle valves, failed electrical services, and failed communication cables. This project will replace valves, modify piping and concrete, and construct new underground electrical and communication service as necessary to restore reliability of the relief structure.

Western Conveyance and Distribution Region Blind Flange Structures Washdown Improvements

The western conveyance and distribution region has a considerable number of structures with blind flanges located inside the vaults. These facilities do not have access to a reliable source of water needed to wash down equipment where dirt, grease, and other debris collect between maintenance visits. Grime and build-up on the piping, valves, bolts, and appurtenant equipment must be removed in order to disassemble parts, evaluate their condition, perform maintenance, and then re-assemble and place back into service. Currently, unnecessary time and expense are wasted in attempting to procure mobile sources of water, which significantly slows down the ability to access multiple sites. This inefficiency makes the process wasteful, uneconomical, and time-consuming. This project will modify, replace, or enhance structures that contain blind flanges by adding connection points that will allow for immediate access to water for the purpose of performing on-site maintenance.

Yorba Linda Feeder Cathodic Protection System Rehabilitation

The existing cathodic protection systems for Yorba Linda Feeder were installed in 1990. Recent surveys of the existing systems have indicated that they no longer provide adequate protection due to the deterioration of their anodes after years of service. The typical design life of an impressed-current cathodic protection system is 25 years. Therefore, the time in service and recent surveys indicate the systems have reached the end of their useful life and require replacement. This project will replace the impressed-current cathodic protection anode wells and rectifiers and demolish the existing anode wells per California Well Standards.

Districtwide and Other Facilities and Systems

Fiscal Years 2026/27 and 2027/28 Estimate: \$17.5 million

Program Information: *The Districtwide and Other Facilities and Systems Program is composed of projects to refurbish, replace, upgrade, or provide new facilities and systems that support Metropolitan's business and operations.*

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - CRA Aircraft Facility Improvements - Stage 1
 - CRA Aircraft Facility Improvements - Stage 2
 - CRA Employee Housing Fencing and Shade Structure Improvements
 - CRA Employee Housing Roof Replacement
 - La Verne Shops Upgrade - Stage 6
 - Michael J. McGuire Water Quality Laboratory Equipment Replacement
 - Orange County Region Service Center Storage Yard
 - Weymouth Sedalia Property Acquisition
- Major milestones achieved or estimated to be achieved:
 - CRA Employee Housing Demolition and Roof Replacement – construction completed
 - CRA Employee Housing Fencing and Shade Structure Improvements – construction to be completed
 - DVL Floating Restroom and Boat Docks Replacement – construction contract to be awarded
 - Diamond Valley Lake Floating Wave Attenuator – Stage 2 – construction to be completed
 - Headquarters Building Fire Alarm and Smoke Control Improvements – construction completed
 - Headquarters Building Physical Security Improvements - Stage 3 – construction completed
 - HQ Video Room Suite Renovation – construction completed
 - La Verne Shops Improvements - Equipment Installation and Building Completion – construction to be completed
 - Lake Mathews Aboveground Storage Tank Replacement – construction contract to be awarded
 - Michael J. McGuire Water Quality Laboratory Upgrades – procurement and installation of critical long-lead equipment completed
 - Palos Verdes Reservoir Helicopter Dip Tank – construction completed
 - Weymouth Sedalia Property Acquisition – acquisition completed

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Desert Housing and Property Improvements	\$ 167,900,000	2029	Complete preliminary design for Gene, Iron Mountain, Eagle Mountain, and Hinds pumping plants

Employee Housing Project Group

CRA Employee Housing Fencing and Shade Structure Improvements

Metropolitan is undertaking certain village enhancements at the desert facilities to increase employee retention. This project includes the installation of approximately 12,700 feet of six-foot and four-foot chain-link fencing with privacy slats and gates at 68 houses at four pumping plants, as well as shade structure improvements and fencing for three playground areas. The total shade structure area will be approximately 11,000 square feet.

CRA Employee Housing Roof Replacement

Metropolitan is making improvements to existing housing at the desert facilities to increase employee retention. This project includes roof replacement for 14 houses at four pump plants and associated hazardous materials abatement containing asbestos and lead; and abatement and demolition of eight houses at two pump plants and associated concrete slab removal and abandonment of utilities.

Desert Housing and Property Improvements

Metropolitan owns houses throughout the five CRA pumping plants and rents to employees involved in operation and maintenance of the CRA. A community planner was engaged to re-evaluate the desert housing program and provide recommendations. The Board directed staff to proceed with transitioning to a new housing model. This project will implement the first phase of the transition with design and construction of new smaller townhome-style buildings at the pumping plant facilities, and incorporate single family residences after phase one, if necessary. The project also includes new kitchens at Eagle and Iron Mountain; rehabilitation of kitchen at Gene; new lodges at Eagle Mountain, Iron Mountain, and Gene; new storage/maintenance buildings at four sites; and other village amenities such as community centers, gyms, playgrounds, and other recreational facilities, and drought-tolerant landscaping. In addition, manufactured homes will be added at four pumping plant facilities to supplement lodging for additional labor and the apprenticeship program.

Recreation Project Group

Diamond Valley Lake Domestic Water System Improvements

The existing potable water line that supplies the DVL facilities with water is oversized and experiences regular instances of low chlorine residual levels, which require regular flushing of the system. Maintaining a stable chlorine residual in the potable water system is necessary to ensure that sufficient disinfectant is available to inactivate pathogens and prevent recontamination. This project will install a smaller water line to supply Wadsworth Pumping Plant's domestic water system. The higher turnover rate in the smaller pipeline will help maintain the chlorine residual. The existing larger diameter line will be left in place to handle fire flow.

Diamond Valley Lake East Marina Utilities

Diamond Valley Lake (DVL) offers recreational opportunities to the region, including boating, fishing, hiking, and biking. The facility supports 4,500 acres of on-water activity, 28 miles of trails, and 13,500 acres of protected open space. This project will extend the existing water and sewer facilities from the intersection of Searl Parkway and Angler Avenue to the DVL East Marina to support existing operations and future development. The construction of the new infrastructure will replace existing failing tanks, which are filled with trucked-in water to service the Marina store, enhance utility service reliability, and comply with flows and pressures required to develop the Marina into a self-sustainable recreational facility.

Diamond Valley Lake to Lake Skinner Trail

Metropolitan jointly funded a trails study with Riverside County Regional Park and Open-Space District to investigate the feasibility of connecting trail alignments that would expand public access to the area's natural resources in an environmentally sustainable manner. This project will create a recreational link between Diamond Valley Lake and Lake Skinner, as identified in the initial reservoir planning documents, and will connect to the existing network of trails. The proposed trail alignment minimizes impacts to the Southwestern Riverside County Multi-Species Reserve through the joint use of the east side of the San Diego Canal Patrol Road. This project will provide parking at several locations, amenity areas, and improve fencing along the San Diego Canal. Planned trail uses will include hiking and bicycling.

DVL Floating Restroom and Boat Dock Replacement

Metropolitan provides floating restrooms and boat docks at Diamond Valley Lake (DVL) to support recreation and fulfill Metropolitan's obligations outlined in the Environmental Impact Report (EIR) and required by the Recreation Activity Plan approved by the Department of Drinking Water. The floating restrooms are 20 years old and at the end of their service life. The equipment requires constant maintenance, and a failure of the holding tanks could lead to sewage leaking into the reservoir, creating a water quality issue for Metropolitan. The floating boat dock system at the marina is nearly 20 years old. Multiple boat dock anchor cables have failed in recent years, and other system components are rapidly deteriorating. The anchoring system secures and stabilizes the docks and provides a safe location for individuals boarding and disembarking vessels. This project will replace the existing restrooms and docks to ensure continued access to the public and safe operations.

Districtwide & Other Facilities & Systems Project Group**Apprentice Training Center Facility**

The current apprentice training center has come to the end of its useful life and lacks the needed space for break rooms and training without reconfigurations. As a result, some training modules are outsourced to other vocational training colleges and programs. This project will refurbish and make modifications to the former Diamond Valley Lake Visitor Center building to enable its use as Metropolitan's apprentice training center facility. The former visitor center building was completed in 2008 and shares several building components with the adjacent Western Science Center Museum. The project will address the need for additional space dedicated to individual apprentice training center functions such as break rooms, classrooms, restrooms with added capacity and ample space for library and storage areas. The project will also address the aging and obsolete building systems that are currently shared with the adjacent Western Science Center Museum. To meet Metropolitan building standards, upgrades will be made to security, access, architectural, mechanical, electrical, plumbing systems, and other building features and equipment. Completion of this project will provide the necessary facilities for apprentice training well into the future for the development of the workforce that will operate and maintain Metropolitan's conveyance, distribution, and treatment systems.

CRA Aircraft Facility Improvements - Stage 1

Metropolitan owns and operates several airstrips along the Colorado River Aqueduct (CRA) that are deteriorating with age. The project will design and construct various improvements to runway pavement and lighting at the four aircraft facilities located near the CRA pumping plants (Gene, Iron Mountain, Eagle Mountain, and Hinds). This includes: (1) runway extensions needed to comply with FAA guidelines, (2) rehabilitation of the existing asphalt paved runway, (3) rehabilitation of the existing asphalt paved access road leading to the runway and construction of a new asphalt paved access road to replace the existing access road without asphalt pavement, and (4) replacement of the existing incandescent bulb lighting along the runways at Iron Mountain and Eagle Mountain with energy efficient Light Emitting Diode (LED) bulbs.

CRA Aircraft Facility Improvements - Stage 2

Metropolitan owns and operates two aircraft, which are used for various support activities on the Colorado River Aqueduct (CRA). There is currently no enclosed area to store aircraft and no designated landing area at Eagle Mountain for helicopters. Planes have to be taken off-site for hangar storage in Lake Havasu. The project will design and construct various aircraft facility improvements at the Gene, Eagle Mountain, and Hinds pumping plants. The improvements include: 1) construction of a new aircraft hangar and parking area at the runway facility near Gene Pumping Plant, and 2) construction of a new helipad at Eagle Mountain Pumping Plant.

Desert Operational Support Facility at Eagle Mountain Pumping Plant

The existing office spaces at the desert facilities are inadequate. Many of the structures are from the original CRA construction and have not been recently updated. Due to recent growth in Desert teams and projected growth to support Desert initiatives, the existing Desert infrastructure is unable to adequately provide the necessary workspace to facilitate operational support. The additional space will support continued growth, foster innovation, and maintain operational efficiency. This project will install new modular office trailers at the Eagle Mountain Pumping Plant facility.

Desert Operational Support Facility at Gene Pumping Plant

The existing office spaces at the desert facilities are inadequate. Many of the structures are from the original CRA construction and have not been recently updated. Due to recent growth in Desert teams and projected growth to support Desert initiatives, the existing Desert infrastructure is unable to adequately provide the necessary workspace to facilitate operational support. The additional space will support continued growth, foster innovation, and maintain operational efficiency. This project will install new modular office trailers at the Gene Pumping Plant facility.

Desert Operational Support Facility at Hinds Pumping Plant

The existing office spaces at the desert facilities are inadequate. Many of the structures are from the original CRA construction and have not been recently updated. Due to recent growth in Desert teams and projected growth to support Desert initiatives, the existing Desert infrastructure is unable to adequately provide the necessary workspace to facilitate operational support. The additional space will support continued growth, foster innovation, and maintain operational efficiency. This project will install new modular office trailers at the Hinds Pumping Plant facility.

Desert Operational Support Facility at Iron Mountain Pumping Plant

The existing office spaces at the desert facilities are inadequate. Many of the structures are from the original CRA construction and have not been recently updated. Due to recent growth in Desert teams and projected growth to support Desert initiatives, the existing Desert infrastructure is unable to adequately provide the necessary workspace to facilitate operational support. The additional space will support continued growth, foster innovation, and maintain operational efficiency. This project will install new modular office trailers at the Iron Mountain Pumping Plant facility.

Districtwide Electrical Switch Yard Protection

Several of Metropolitan's switch yard facilities fall under North American Electric Reliability Corporation (NERC) and Federal Energy Regulatory Commission (FERC) oversight and must adhere to infrastructure regulations set by these agencies. This project will upgrade exterior electrical switchyard physical protective barrier systems throughout Metropolitan.

Districtwide Fall Protection Improvements

Working at elevated areas within 6-feet of an edge that has 6-foot falling height, requires fall protection per California Occupational Safety and Health Administration (Cal-OSHA) regulations. The current procedures require that when employees need to enter a rooftop area to service equipment, they must develop and implement a specific plan for safe access; complete a job safety hazard checklist to address all fall hazards; and utilize safety belts, lanyards, or other approved fall protection systems as required. This project will construct guardrail and skylight fall protection on building rooftops, and other types of fall abatement protection for other serviceable areas on facilities with fall protection deficiencies at the CRA pumping plants, water treatment plants, and other miscellaneous facilities throughout the service area per Cal-OSHA Title 8 requirements. Engineered controls such as guardrails and skylight screens will provide the highest level of protection, ensuring safety, limiting liability, improving staff productivity, and ensuring compliance with Cal-OSHA requirements.

Districtwide HVAC Replacement

Metropolitan's facilities include nearly 700 structures with over 2,000 pieces of heating, ventilation, and air conditioning (HVAC) equipment. Approximately 80% of the HVAC equipment used by Metropolitan supports process systems that are required to treat or distribute water, and for regulatory compliance. The majority of Metropolitan's HVAC equipment is over 34 years old, requiring more corrective maintenance to remain operational, and consuming more electricity than newer, more energy-efficient units. This project consists of a phased replacement of outdated HVAC infrastructure with certified energy-efficient equipment and addressing regulatory changes in EPA guidelines that are phasing out the refrigerants currently used in most of Metropolitan's HVAC systems. The project will also (1) modernize HVAC controllers into a cohesive building automation network to allow Metropolitan staff to efficiently respond to HVAC interruptions, quickly troubleshoot problems, provide early detection of problems before catastrophic failures, and ensure optimal performance of the HVAC systems; and (2) upgrade existing or install new air filtration systems with high efficiency particulate air (HEPA) filtration and germicidal equipment such as UV disinfection to occupied buildings to provide enhanced protection from airborne viral and bacterial particulates.

Districtwide Pressure Vessel Rehabilitation and Improvements

Metropolitan has more than 550 pressure vessels located throughout its service area. These assets are used to contain water, air, and chemicals under pressure for use in treatment, conveyance, distribution, and utility tasks. A majority of these pressure vessels are over 25 years old, with the oldest recorded being 87 years old. From preliminary inspections performed on 265 of the pressure vessels over the last three years, approximately 88% of the pressure vessels inspected had some form of recommended corrective action identified. The Districtwide Pressure Vessel Rehabilitation and Improvements project will establish a method to systematically assess the condition of all pressure vessels and supporting infrastructure located throughout Metropolitan's conveyance, distribution, and treatment systems; identify pressure vessels that require rehabilitation or replacement; and implement a rehabilitation or replacement plan.

Districtwide Underground Storage Tank and Fueling System Upgrades

Metropolitan currently maintains and utilizes a network of underground storage tank (UST) fueling systems that the district is reliant on for servicing district vehicles and equipment. The UST fueling systems also supply fuel for emergency generators that provide emergency backup power at each facility. The UST fueling systems have exceeded their service life and require refurbishment. This project will refurbish and upgrade Metropolitan's UST fueling systems, including storage tanks, above- and below-ground piping, conduit, control and monitoring systems, vent systems, housings, and related appurtenances.

DVL Microwave Communications Hub Power Conversion

Reliability of the microwave communications hub at the east dam of the Diamond Valley Lake (DVL) is critical to keep communications to the marina through phone and 2-way radio, dam monitoring equipment, and security cameras. The microwave hub also provides a redundant path for communications and data to the visitor center. The solar power equipment has been vandalized over time, and some components need improvement. This project will replace solar power supply for the microwave hub and three security camera sites at DVL's east dam with wired power and add air conditioning to the microwave hub control room.

Eagle Rock Security Upgrade - Stage 1

The existing security system utilized throughout Metropolitan to protect its facilities requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance the theft and trespassing detection and deterrence, lower maintenance costs, and better leverage the available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will improve the existing security control system at the Eagle Rock Facility.

Eagle Rock Security Upgrade - Stage 2

The Eagle Rock Operations Control Center (OCC) was built in 1995. The OCC coordinates and controls Metropolitan's water conveyance and distribution system throughout its entire service area. As the main hub of this system, the OCC is pivotal for the management of water deliveries through Metropolitan facilities. The site currently consists of (1) a two-story building that houses the OCC, the Emergency Operations Center, and several staff offices, (2) a two-story older structure that holds the Business Incident Command Post, Security Water Center, several offices, and a Control Systems shop, and (3) several concrete structures used for transporting water. A vulnerability assessment of the OCC site was conducted in 2017. This assessment identified several security issues of concern as a result of trespassing onto the property. This project will make site security improvements, including all hardscape work, non-technology-related security work at the Eagle Rock Control Center.

Etiwanda Test Facility

This project will construct a new hydraulic testing facility at the site of the Etiwanda Reservoir to verify the accuracy of flow meters under 'as constructed' conditions and test new equipment introduced into the water industry (e.g., valves, actuators, and instrumentation). The test facility will utilize water from the Etiwanda Pipeline and discharge it into the Etiwanda Reservoir bypass channel. The test facility will consist of: Inlet works, test works, energy dissipation and collection tanks, miscellaneous electrical equipment, control equipment, and a storage building.

Headquarters Building Automation System Upgrades

The building automation system controls all lighting, a carbon monoxide monitoring system, HVAC, and associated mechanical equipment in Metropolitan's Headquarters Building. The system is required to operate the building in an energy-efficient manner, consistent with Title 24 energy efficiency standards. In the event of a building automation system failure, thermal control within the data center would be lost, and garage exhaust fans within the parking garage would become inoperable, resulting in damage to critical facilities and unsafe conditions, respectively. The existing building automation system is obsolete and is no longer supported by the original equipment manufacturer. This project will replace the existing building automation system with a new nonproprietary system and will support integration of the new fire and smoke control systems that will be installed under the Headquarters improvements project.

Headquarters Building Interior and Exterior Lighting and Control System Upgrade

The existing fluorescent lighting fixtures in the Metropolitan Headquarters building are 25 years old and past their service lives. As the fixtures and components continue to age, the risk of fire hazard will increase. This project will replace and upgrade interior and exterior lighting with new energy-efficient light-emitting diode (LED) fixtures controlled by a new lighting control system, which allows for programmable on/off, dimming, daylight harvesting, and occupancy sensing. This project will bring the building lighting system up to the current California Title 24 building standards and may qualify for the Los Angeles Department of Water and Power's Commercial Lighting Incentive Program.

Headquarters Building Landscape Improvements

The exterior landscaping irrigation system at Metropolitan's Headquarters Building is beyond its useful life and increasingly requires component repairs and replacement. The system is less efficient compared to drip irrigation systems. The irrigation nozzles and underground lines are outdated and not correctly oriented to maximize plant growth and minimize water waste. In addition, the flora surrounding the headquarters is not native to California and thus is not optimal for California's climate conditions. The outdated irrigation system, combined with the non-optimal plant life and sprinkler type/orientation, needs immediate replacement. This project will include the installation of a bioswale infiltration area, installation of a high-efficiency drip line irrigation system, landscape grading, and planting with California native drought-tolerant plants, with guidance from Metropolitan's Water Resource Management and in alignment with the Model Water Efficient Landscape Ordinance (MWELO) established by the Green Building Code.

Headquarters Building Modular Furniture Replacement

The service life of office modular furniture is about 20 years, and the existing furniture in the Metropolitan Headquarters Building predates the building since it was originally purchased and used when Metropolitan worked out of Cal Plaza. Additionally, the furniture supplier has discontinued this line of products. This project includes space planning, which will develop new furniture standards and guidelines that address changing organizational needs; replacement of obsolete modular furniture; installation of new common use space/privacy rooms/meeting rooms/storage; additional enclosed offices; associated power, communication and network installations in walls, ceilings, and floors; and other work to comply with safety codes.

Headquarters Elevator Modernization

The 13 vertical lift elevators at the Metropolitan's Headquarters Building are 27 years old, and the elevator control systems have reached the end of their service life. The existing elevator components are obsolete and no longer manufactured. Equipment failure may render the elevator out of service indefinitely. This project will modernize the aged and obsolescent operating equipment and elevator door closures on all elevators, replace the HVAC heat pump that services the 6-bay elevator machine room, and other appurtenances to reliably operate the elevators.

Headquarters HVAC System Rehabilitation

The heating, ventilating, and air conditioning (HVAC) system at Metropolitan Headquarters Building includes a centralized cooling system which provides cool air through a system that includes chillers, air-handling units, cooling towers, air disinfection system, and associated mechanical, electrical, and control systems. After 27 years of continuous operation, the three existing chillers and other HVAC system components throughout the building have reached the end of their useful life and require replacement. This project will provide upgrades to the HVAC system including replacement of three chillers and total refurbishment of the air-handling units, fluid coolers, and associated mechanical, electrical, and control systems.

La Verne Conveyance and Distribution Region Service Center Building

Metropolitan's distribution system consists of over 830 miles of pipelines and 5,400 individual structures that require regular maintenance and monitoring. This system encompasses a broad service area of 5,200 square miles. To efficiently perform needed O&M work across this system, Metropolitan has established permanent service centers at several locations to provide a safe shop environment and store equipment and supplies to support local maintenance activities. The La Verne Conveyance and Distribution (C&D) Team currently works out of multiple shared spaces at the La Verne facility, which are inadequate. This project will construct a new service center facility for the La Verne C&D Team. The new facilities will include a central meeting area, computer room, offices, kitchen, restrooms, and shop area. The industrial shop area will accommodate welding, machining, and a general work area. The general work area will allow for storage and performing rebuilding of valves. The shop area will have the appropriate industrial ventilation for the intended work activities. The facility will include an incident command post.

La Verne Field Engineering Building Replacement

The Field Engineering Building, located at Metropolitan's La Verne Facility, was designed and built over 50 years ago in accordance with building codes current at that time. This project will construct a new Field Engineering Building to replace the existing facility, which does not meet Metropolitan's current seismic building standards and is limited in function due to HVAC deficiencies and workspace constraints. This project will enhance staff safety and improve the functionality of laboratory and office spaces.

La Verne Shops Upgrade - Stage 6

The La Verne Shops are located on the grounds of the Weymouth plant and have been in service since 1941. The shops were expanded in the 1960s and were expanded again in the 1980s to support a major rehabilitation of the pumps along the CRA. A shop modernization program was started in 2002, and included building expansions and upgrades, and shop equipment replacement or refurbishment. The sixth and final stage of the program will focus on the procurement and installation of new machine shop equipment, including two new horizontal lathes, a vertical lathe, a medium-sized floor mill, and additional equipment to be determined within the space occupied by the old plasma cutter. This new equipment will replace existing equipment that is over 50 years old and is not viable to refurbish. This final stage will also include refurbishment of an existing vertical lathe and an overall condition assessment of all existing machine shop equipment to determine any necessary rehabilitation of any existing machine to ensure reliability and proper performance. Other appurtenant work may be necessary to the building utilities and foundation to facilitate installation of the new equipment, and re-pave the area around the building to match the recent re-paving of the Weymouth plant.

La Verne Support Building No. 4 Seismic Improvements

La Verne Support Building No. 4, formerly known as Softener Building No. 3, houses both engineering services and plant support staff. The building is a one-story reinforced concrete structure that formerly contained below-grade concrete chambers with water tanks, conduits, and pipe galleries. As the building was renovated and converted into office spaces in late 2003, the chambers were abandoned and are no longer in use. The approximately 28,100-square-foot structure now houses offices, support spaces, restrooms, and conference areas. Planned improvements for Building No. 4 include structural strengthening to enhance seismic performance and resiliency, as well as an expanded footprint to improve functional performance. An evaluation of the building improvement and expansion will include options to add districtwide control center capabilities.

La Verne Support Building Seismic Improvements

As part of Metropolitan's seismic upgrade program, a rapid evaluation identified potential seismic deficiencies in La Verne Support Building No. 2 (formerly known as Softener Building No. 1) and La Verne Support Building No. 3 (formerly known as Softener Building No. 2). The project's scope of work includes conducting a detailed evaluation to verify initial findings, strengthening the structures to address seismic deficiencies, and improving non-structural components to enhance functionality.

Lake Mathews Aboveground Storage Tank Replacement

The Lake Mathews existing aboveground diesel storage tank does not conform to current regulations and needs to be removed from service. In its present condition, the tank cannot be operated in a safe manner. The Lake Mathews Spill Prevention Countermeasure and Control Plan cannot be certified if the aboveground diesel storage tank remains in service. This project will replace the existing 10,000-gallon aboveground storage tank (AST) with its associated containment dike, venting, fill system, level monitoring, fuel dispensing system, catwalk, and continuous release detection system with a new 6,000-gallon AST system, and design and construct a roof over the storage tank containment and unloading area. This project will also install an eyewash station.

Lake Mathews Domestic Water System Rehabilitation

Various shops and office facilities are located at the Lake Mathews facility. Presently, the site has a total of 98 reporting personnel drawn from the Construction Services Unit (CSU), Conveyance and Distribution (C&D), Eastern Regional Unit (ERU), Eastern Fleet Team, Safety, Regulatory, and Training Section (SRT), Security Management, and Contracting Services. The majority of the structures at the facility originally served as construction offices, warehouses, and various workshops during the 1960s reservoir expansion. As the facility was expanded over the years, utilities were added as a result; however, these utilities were not designed or upgraded to support ongoing or future expansion. The domestic water system lacks isolation valves and redundancy and does not comply with current water quality standards. It also lacks appropriate backflow prevention measures. Additionally, the fire suppression system for the latest building at Lake Mathews—the PCCP valve storage facility—is reliant on the domestic water system. In 2025, the facility's domestic water system experienced at least 6 leaks attributable to the system's inadequate capacity and it being beyond its end-of-life operational lifespan. This project will rehabilitate the domestic water line system throughout the Lake Mathews facility.

Lake Mathews Equipment Storage Building

The Lake Mathews facility houses Metropolitan's Construction Services Unit (CSU). This unit is essential to Metropolitan's ability to respond to emergency situations and make needed repairs. In addition to the highly trained workers, the unit also has large, specialized heavy construction equipment. This expensive equipment is currently housed outdoors and subjected to the elements. This project will provide a storage building to secure all CSU equipment stored at Lake Mathews from theft and prevent environmental deterioration.

Lake Mathews Vehicle Maintenance Center Modernization

This project aims to upgrade and centralize fleet maintenance operations by replicating the existing Jensen fleet shop while significantly enhancing its capabilities. This initiative will merge both automotive (light- and medium-duty) and heavy equipment maintenance operations under one roof, fostering a more integrated, efficient, and scalable maintenance environment. The new facility will be designed to accommodate evolving operational demands, including the growing presence of zero-emission vehicles (ZEVs), advanced diagnostic technologies, and support for emergency response readiness.

Lake Skinner Boat Dock Installation

Metropolitan staff perform reservoir management duties at Lake Skinner. Currently, there is no dock or ramp infrastructure to launch or secure a boat on the lake near the Skinner plant. Staff currently travel from the plant to the public marina on the opposite end of the lake on a hilly road with cars traveling at high speeds. When performing work on consecutive days, boats are currently moored at makeshift facilities near the plant. A wooden dock was installed approximately 20-30 years ago; however, this dock fell into disrepair and was removed approximately ten years ago. This project will design and construct a new dock and ramp to reduce travel time for staff and provide storage for district boats.

Metropolitan Water District Headquarters Museum

The Metropolitan Water District of Southern California was formed in 1928 to provide a reliable and sustainable water source to the rapidly growing population of Southern California. In 2028, Metropolitan will celebrate its 100th Anniversary, and this project will construct a gallery in the headquarters building to illustrate Metropolitan's history with exhibits and commemorate this important milestone.

Michael J. McGuire Water Quality Laboratory Upgrades

Metropolitan's Michael J. McGuire Water Quality Laboratory at the La Verne site conducts over 300,000 water quality analyses yearly to comply with treated water standards, support emerging contaminants studies, assess future treatment technologies, and optimize treatment and distribution system processes. Upgrades to the building are needed to increase its seismic resiliency and to efficiently address new and evolving water quality issues and regulations by enhancing the reliability of Metropolitan's sample processing and water quality research functions. This project will provide seismic upgrades, a building expansion, functional layout improvements, such as laboratory and office space reconfiguration, lab equipment replacements, accessibility improvements, HVAC and roof replacements, and other related building improvements necessary, including technology components to renovate and upgrade the building to support Metropolitan to meet current and future water quality regulations.

New La Verne Warehouse

The Central Stores Warehouse at La Verne is Metropolitan's main warehouse for storing materials, supplies, and equipment used by field personnel to support Metropolitan's operations. It is comprised of four main buildings (Buildings 30, 31, 32A, and 33). Seismic evaluations have determined that the buildings may be damaged from a maximum credible earthquake, and retrofitting the four buildings is not a cost-effective option. In addition, the buildings lack the storage space necessary to house Metropolitan's materials, supplies, and equipment, and are not suitable to safely store adequate supplies of medical-grade supplies and essential commodities for emergency preparedness, such as for pandemics. Furthermore, they lack the equipment to handle large assets like large-diameter specialty valves. This project will construct a new warehouse with approximately 55,000 square feet of indoor floor space and approximately 30,000 square feet of outdoor storage yard covered under canopies for Central Stores and Investment Recovery Teams. This project will also demolish Buildings 30 and 31 and replace or restore and seismically retrofit Buildings 32A and 33 to meet the current building code. The new warehouse and retrofitted buildings will support Metropolitan's ongoing operations and maintenance, capital construction efforts, and emergency preparedness.

Orange County Region Service Center Storage Yard

The Orange County Service Center, built in 2021, features an uncovered storage area for equipment on the southern side of the yard. Equipment such as valves, pumps, hoses, and other operating equipment for current and future projects is stored in direct contact with the elements. Rain events and heatwaves increase the deterioration of equipment, resulting in increased efforts by staff to maintain it. Storing the equipment within a shaded environment will extend longevity and reduce maintenance efforts. The current storage area was designed and constructed with a layer of crushed aggregate base (CAB), making it difficult to use in its current configuration. This project will replace CAB with concrete and establish a covered storage area to protect the equipment stored outside, provide additional indoor storage space, and result in a more organized and improved working environment for staff and equipment.

South Bay Conveyance and Distribution Region Service Center Building

The current Los Angeles Conveyance and Distribution Team will be split into two. The new South Bay Conveyance and Distribution Team will repurpose existing buildings located at Palos Verdes Reservoir for use as shop facilities in the near term. These facilities include a retrofitted residential house and a few small, scattered shop buildings. This project will construct a new service center facility to meet the team's long-term needs. The facility will include a central meeting area, computer room, offices, kitchen, restrooms, and shop areas. Shops will include welding, machining, coating, valve rehabilitation, storage, fleet, and fuel facilities.

SWP Invasive Mussel Mitigation and Control

Since the discovery of quagga mussels in the lower Colorado River in 2007, Metropolitan has implemented ongoing surveillance and control measures within the Colorado River Aqueduct to mitigate potential impacts on its infrastructure. The detection of adult quagga mussels along the State Water Project (SWP) Pyramid Lake in 2016 and Castaic Lake in 2021 prompted the implementation of the ongoing extensive monitoring of adult mussels and veligers (mussel larvae) along the west and east branches of the SWP. In October 2024, golden mussels were discovered in the Port of Stockton and O'Neill Forebay at San Luis Reservoir and quickly spread throughout the Delta and the SWP. The discovery of both quagga and golden mussels in the SWP prompted the need for a program to immediately address control of invasive mussels and a long-term strategy to protect Metropolitan's critical infrastructure exposed to SWP supplies. This project will evaluate and implement the most effective strategies tailored to specific systems and locations to minimize the spread of quagga and golden mussels, and reduce their impact on Metropolitan's infrastructure, raw water deliveries, and maintenance-related dewatering.

System Improvements for Wildfire Protection

Metropolitan's facilities and operations are potentially at risk from wildfires. There are many areas near Metropolitan facilities with hilly and heavily vegetated terrain, surrounding residences with narrow streets, or remote areas where response time is critical. The ability to fight fires in these areas with helicopters and having an accessible reliable water supply to reload the helicopters increases the fire department's ability to successfully suppress fires and protect Metropolitan's facilities. This project will evaluate potential locations where Metropolitan may benefit from additional aerial fire suppression support facilities. The project includes design, procurement, and construction of a limited number of aerial fire suppression support facilities to protect Metropolitan Facilities from fires.

Wildfire Smoke Control at Eagle Rock Operations Control Center, Weymouth, Mills, and Skinner Water Treatment Plants

This project will improve air quality in the control rooms of Eagle Rock Operations Control Center, Mills, Skinner, and Weymouth plants, ensuring these facilities can be reliably operated during periods of poor outdoor air quality, such as wildfires. This project will install a dedicated high-efficiency HVAC system for control rooms and provide other appurtenances to ensure the safety of staff during wildfire events.

Drought Mitigation – SWP Dependent Areas Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$264.5 million

Program Information: *The Drought Mitigation – SWP Dependent Areas Program is comprised of projects to replace, refurbish, upgrade, or construct new facilities, which are identified to mitigate the vulnerability experienced by member agencies that are impacted during shortages of State Water Project supplies.*

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - Inland Feeder Supply Reliability Pipeline Improvements
- Major milestones achieved or estimated to be achieved:
 - Construction:
 - Badlands Tunnel Surge Protection Facility – completed
 - Wadsworth Pumping Plant Bypass Pipeline – to be completed
 - Progressive design-build (PDB) services agreement authorized:
 - Sepulveda Feeder Pump Stations
 - Procurement of long-lead equipment
 - Stage 1, Phase 2A – started construction of Venice Pump Station
 - Stage 1, Phase 2B – PDB services agreement for Sepulveda Canyon Pump Station to be authorized

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Inland Feeder – Rialto Pipeline Intertie	\$ 22,100,000	2026	Complete construction
Inland Feeder/SBVMWD Foothill Pump Station Upgrade	\$ 32,000,000	2028	Start construction
Sepulveda Feeder Pump Stations - Stage 1	\$ 255,600,000	2030	Continue construction

Drought Mitigation – SWP Dependent Areas - All

Antelope Valley East Kern High Desert Water Bank to SWP West Branch Aqueduct Conveyance System

This project will provide the necessary infrastructure to convey Metropolitan's stored State Water Project (SWP) water supplies from the Antelope Valley East Kern (AVEK) High Desert Water Bank, which is approximately five miles from the State Water Project West Branch Aqueduct. This project will provide direct relief to the westside SWP-dependent area agencies during droughts.

Burbank Pump Station for Delivery to Service Connection B-5A

This project will construct a new pump station at the Burbank Valley Blending Facility to provide Metropolitan with operational flexibility of shifting delivery points during droughts to conserve State Water Project water supplies.

Colorado River Water for Replenishment at USG-3

This project will modify facilities near Service Connection USG-3 with pumping equipment and conveyance piping to allow for the delivery of Colorado River Aqueduct water from the Weymouth plant for replenishment to offset State Water Project water supplies during severe droughts.

Inland Feeder/SBVMWD Foothill Pump Station Intertie - Stage 1

This project will design and construct an intertie between the San Bernardino Valley Municipal Water District's (SBVMWD) Foothill Pump Station and Metropolitan's Inland Feeder, enabling the delivery of Diamond Valley Lake (DVL) water to the Rialto Pipeline service area. It is one of the four projects to improve the area's supply reliability during droughts.

Inland Feeder/SBVMWD Foothill Pump Station Upgrade

This project will design and construct an additional pump and related equipment to add 13 cfs pumping capacity to the SBVMWD Foothill Pump Station, bringing the total pumping capacity to 120 cfs.

Inland Feeder Supply Reliability Pipeline Improvements

This project will strengthen fittings and pipeline components along the Inland Feeder to protect the feeder against pumping pressures during future drought operations of the DVL to Rialto delivery system and improve the supply reliability of the Rialto Pipeline service area.

Inland Feeder-Rialto Pipeline Intertie Facility Permanent Power Upgrade

The intertie between the Inland Feeder and Rialto Pipeline at DWR's Devil Canyon Facility is one of the four projects that enable the delivery of DVL storage to the Rialto Pipeline service area. To expedite the project delivery and prepare for the next potential drought, the valve operation relies on the existing DWR power source. This project will construct a duct bank to an SCE power pole and install a transformer to provide permanent power, controlled by Metropolitan, to facilitate long-term operation.

PC-1 Pump Station

This project, which will construct a new pump station adjacent to PC-1 pressure control structure, will improve the supply reliability of the eastern State Water Project dependent area by enabling the delivery of stored water from Diamond Valley Lake (DVL) and Colorado River water to the area via DVL to Rialto operation. This project is a long-term alternative to replace the functions of the existing Foothill Pump Station, which is owned and operated by the San Bernardino Valley Municipal Water District.

Sepulveda Feeder Pump Stations – Stage 1

This project will enable Metropolitan to convey treated CRA and DVL water from its Central Pool northward along the Sepulveda Feeder to the west service area, supplementing deliveries from the Greg Avenue Pump Station. This operation requires two new pump stations along the Sepulveda Feeder: one at the existing Venice PCS site and one at the Sepulveda Canyon Control Facility site. The project will be implemented in multiple stages. The initial stage includes the construction of two pump stations capable of delivering up to 30 cfs northward from the Central Pool to the west service area. The capacity of the initial stage of the project is limited by the current allowable pressure of the Sepulveda Feeder, which is primarily comprised of prestressed concrete cylinder pipe (PCCP). The pump station sites will be planned so that additional pumping capacity, up to a potential maximum capacity of approximately 160 cfs, could be added in future stages. The future expansion could take place after the PCCP portions of the Sepulveda Feeder are relined with welded steel pipe, and its scope is covered under a separate project.

Sepulveda Feeder Pump Station - Stage 2

This project will expand the pumping capacity of the Sepulveda Feeder Pump Stations (at Sepulveda Canyon Facility and Venice PCS) from 30cfs in Stage 1 to up to 160cfs. The project will further enhance the supply reliability of the Westside State Water Project dependent area agencies against extreme droughts and potential earthquakes affecting SWP supplies by enabling the delivery of treated Colorado River water or Diamond Valley Lake storage to the area.

Sepulveda Feeder West Area Water Supply Reliability Pipeline Improvements

This project includes additional PCCP pipe work at the North Reach of Sepulveda Feeder, such as selected pipeline strengthening and stronger appurtenant equipment and fittings, to resist the higher pressure due to the planned expansion of the Sepulveda Feeder pumping operation up to 160 cfs. A separate CIP project that covers the primary PCCP relining work of the reach is expected to be completed before the expansion.

Three Valley MWD Miramar Pumping Plant Upgrade

This project will expand the capacity of the existing Three Valley Municipal Water District's (TVMWD) pumpback operation to pump up to 30 cfs of water from the Weymouth Plant to TVMWD's Miramar Treatment Plant to offset SWP demand during droughts. This project will include mechanical, structural, electrical, and instrumentation work to support the expansion of the pumping capacity and provide adequate surge protection.

Information Technology and Control Systems Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$49.5 million

Program Information: *The Information Technology and Control Systems Program is comprised of projects to replace, upgrade, or provide new facilities, software applications, or technology that will enhance cyber security, reliability, flexibility, and capability of information, communication, and control systems.*

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - Cyber and IT Governance Risk and Compliance Implementation
 - Data Storage Infrastructure Refresh
 - Enterprise Software Management
 - Jensen METCON
 - Maximo Application Suite Upgrade
 - MyWarehouse Shopping Cart Replacement
 - Network Visibility and Situational Awareness Upgrades
 - Pasadena Microwave Tower Improvements - Phase II
 - Weymouth METCON
- Major milestones achieved or forecasted to be achieved:
 - Desert Microwave Tower Site Upgrades – construction to be completed
 - Enterprise Content Management – Phase I – deployment completed
 - Enterprise Data Analytics – continuation of use cases development
 - Fuel Management System Upgrade – deployment completed
 - Gene Communication System Upgrade – construction completed
 - Mills METCON - fiber conduit installation construction contract awarded
 - WiFi Upgrade
 - Headquarter Sites – construction completed
 - Riverside Sites – construction contract awarded

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Applications-Servers Upgrade from Unsupported OS	\$ 2,200,000	2026	Complete deployment
Emergency Radio Communications System Upgrade	\$ 10,100,000	2027	Complete deployment
Enterprise Content Management Phase II	\$ 7,100,000	2028	Complete deployment
Enterprise Data Analytics	\$ 2,600,000	2028	Complete deployment
WiFi Upgrade	\$ 2,900,000	2027	Complete deployment

IT Applications Project Group

Applications-Servers Upgrade from Unsupported OS

The goal of this project is to remove unsupported systems from Metropolitan infrastructure. The scope's primary goal is to upgrade operating systems to supported versions. Where applicable, the project will also update applications to facilitate the operating system upgrades. This is critical, as the continued operation of such systems introduces a significant risk to the overall integrity and security of Metropolitan data.

Arc Flash Assessment and Mitigation

Metropolitan utilizes an extensive electrical power distribution system to direct and deliver electrical power to operate its facilities. Safe operation of these facilities is essential to protect staff from a sudden, unanticipated release of electric energy, commonly known as arc flash hazards. This project will develop models for Metropolitan facilities that are susceptible to arc flash hazards, including all water treatment plants, CRA pumping plants, hydroelectric power plants, dams, reservoirs, lakes, and pressure control structures. The models will provide complete and consistent information that will identify equipment improvements to enhance safety, meet current regulatory compliance, and deliver arc flash labels for all equipment required to be labeled per National Fire Protection Association (NFPA) 70E requirements.

Asset Monitoring System Stage 1 - Conveyance and Distribution

Currently, asset condition and performance data are maintained in multiple data systems. At times, data is redundant, not consistent, or missing resulting in delays in decision-making and increased uncertainty. This project will create an integrated dashboard interface inter-connected with existing disparate data systems and utilize geographic information system (GIS) functionality to visualize key information related to asset health, condition, performance, location, and other key data for critical Metropolitan facilities. This effort will be addressed in phases: conveyance and distribution system, treatment plants, reservoirs, power transmission lines, support facilities, communication sites, fleet, real property, and advanced water purification.

BDMS Rewrite

This project will upgrade the Board Document Management System (BDMS) from SharePoint 2013 on-premise solution to a Microsoft 365 cloud environment solution. This upgrade will provide additional functionality such as a mobile and tablet friendly user interface, improved process automation, and possible integration with the board agenda system.

CIP Budget System Enhancements

The CIP Budget System is a web-based system for submitting CIP project proposals with a resource-loaded schedule, managing project data, and analyzing and preparing the CIP budget. This project will further enhance the system using best practices and lessons learned during the FY 2026-28 budget preparation cycle. The scope also includes upgrading or customizing software tools to add a CIP expenditures forecasting capability and provide integration with current and new technologies including but not limited to Power Apps, Power Automate, Primavera, InVizion, Power BI, and artificial intelligence (AI) to support or enhance current or future business processes related to CIP project proposal submittals, risk assessments, workflows, tracking, authorizations, funding, forecasting, reporting, and other work-related CIP business or process.

Clear Orbit Bar Coding System Replacement

This project will replace the end-of-life Clear Orbit barcoding system across Metropolitan's eight inventory warehouse locations. As part of the new system, a modern mobile handheld barcoding solution will be deployed, including all necessary ancillary hardware and equipment such as charging stations and barcode printers. The new system will be fully integrated with Oracle Cloud Infrastructure (OCI) and supported by enhancements to the IT infrastructure to ensure robust and reliable wireless connectivity throughout all warehouse facilities.

Enterprise Asset Planning System

Currently, short-term asset renewals are addressed by staff submitting Capital Investment Plan (CIP) proposals that identify upcoming needs to maintain a reliable system. This project will acquire a software application and implement a comprehensive solution to forecast long-term asset lifecycle costs. The resulting decision support tool will facilitate strategic planning for renewal of Metropolitan assets based on condition, performance, outage constraints, staff resource limitations, planned budget, shutdown schedules, relative value, and risk.

Enterprise Content Management Phase II

Phase II of the enterprise content management (ECM) effort will complete the design and deliver the initial deployment of the ECM software into the Metropolitan environment. The system will enable the organization, collaborations, and automated enforcement of records retention policies to non-structured electronic media. The following work will be performed: Migrate the file share data to M365 on the SharePoint platform. Implement federated search capabilities into other Metropolitan repositories (i.e., ProjectWise, Peoplesoft, Maximo, etc.), as well as, to the new document repository for the migrated files. Replace the current non-vendor-supported Electronic Data Management System (EDMS), FileNet V5.5, and migrate current content to M365. Replace the current Cumulus system with a better solution for Digital Asset Management (D.A.M.), and migrate current content to an Enterprise Content Management (ECM) solution. Implement and automate the enforcement of records management policies on the M365 platform, to achieve compliance with internal and external Records Management policies and laws. Develop a user interface to automate metadata collection, document classification, and manage the overall lifecycle of all content and related processes. Enhance current information management capabilities and establish a baseline for Information Governance policies and procedures.

Enterprise Content Management Phase III

Phase III of the enterprise content management (ECM) effort will deliver the balance of Metropolitan ECM implementation. The following work will be performed: Enhance core ECM implementation (System of engagement and system of record); document classification refinement and enforcement; implement additional federated search capabilities; record retention policy refinement; templates to automate data classification; eDiscovery; security (as required); business process management - workflow automation; and implement additional features of O365.

Enterprise Data Analytics

The purpose of this project is to build an Enterprise Data Warehouse & Analytics to answer both operational and strategic questions faced by Metropolitan teams. The Data Warehouse will be built of individual data marts modeling a specific business area, providing integrated reporting through Extract/Transform/Load (ETL) procedures and common dimensions. This Enterprise Data warehouse will contain both business and operational data. It will be designed to combine these two data types to provide a financial dimension to operational data. By linking data like EBS (financial), SCADA, GIS, and Water Supply/Demand, staff can model different scenarios to answer questions and to discover trends and anomalies previously not visible due to isolated reporting.

Enterprise Software Management

This project will implement an enterprise software management tool to record and track software licenses to facilitate licensing compliance, software updates, and regular review of licensing information. The enterprise software management tool will include various categories, including physical, software, hardware, mobile, and the cloud (SaaS, IaaS, PaaS).

HR Information System Improvements

This project aims to automate operational functions of the HR information system and provide employees and managers with the tools and technology to improve business operations, promote collaboration, and enhance workforce productivity by simplifying access to HR information, supporting customers in making business decisions, so the organization can build a high-performance culture that's meaningful to staff and valuable to the business. The following work will be performed: Enhance the current Fluid interface with Modern Mobile interface capabilities; enhance the Manager Self-Service Module; and implement a new Performance Management Module.

Hydraulic Model Enhancement

This project will enhance Metropolitan staff's capabilities to perform hydraulic and water quality modeling by incorporating additional features into the existing conveyance and distribution system model. The proposed add-on modules would enable simulation of hydrogeneration, real-time operational dynamics, hydraulic transients, integrated 2D/1D flow analysis, and advanced water quality assessments, including modeling of multi-order chlorine decay, bio-film formation, and sedimentation analysis.

Hydraulic Modeling Analysis Toolkit and Water Quality Calibration

Metropolitan's Engineering Services Group completed development of a system-wide hydraulic model in January 2017 after a multi-year development effort. Even while model development was still underway, many uses for the hydraulic model were identified. This project will develop tools to support hydraulic model analysis, aiming to increase efficiency and enhance productivity when utilizing the hydraulic model for analysis. The project also includes the development and calibration of water quality modeling capabilities.

Maximo Application Suite Upgrade

This project will upgrade Metropolitan's Computerized Maintenance Management System. Metropolitan's current version of IBM Maximo is reaching end of support. IBM Maximo is an enterprise asset management solution that lets Metropolitan manage, maintain, and optimize their physical assets throughout their entire lifecycle. It provides a unified platform that integrates capabilities such as work order management, inventory control, and preventive maintenance to reduce downtime and improve operational efficiency.

MWD Intranet Upgrade

The Intranet is a restricted and internal network that enables Metropolitan employees to store, share, and organize information. Initially developed in 1997, the Intranet is built on technologies that have become obsolete. This project will redesign Metropolitan's Intranet to enhance employee communication, engagement, and usability with a modern, consistent design that empowers departments to easily manage and update content.

MWDH2o.com Redesign Phase II

Phase II of this initiative will involve the redesign of Metropolitan's bewaterwise.com website that will mirror similar functionality as our primary MWDH2o.com website. Part of this phase will also include enhancements to the MWDH2o.com site in order to improve its functionality and content viewer for our customers.

MyWarehouse Shopping Cart Replacement

Staff currently uses an outdated system for checking availability and acquisition of Metropolitan-owned inventory items that lacks an easy-to-use interface and integration with financial systems. This project will deliver a new cloud-based and mobile-supported e-commerce inventory ordering application. It will provide a simple interface allowing a user to login, search the active item master catalog, view item specifications and pictures, see on-hand quantities, add items to a shopping cart, and checkout with proper accounting charge codes.

Oracle EBusiness Suite Upgrade

The purpose of this project is to upgrade Metropolitan's Oracle e-Business Suite (EBS), which is a mission-critical integrated set of business applications for automating Metropolitan's financials, procurement, project management, and grants management activities. This suit was last upgraded in 2016. Since then, the technology has been superseded by newer hardware (x86), operating systems (Oracle Linux), and Oracle database versions, as well as newer EBS versions with enhanced functionality and capabilities. This project will upgrade the outdated EBS to the newer version with more functionality and capabilities.

Payroll and Time Keeping Systems Improvements

This project seeks to re-implement improved PeopleSoft payroll software and replace the current timekeeping software with a package that better integrates with payroll system and provides a friendly interface for customers. The current payroll and timekeeping applications both have deficiencies that have caused significant compensation issues for employees and have resulted in the need for excessive manual corrections by payroll staff. This project will enhance workforce productivity by simplifying access to business information and will maintain sound business practices and fiscal integrity.

Supplier Portal Implementation

This project will implement the Oracle iSupplier Portal to provide a tool and structure to effectively collaborate and communicate with Metropolitan's supplier community. Scope includes implementation services to interface with the Oracle EBS system. The implementation of the portal will reduce repetitive inquiries from vendors, saving staff time and reducing vendor frustration.

Water Planning Application

Water planning staff make decisions every day that affect storage, cost, and movement of water within our system. The current software tool used is inefficient and obsolete, which was initially launched more than 20 years ago and last partially updated in 2008. This project will replace the existing water planning application with a new cloud-based application that meets the latest cybersecurity standards, which will automate the process of gathering, categorizing, cleaning, validating, and reporting of critical data used by planners. It will also make it ease to maintain data for IT and planning staff.

WINS Billing System Upgrade

The Water Information System (WINS) bills Metropolitan's member agencies on a monthly basis. It processes, stores, and reports water transactions, customer (member agencies, sub-agencies, and contract agencies), usage, and revenue data. The custom application, which is over 10 years old, needs to be updated. This project will replace Metropolitan's existing WINS software, which will provide a secure, scalable, rule-driven, and web-based water invoicing solution software application that allows Metropolitan to implement the Board of Directors' approved water service policies.

WINS Billing System v2.1

The project is a replacement of Metropolitan's existing WINS software, which processes, stores, and reports water transactions, customer (member agencies, sub-agencies, and contract agencies), usage, and revenue data. In support of Metropolitan's Water Billing System, conduct Design, Develop, and Deploy to add new functionalities and enhancements outside of WINS 2.0 based on new business user requirements.

WINS Billing System v2.2

The project is a replacement of Metropolitan's existing WINS software, which processes, stores, and reports water transactions, customer (member agencies, sub-agencies, and contract agencies), usage, and revenue data. In support of Metropolitan's Water Billing System, conduct Design, Develop, and Deploy to add new functionalities and enhancements outside of WINS 2.0/2.1 based upon additional business user requirements.

IT Infrastructure Project Group**Bi-Directional Amplifier System for Pumping Plant and Water Treatment Plant Tunnels**

Field staff use handheld portable radios as their primary means of communication between each other while working at locations outside of their office. While there are 2-way radio signals readily available in the surroundings of all the water treatment plants and pumping plants, there are no signals available within the treatment plants' tunnels and pumping plant basements. The radio frequencies at these locations are unable to penetrate throughout the structures of the building or underground, thus creating areas without communication capabilities. This project will design and implement a bi-directional amplifier (BDA) system that will integrate existing radio frequencies to carry the signals throughout the tunnels of the treatment plants and the basement of the pumping plants. This system will provide adequate communication between staff working in the basement and the tunnels.

Campus Fiber - CRA Pumping Plants

The goal of this project is to design and implement a robust, scalable, and future-proof fiber optic infrastructure across Metropolitan's CRA pumping plants to meet growing data, security, operational, and connectivity demands. This project will design and construct fiber optic infrastructure to support the goal.

Campus Fiber - Water Treatment Plants

The goal of this project is to design and implement a robust, scalable, and future-proof fiber optic infrastructure across Metropolitan's water treatment plants to meet growing data, security, operational, and connectivity demands. This project will design and construct fiber optic infrastructure to support the goal.

Data Storage Infrastructure Refresh

A portion of the digital storage system used by business and operational applications must be replaced with new storage to mitigate the risk presented by out-of-support storage and provide the necessary storage for future data growth. This project will procure and install new data storage equipment to replace older equipment that will soon reach end-of-support-life by the manufacturer

Data Storage Platform Modernization

The existing IT data storage relies on a design and platform that will not support the projected growth of Metropolitan's data and disaster recovery needs. Additionally, the current system will reach end-of-life support by the manufacturer in 2027. This project will design, procure, and implement an updated and modernized data storage platform for Metropolitan, providing a more efficient data storage platform and support of data recovery in the event of a disaster.

Desert Microwave Tower Site Upgrades (Phase 1 of 2)

The Desert region microwave network consists of 24 sites with microwave radios (and 12 additional paths not in the desert), with at least one new path planned into the Las Vegas region to provide reliability with new redundant paths connecting to the Desert region. Consequently, an assessment and design plan is needed for their replacement. This project considers the existing communications traffic, as well as anticipated growth or changes in the data and voice traffic, and establishes current and future interface requirements to other Metropolitan subsystems. The project scope covers the procurement of microwave radio equipment and associated antennas with waveguides, design of microwave network and system infrastructure, and installation of equipment on towers and inside buildings. In addition, procurement of new batteries and design of the battery backup system to ensure reliability through remote monitoring.

Desert Pumping Plants Cellular Extension LTE/4G/5G/Signal

This project will install critical infrastructure that will boost the cellular service within the CRA pumping plants to ensure staff are able to communicate properly utilizing their own cell phone.

Desert Pumping Plants IT Communications Room Expansion & Rehabilitation

This project will rehabilitate and expand the main communications rooms at Hinds, Iron Mountain, Eagle Mountain, and Gene pumping plants. These critical facilities have outgrown their capacity and lack essential safety systems.

Detention Peak, Cactus City, and Copper Basin Microwave Tower Additions

Metropolitan uses SCE microwave hardware to link data between Detention Peak to Cactus City and then Chuckwall. The existing towers at Detention Peak and Cactus City have reached their structural capacities. This project will design, procure, perform associated civil work to develop sites, construct microwave towers, install and commission microwave equipment at Cactus City, Detention Peak, and Copper Basin.

Emergency Generators for Mountaintop Communication Sites

This project will provide dependable power sources for Metropolitan's telecommunications sites when primary power (via grid, solar, and/or battery) becomes unavailable. Additionally, these new low-emission generators may eliminate the need to permit the engine with the applicable regulatory jurisdiction, which will shorten the project's schedule and reduce Metropolitan's regulatory and carbon footprint. This project also includes procurement & installation of 1,000-gallon propane tanks since the current tanks' capacities and corroded conditions limit the ability to provide fuel for prolonged outages. Finally, the project will also upgrade HVAC equipment at each site to maintain optimal operating temperatures to prolong the service life of the communications equipment.

Emergency Radio Communications System Upgrade

This project will migrate and upgrade Metropolitan's existing emergency radio communications system from Motorola trunked radios MOTOTRBO Connect Plus system to upgraded Motorola MOTOTRBO Capacity Max system, for which active support is available beyond 2021. The upgrade will consist of: installing two sets of redundant servers, upgrading switches and routers at 31 existing repeater stations, replacing older subscriber radios, upgrading software on remaining existing subscriber radios to support future Capacity Max implementation, and all associated licenses, testing, installation, and cutover. In addition, to enhance reception, bi-directional amplifiers with distributed antenna systems will be designed, procured, and installed at: the five CRA pumping plants, Wadsworth Pumping Plant, and Diamond Valley Lake. Two additional repeater locations will be procured, licensed, designed, and installed at Eagle Rock Control Center and Sepulveda Canyon Control facility locations. This project will also undertake the replacement of batteries that are approaching the end of life at 31 sites.

Gene Communication System Upgrade

Metropolitan's microwave radio wide-area network (WAN) transmits telephone, voice, data, and video communication between all Metropolitan facilities, utilizing point-to-point microwave transmission. While microwave transmission is highly effective, it is limited to line-of-sight propagation; thus, it cannot pass through mountains or other similar obstacles. Gene Pumping Plant relies on a microwave tower at Black Metal Mountain and does not have a redundant site to support the plant if the system at Black Metal Mountain were to fail. Furthermore, the desert region now requires high-capacity carrier-grade communication links to provide reliable data, voice, and video transmission to support the needs of new IT and supervisory control and data acquisition system (SCADA) infrastructures. The types of information that rely on this network are real-time data from the supervisory control and data acquisition system, security cameras, teleprotection, and system alarms to Metropolitan's control facilities, and provides access at remote sites to the email, geographical information system, Oracle financials, timekeeping, and PeopleSoft applications. This project will install approximately 22 poles and two miles of fiber optic cable from Parker Dam to Gene Pumping Plant administration building to connect to high-quality, high-speed data system to improve a variety of technological challenges at the desert facilities.

HPUX Infrastructure Disposition

To ensure continued reliability and reduce the risk of service interruptions caused by aging hardware and unsupported software, it is essential to transition the applications currently hosted on the soon-to-be-out of support Hewlett Packard Unix (HP-UX) server environment to a modern, fully supported platform. This upgrade will help maintain system stability, improve performance, and safeguard operational continuity.

Microsoft Access Database and Application Rewrite

Microsoft Access is a database platform used for small departmental applications. These applications must be rewritten for security, scalability, and future maintainability since the Access database currently resides on network file shares, which are prone to file corruption and require frequent IT support. This project will upgrade Microsoft Access application/databases to more reliable, secure, maintainable or manageable and scalable databases.

Network Equipment Refresh Upgrade

This upgrade is required to replace the end-of-life network infrastructure across the entire Metropolitan enterprise. This infrastructure project impacts all communication at Metropolitan. This includes load-balancers, firewalls, and routers and switches.

Pasadena Microwave Tower Improvements

This project will replace the existing microwave tower and equipment to enhance and improve the reliability of network communication links to Eagle Rock Operations Command Center (OCC), Union Station headquarters building, and Garvey Reservoir.

Standby Generator Relocation at Six WAN Sites

Metropolitan's wide area network (WAN) provides a critical communication and data link between facilities across the distribution system. The Standby generators at six WAN sites must be relocated for consistency with the current fire codes and to enhance safety. These generators are needed to provide backup power in the event of loss of primary power. The planned improvements will reduce the risk of damage to communication equipment and the buildings in the event of a fuel leak. Improvements will address fire codes for the standby generators at Garvey Reservoir, Pleasant Peak, Detention Peak, Cactus City, and two sites near Iron Mountain Pumping Plant. In addition to relocating the generators, fuel lines, electrical conduits, and junction boxes will also be replaced at all six sites.

Telephone System Upgrade

This project will modernize and enhance Metropolitan's communication infrastructure by upgrading its existing voice communication system to a more efficient and scalable solution. This project will involve replacing outdated hardware and integrating new technologies to ensure continued operational support and to meet the needs of a mobile userbase. The project will include a thorough assessment of current systems, the installation of updated hardware and software, and system testing to ensure a smooth transition and ongoing performance.

Western Region Microwave Tower Sites Upgrade

The western region microwave network consists of 52 sites with microwave radios to provide reliability using existing paths connecting to the western region. Consequently, an assessment and design plan is needed for their replacement. This project considers the existing communications traffic, as well as supporting anticipated growth or changes in the data and voice traffic, and establishes current and future interface requirements to other Metropolitan subsystems. The project scope covers the procurement of microwave radio associated network equipment and associated antennas with waveguides, design of microwave network monitoring system, and system infrastructure, and installation of equipment on towers and inside buildings. In addition, procurement of new batteries and design of the battery back-up system to ensure reliability thorough remote monitoring.

Weymouth Communication Room Relocation

This project will relocate the existing communication room at the Weymouth plant administration building to an upgraded location where appropriate heating, ventilation, and air conditioning (HVAC), redundant power, and a fire suppression system is available to properly support Metropolitan's IT equipment at the Weymouth plant.

Wifi Upgrade

The current wireless network at Metropolitan is based on outdated technology and end-of-life hardware. This project will upgrade the WiFi network in terms of technology used and hardware. This upgrade will impact all Metropolitan's staffed facilities.

IT Security Project Group**Cyber and IT Governance Risk and Compliance Implementation**

This project will focus on establishing robust frameworks and processes to effectively manage cyber and IT risks. This project involves implementing a Governance Risk and Compliance (GRC) tool, developing comprehensive policies, procedures, and controls to enforce compliance with regulations and industry standards. The GRC tool will integrate with our existing applications like Microsoft Office 365 and allow for cybersecurity compliance processes by generating reports that will support digital audits: 1) top layer - compliance audits: laws, regulations, industry standards, internal policies, vendor management; 2) middle layer - IT audits: data security, network integrity, access controls; 3) bottom layer - operational audits: process documentation, workflow optimization.

Data Loss Prevention

This project will establish a robust Data Loss Prevention (DLP) program within Metropolitan. This project entails several critical components, including data classification, enforcement mechanisms, and ongoing support. Enforcement mechanisms such as access controls, encryption, and data monitoring prevent unauthorized access and data leakage. Implementing a comprehensive DLP solution will ultimately safeguard sensitive Metropolitan data and mitigate the risk of data loss.

Eastern Region Security Camera Replacement

The software used to monitor security systems throughout Metropolitan's facilities has reached end of life and is no longer supported. The replacement of cameras and related security systems is crucial at this time to increase operational flexibility, improve security, lower maintenance costs, and ensure regulatory compliance. Delays will result in: 1) undetected incidents such as vandalized, stolen, and damaged equipment, 2) an increase in the yearly maintenance cost, 3) possible penalties, and 4) potential non-compliance with future critical infrastructure security legislation. This project upgrades IT infrastructure, which will support the existing security camera replacement and the monitoring system upgrades within the Eastern Region.

Electronic Badge Access Control System Upgrade

Metropolitan uses electronic badges to control employee access to facilities and certain IT systems. The current outdated legacy electronic badge access reader system is knowingly susceptible to cyber hacking vulnerabilities and represents an unacceptable risk. This project will replace employee and contractor badges and all card readers throughout Metropolitan.

Network Access Control

This project will establish a comprehensive system to manage and control network access within Metropolitan. The Network Access Control (NAC) solutions will enforce authentication, authorization, and security policies for all devices seeking network connectivity to Metropolitan's network.

Network Visibility and Situational Awareness Upgrades

This project will implement Network Visibility and Situational Awareness Upgrades to enhance the organization's network monitoring capabilities through the implementation of advanced technologies, including Traffic Access Points (TAP), Extended Detection and Response (XDR), and Network Detection and Response (NDR). TAPs are deployed strategically within the network infrastructure to capture and analyze network traffic, providing comprehensive visibility into data flows and network behavior. XDR platforms are leveraged to collect and correlate data from multiple security tools, enabling holistic threat detection and response across various endpoints. NDR solutions use advanced analytics and machine learning algorithms to identify and mitigate network threats, including anomalous activities and potential breaches. By implementing these technologies, the project aims to improve network visibility, enhance situational awareness, and strengthen the organization's ability to detect and respond to emerging cyber threats effectively.

Security Operations Center - Cyber Security Upgrade Phase 2

This project will assess and remediate exposures and cyber threats throughout Metropolitan with special emphasis on the business and SCADA networks. Maintaining a secure computing infrastructure requires the application of ongoing cyber countermeasures to protect against new cyber threats that are continually identified.

Security Service Edge Implementation

This project will allow Metropolitan to conduct real-time threat detection and mitigation. Through Security Service Edge (SSE), Metropolitan will integrate security functionalities directly into the network edge, eliminating the need for backhauling traffic to centralized security appliances.

Smartbadge Implementation

This project will replace current Metropolitan badges to smartbadges, which is compatible with current Metropolitan authentication systems and will improve overall security posture.

Western Region Security Camera Replacement

The software used to monitor security systems throughout Metropolitan's facilities has reached the end of life and is no longer supported. The replacement of cameras and related security systems is crucial at this time to increase operational flexibility, improve security, lower maintenance costs, and ensure regulatory compliance. Delays will result in 1) undetected incidents such as vandalized, stolen, and damaged equipment, 2) an increase in the yearly maintenance cost, 3) possible penalties, and 4) potential non-compliance with future critical infrastructure security legislation. This project upgrades IT infrastructure, which will support the existing security camera replacement and the monitoring system upgrades within the Western Region.

Control Systems/SCADA Project Group

AMR System RTUs and Radio Modem Upgrade

Metropolitan's Automatic Meter Reading (AMR) system gathers flow data from service connections and master meter flow meters and provides such data to other Metropolitan business and operational systems. The current phase consists of the replacement of remaining radio modems and master stations. In addition, the network equipment will be replaced at each master station. Planned work for this phase includes purchase of six replacement RTUs, establishment of a professional services agreement for configuring a replacement RTUs with the radio modems, installation, testing, cutover, and internal resources to support implementation. Future phases will include replacement of the AMR RTUs. Metropolitan is currently conducting a major control system upgrade and it is anticipated the AMR system will be consistent the technology selected in that upgrade project. This phase will replace all the existing AMR RTUs, operator interface terminals, digital displays, configuration laptops, battery chargers for battery backup systems, associated networking equipment, and servers to include: firewalls, switches, routers, and network monitoring devices. In addition, updated AMR system will be documented with control narratives and network architecture design drawings.

AT&T MPLS SCADA Network Upgrade

This project will upgrade portions of Metropolitan's SCADA wide area network (WAN) communications circuit that utilize multiprotocol label switching (MPLS) technology. This upgrade is driven by anticipated future cost increases as well as reliability issues related to the duration of service outages.

Control System (SCADA) Server Replacement

This project will replace servers for Metropolitan's Supervisory Control and Data Acquisition (SCADA) system that are at the end of their expected life. The current servers are no longer supported by the manufacturer. This replacement is necessary to maintain the reliability of water treatment and delivery systems.

Desert Pumping Plant Communication Copper Cable Replacement

This project will replace outdated and damaged conduits and twisted pair copper cables that currently support the communication backbone of the desert sites.

METCON (previously known as Control System Upgrade)

- **Diemer METCON**
- **Jensen METCON**
- **Mills METCON**
- **Skinner METCON**
- **Weymouth METCON**
- **Water System Control Master Plan**

Metropolitan's control system spans the CRA, Metropolitan's five water treatment plants, and the entire conveyance and distribution system. This project is planned to be implemented in a phased approach through several projects to upgrade hardware, software, and communications networks. Phases covering preliminary investigations, conceptual design, and demonstrations have been completed, with activities currently underway at Mills, Skinner, Diemer, Jensen, and Weymouth control system areas.

Minor Capital Projects Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$15.9 million

Program Information: *The Minor Capital Projects (Minor Cap) Program is comprised of projects, with an estimated cost of less than \$400,000, that often require rapid response to address unanticipated failures, safety or regulatory compliance concerns, or to take advantage of shutdown opportunities. The Minor Cap Program authorizes the General Manager to execute projects that meet defined criteria without seeking additional Board approval.*

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - Sixteen projects were initiated
- Major milestones achieved or estimated to be achieved:
 - Twenty-four projects were completed

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Various projects	\$34,000,000 for two open and new Minor Cap Appropriations	2031	Complete all projects within 3 years of initiation

Prestressed Concrete Cylinder Pipe (PCCP) Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$80.1 million

Program Information: The PCCP Program is composed of projects to refurbish or upgrade Metropolitan's PCCP feeders to maintain water deliveries without unplanned shutdowns.

Accomplishments for FY 2024/25 and FY 2025/26

- New projects initiated thru September 2025:
 - None
- Major milestones achieved or estimated to be achieved:
 - Allen-McColloch Pipeline Urgent Rehabilitation Stages 1 and 2 – construction completed
 - Electromagnetic Inspection of PCCP Lines (Fifth Cycle) – inspected 114 miles (approximately 80 percent complete)
 - Lake Mathews PCCP Rehabilitation Valve Storage Building – construction completed
 - Second Lower Feeder PCCP Rehabilitation - Reach 3B – construction completed
 - Sepulveda Feeder PCCP Rehabilitation – Reach 2 – construction contract to be awarded

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Electromagnetic Inspections of PCCP Lines	\$ 1,100,000	Ongoing	Complete the fifth cycle and initiate the sixth
Sepulveda Feeder PCCP Rehabilitation - Reach 2	\$ 82,200,000	2027	Complete construction

Allen-McColloch Pipeline Project Group

Allen-McColloch Pipeline PCCP Rehabilitation

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe or with other materials such as carbon fiber reinforced polymer (CFRP) designed as a stand-alone pipeline, which can accommodate full internal and external pressures on the line. The project includes restoring the Allen-McColloch Pipeline (AMP) to "Like New" condition. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, and other type of valves. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all pressure control structures, master meters, and meter structures. This project will also relocate air-release and vacuum valves from underground vaults to above-ground enclosures along the AMP where urgent PCCP rehabilitation was completed in recent years under the AMP PCCP Rehabilitation of 2020 and AMP Urgent PCCP Rehabilitation Stage 1 (2023) and Stage 2 (2024). This project will also construct a paved access from the road and a three-foot paved accessway around the new manhole structure at Station 1157+39 to perform routine maintenance.

Allen-McColloch Pipeline Urgent Relining – Air Release and Vacuum Valve Relocation

An urgent relining project was recently completed to mitigate broken PCCP prestressing wires on a portion of the Allen-McColloch Pipeline (AMP). To expedite completion and return the line to service, relocation of air release and vacuum valves was not included in the urgent relining work. This project will relocate air-release and vacuum valves from underground vaults to above-ground enclosures along the AMP where urgent PCCP rehabilitation was completed in 2024. This project will also construct a paved access from the road and a three-foot paved accessway around the new manhole structure at Station 1157+39 to perform routine maintenance.

Calabasas Feeder Project Group**Calabasas Feeder PCCP Rehabilitation**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe or with other materials such as carbon fiber reinforced polymer (CFRP) designed as a stand-alone pipeline, which can accommodate full internal and external pressures on the line. The project includes restoring the Calabasas Feeder to “Like New” condition. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all pressure control structures, master meters, and meter structures.

Rialto Pipeline Project Group**Rialto Pipeline Rehabilitation**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe or with other materials such as carbon fiber reinforced polymer (CFRP) designed as a stand-alone pipeline, which can accommodate full internal and external pressures on the line. The project includes restoring the Rialto Pipeline to “Like New” condition. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all pressure control structures, master meters, and meter structures.

Second Lower Feeder Project Group**Carbon Creek Pressure Control Structure Rehabilitation**

The Carbon Creek Pressure Control Structure was constructed in 1972. The structure is located south of the intersection of East Orangethorpe Avenue and North Community Drive in the city of Placentia. This control structure maintains operating pressure and controls flows on the Second Lower Feeder, while maintaining water deliveries from the Diemer plant into the Central Pool. Upgrades at Carbon Creek PCS structure will be made to security, mechanical, electrical, and structural components. All equipment and appurtenances will be rehabilitated and upgraded to meet Metropolitan's standards.

Second Lower Feeder PCCP Rehabilitation

- **Reach 5**
- **Reach 6**
- **Reaches 7 & 10**
- **Reach 9**
- **Reach 12**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe or with other materials such as carbon fiber reinforced polymer (CFRP) designed as a stand-alone pipeline, which can accommodate full internal and external pressures on the line. The project includes restoring the Second Lower Feeder to “Like New” condition. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all pressure control structures, master meters, and meter structures.

Sepulveda Feeder Project Group**Sepulveda Feeder PCCP Rehabilitation**

- **Preliminary Design and Valve Procurement**
- **Reach 1**
- **Reach 2**
- **Reach 3**
- **Reach 4**
- **Reach 5**
- **Reach 6**
- **Reach 7**
- **Reach 8**
- **Reach 9**
- **Reach 10**

The planned rehabilitation work involves lining the existing PCCP segments with steel liner pipe or with other materials such as carbon fiber reinforced polymer (CFRP) designed as a stand-alone pipeline, which can accommodate full internal and external pressures on the line. The project includes restoring the Sepulveda Feeder to “Like New” condition. This would include relocation of all air release and vacuum valves (AR/VV) that have not already been relocated above ground and evaluating and possible replacement of sectionalizing, service connection turnout, pumpwell, AR/VV, shutoff, and blowoff valves, etc. In addition, the project includes procurement of any needed permanent or temporary right of way and evaluation and possible replacement or modification of all pressure control structures, master meters, and meter structures.

PCCP – Other Project Group

Electromagnetic Inspections of PCCP Lines (Fifth Cycle)

All PCCP lines within the distribution system are inspected every three to seven years. The frequency is based on the condition and history of repairs for each feeder. Four cycles of electromagnetic testing have been completed to date on Metropolitan's PCCP feeders. This project will perform the fifth cycle of inspections over a six-year period. Planned activities for the inspections include scheduling and coordination of shutdowns; conducting the electromagnetic inspections; conducting internal visual inspections; shutting down and dewatering the feeders and returning them to service; analyzing the inspection results; and preparing comprehensive inspection reports.

Electromagnetic Inspections of PCCP Lines (Sixth Cycle)

All PCCP lines within the distribution system are inspected every three to seven years. The frequency is based on the condition and history of repairs for each feeder. The fifth cycle of electromagnetic testing on Metropolitan's PCCP feeders is nearing completion. This project will perform the sixth cycle of inspections over a six-year period. Planned activities for the inspections include scheduling and coordination of shutdowns; conducting the electromagnetic inspections; conducting internal visual inspections; shutting down and dewatering the feeders and returning them to service; analyzing the inspection results; and preparing comprehensive inspection reports.

Foothill Feeder Acoustic Fiber Optic PCCP Monitoring System

Prestressed concrete cylinder pipe (PCCP) is well-known in the waterworks industry to be at risk of sudden failure from loss of strength due to the breaking of pre-stressed wires. Currently, staff must dewater the Foothill Feeder to inspect the pipeline's condition manually. The proposed project installs an innovative acoustic fiber optic system that will provide continuous condition monitoring over approximately 11 miles of the Foothill Feeder without having to dewater and enter the pipeline, along with other associated equipment.

Pure Water Southern California (PWSC) Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$150.0 million

Program Information: Pure Water Southern California is a large regional recycled water program that will provide a new local source of safe and reliable drinking water for Southern California. At full build-out, PWSC will produce up to 150 million gallons per day (mgd) of purified water for indirect and direct potable reuse applications. For FYs 2026/27 and 2027/28, only the work for designing the initial 45 mgd program capacity is included in the CIP budget. However, to provide a complete picture of the entire program, project descriptions for the full build-out are included in this appendix.

Accomplishments for FY 2024/25 and FY 2025/26

- This is a new CIP program for FYs 2026/27 and 2027/28.

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
PWSC Advanced Water Purification Facility	\$ 1,715,500,000	2036	Procure a progressive design builder; initiate design
PWSC Reach 1	\$ 1,212,100,000	2035	Procure a construction manager/general contractor; initiate final design
PWSC Reach 2	\$ 866,400,000	2045 ¹	Procure a construction manager/general contractor; initiate final design
PWSC Whittier Narrows Pump Station	\$ 365,600,000	2045	Land acquisition

¹ The portion of Reach 2 required for 45 mgd delivery is anticipated to be completed in 2034.

Pure Water Southern California – All

PWSC Advanced Water Purification Facility

This project will design and construct a new Advanced Water Purification Facility (AWPF) to produce purified water for indirect and direct potable reuse applications for Pure Water Southern California. The AWPF will be constructed at the Joint Treatment Site located adjacent to the Los Angeles County Sanitation Districts' (Sanitation Districts) A. K. Warren Water Resources Facility (Warren Facility) in the City of Carson. Metropolitan will design and construct the advanced water treatment (AWT) facilities, along with ancillary facilities to support the operation of the AWPF. The AWT processes will include reverse osmosis (RO), ultra-violet with advanced oxidation process (UV-AOP) disinfection, as well as chemical and post-treatment stabilization systems. Ancillary facilities will include a new visitor center, administration and operation/lab buildings, maintenance and warehouse buildings, electrical power substation with distribution switchyard, chemical storage facilities, electrical buildings, product water clear well and pump station, surge tanks, battery storage, backup generators, solar panels, and parking lots with electric charging stations. If required, direct potable reuse (DPR) facilities will include ozonation, granular activated carbon (GAC) filtration, biologically activated carbon (BAC) filtration, and membrane filtration (MF). The project will also involve utility relocation and construction of pipeline from the clearwell to the start of Reach 1 of the backbone conveyance system. A Workforce Training Center will also be constructed in partnership with the Sanitation Districts.

PWSC Advanced Water Purification Facility Phase 2*

This project will design and construct the expansion of the AWPF by approximately 35 MGD for indirect potable reuse (IPR) and/or direct potable reuse (DPR) applications. Once completed, the total capacity of the AWPF will be approximately 150 mgd. Expanded facilities will include reverse osmosis (RO) and ultra-violet with advanced oxidation process (UV-AOP) disinfection; chemical and post-treatment stabilization systems; associated ancillary facilities; and additional finished product water pumps. The project may also include design and construction of facilities for DPR treatment processes such as ozone, granular activated carbon (GAC) filtration, biologically activated carbon (BAC) filtration, and membrane filtration (MF).

PWSC Azusa Pipeline and Pump Stations*

This project will design and construct new pipelines and pump stations across the cities of Azusa, San Dimas and La Verne, and rehabilitation of San Gabriel Valley Municipal Water District's existing Azusa Pipeline, to convey a portion of the purified water eastward from the backbone pipeline to the Weymouth plant for direct potable reuse via raw water augmentation.

PWSC DPR Pipeline and Pump Stations*

This project will design and construct a new pipeline and pump station(s) across the cities of Irwindale, Azusa, Covina, Glendora, San Dimas and La Verne, and the County of Los Angeles to convey a portion of the purified water eastward from the backbone pipeline and Santa Fe Pump Station to the Weymouth plant for direct potable reuse via raw water augmentation.

* This project is not needed for the initial 45-mgd program capacity but has been included in the CIP Appendix to provide a complete picture of the entire PWSC program.

PWSC DPR Satellite Facility Phase 1*

This project will design and construct a new advanced water treatment facility located either at the Weymouth plant or another satellite location near the Santa Fe Spreading Grounds area, with a capacity of up to approximately 25 mgd, to further treat purified water for direct potable reuse (DPR) via raw water augmentation at the Weymouth plant and/or the Diemer plant. The blending ratio is anticipated to be less than 10% per DDW regulatory guidelines for DPR using primarily ultraviolet (UV) and chlorine dioxide for disinfection. Facilities are anticipated to include a UV reactor building (including reactors, workspace and control room), chlorine dioxide generation building, chlorine dioxide contact basin, treated water storage tank, product water pump station, and pipeline to the Weymouth plant's Junction Structure. An ozone system (liquid oxygen, vaporizer, and ozone contact basin) may also be included as an alternate to the chlorine dioxide process. Ancillary facilities will include a new electrical power substation with distribution switchyard, chemical storage facilities, electrical buildings, generators, solar panels, and parking lots with electric charging stations.

PWSC DPR Satellite Facility Phase 2*

This project will design and construct the expansion of the advanced water treatment facility located either at the Weymouth plant or another satellite location near the Santa Fe Spreading Grounds area, with a total capacity up to approximately 60 mgd, to further treat purified water for direct potable reuse (DPR) via raw water augmentation at the Weymouth plant and/or the Diemer plant. The project is anticipated to include new treatment processes such as ozone and biologically activated carbon (BAC) systems with associated ancillary facilities to comply with California's DPR regulations for a DPR system exceeding a 10% blend ratio. The DPR treatment train is anticipated to include ultraviolet (UV) disinfection, ozone, and BAC. Facilities are anticipated to include a UV reactor building (including workspace and control room), liquid oxygen tanks and vaporizers, ozone generation building and contact basin, BAC system (including contact basin, backwash supply tank and waste equalization tanks), product water storage tank and pump station, pipeline to the Weymouth plant's junction structure, and yard piping. Ancillary facilities will include a new electrical power substation with distribution switchyard, maintenance/ warehouse buildings, chemical storage facilities, electrical buildings, generators, solar panels, and parking lots with electric charging stations.

PWSC Reach 1

This project will design and construct a new large diameter pipeline in the City of Carson and unincorporated Los Angeles County areas to convey purified water from the Advanced Water Purification Facility to the start of Reach 2 as part of the Pure Water Southern California backbone conveyance system.

PWSC Reach 2

This project will design and construct a new large diameter pipeline across the cities of Long Beach, Lakewood, and Bellflower to convey purified water from the end of Reach 1 to the start of Reach 3 as part of the Pure Water Southern California backbone conveyance system.

PWSC Reach 3

This project will design and construct a new large diameter pipeline across the cities of Bellflower and Downey to convey purified water from the end of Reach 2 to the start of Reach 4 as part of the Pure Water Southern California backbone conveyance system.

PWSC Reach 4

This project will design and construct a new large diameter pipeline along the San Gabriel River across the cities of Downey, Norwalk, Santa Fe Springs, Pico Rivera and unincorporated Los Angeles County areas to convey purified water from the end of Reach 3 to the start of Reach 5 as part of the Pure Water Southern California backbone conveyance system.

* This project is not needed for the initial 45-mgd program capacity but has been included in the CIP Appendix to provide a complete picture of the entire PWSC program.

PWSC Reach 5*

This project will design and construct a new large diameter pipeline along the San Gabriel River across the cities of Santa Fe Springs, Pico Rivera, Whittier, Industry, and unincorporated Los Angeles County areas to convey purified water from the end of Reach 4 to the new Whittier Narrows Pump Station and the start of Reach 6 as part of the Pure Water Southern California backbone conveyance system.

PWSC Reach 6*

This project will design and construct a new large diameter pipeline along the San Gabriel River across the cities of Industry, Pico Rivera, and unincorporated Los Angeles County area to convey purified water from the end of Reach 5 and the Whittier Narrows Pump Station to the start of Reach 7 as part of the Pure Water Southern California backbone conveyance system.

PWSC Reach 7*

This project will design and construct a new large diameter pipeline along the San Gabriel River across the cities of Industry, Baldwin Park, and Irwindale to convey purified water from the end of Reach 6 to the start of Reach 8a as part of the Pure Water Southern California backbone conveyance system.

PWSC Reach 8A*

This project will design and construct a new large diameter pipeline across the cities of Irwindale and Duarte near the Santa Fe Spreading Grounds to convey purified water from the end of Reach 7 to the new Santa Fe Pump Station and the start of Reach 8B as part of the Pure Water Southern California backbone conveyance system.

PWSC Reach 8B*

This project will design and construct a new pipeline across the cities of Irwindale and Azusa to convey purified water from the end of Reach 8A and the new Santa Fe Pump Station to the San Gabriel Canyon Spreading Grounds as part of the Pure Water Southern California backbone conveyance system.

PWSC Recharge Facilities

This project will design and construct new recharge facilities, and improvements to existing facilities for groundwater replenishment as part of Pure Water Southern California. Scope of work may include procurement and conversion of an existing rock pit or other suitable location for groundwater replenishment, relocation of existing wells, installation of new wells, and groundwater monitoring. Scope of work may also include utility relocation, erosion control and slope stabilization, access road, site improvement and other appurtenant work. This project also includes property acquisition for the recharge facilities.

PWSC Santa Fe Pump Station*

This project will design and construct a new pump station along the backbone pipeline located near the Santa Fe Dam to deliver purified water north to the San Gabriel Canyon Spreading Grounds for groundwater recharge and east to the Weymouth plant for direct potable reuse through raw water augmentation. The pump station facilities may include a pump room, clearwell, chemical injection vault, chemical storage and feed building, compressor building, surge tanks, administrative and control room, electrical room and a new power substation. The pump station may also be expanded in the future for potential integration with Pure Water Los Angeles or other programs. This project also includes property acquisition for the pump station facilities.

* This project is not needed for the initial 45-mgd program capacity but has been included in the CIP Appendix to provide a complete picture of the entire PWSC program.

PWSC Whittier Narrows Pump Station

This project will design and construct a new pump station along the backbone pipeline located near the Whittier Narrows Dam to deliver purified water north to the Santa Fe Spreading Grounds for groundwater recharge. The pump station facilities may include a pump room, clear well, chemical injection vault, chemical storage and feed building, compressor building, surge tanks, administrative and control room, electrical room and a new power substation. The pump station may also be expanded in the future for potential integration with Pure Water Los Angeles or other programs. This project also includes property acquisition for the pump station facilities.

Water Treatment Plants Program

Fiscal Years 2026/27 and 2027/28 Estimate: \$104.8 million

Program Information: *The Water Treatment Plants Program is comprised of projects to replace, refurbish, or upgrade facilities and components at Metropolitan's five water treatment plants and chlorine unloading facility to continue to reliably meet treated water demands.*

Accomplishments for FY 2024/25 and FY 2025/26

Diemer Plant

- New projects initiated thru September 2025:
 - Diemer Hydrogen Peroxide and Sodium Hypochlorite Tank Improvements
 - Diemer Ozone Network Upgrade
 - Diemer Sewer Metering Upgrades
 - Diemer Turbidimeter Replacement
 - Diemer Yard Paving Improvements
- Major milestones achieved or forecasted to be achieved:
 - Diemer Basin 8 Slope Toe Improvement – construction to be awarded
 - Diemer Chemical Feed Facility Improvements – construction contract awarded
 - Diemer Filter Rehabilitation – final design completed
 - Diemer Helicopter Hydrant Facility – construction completed
 - Diemer Power and Distribution Panel Upgrade – construction completed
 - Diemer Turbidimeter Replacement – procurement contract to be awarded

Jensen Plant

- New projects initiated thru September 2025:
 - Jensen Washwater Reclamation Plant Flocculation Basin Refurbishment
- Major milestones achieved or forecasted to be achieved:
 - Jensen Administration Building Column Panel Replacement – construction completed
 - Jensen Control Room HVAC System Upgrades – construction to be completed
 - Jensen Ozone Critical Components Upgrade – Stage 1 – construction completed
 - Jensen Site Security Upgrade – final design completed
 - Jensen Washwater Reclamation Plant Flocculation Basin Refurbishment – construction contract awarded

Mills Plant

- New projects initiated thru September 2025:
 - Mills Filter Valves Rehabilitation
- Major milestones achieved or estimated to be achieved:
 - Mills Electrical Upgrades – Stage 2 – construction completed
 - Mills Fluorosilicic Acid Tank Replacement – construction contract to be awarded
 - Mills Perimeter Security and Erosion Control Improvements – preliminary design completed

Skinner Plant

- New projects initiated thru September 2025:
 - Skinner 480V Circuit Breakers Rehabilitation
 - Skinner Plant 1 and Ozone Lab Turbidity Meters Upgrade
 - Skinner Plantwide Chemical Flow Meter Replacement
 - Skinner Potable Water Pumps VFD Rehabilitation
 - Skinner Sulfuric Acid Tank Farm Transfer Pipe Rehabilitation
- Major milestones achieved or estimated to be achieved:
 - Skinner Plant 1 and Ozone Lab Turbidity Meters Upgrade – procurement contract to be awarded
 - Skinner Sodium Hypochlorite Tank Replacement – procurement contract to be awarded

Weymouth Plant

- New projects initiated thru September 2025:
 - Weymouth Fluorosilicic Acid Tank Farm Improvements
 - Weymouth Ozone Contactor Expansion Joint Improvements
- Major milestones achieved or estimated to be achieved:
 - Weymouth Administration and Control Buildings Seismic Upgrades – construction contract to be awarded
 - Weymouth Asphalt Refurbishment – construction completed
 - Weymouth Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation – construction completed
 - Weymouth Hazardous Waste Staging and Containment Facility – construction completed

Water Treatment - General

- New projects initiated thru September 2025:
 - CUF Railroad Track Rehabilitation

Objectives for FYs 2026/27 and 2027/28

Project	Total Project Estimate	Estimated Construction Completion	Major Milestones
Diemer Chemical Feed Systems Improvements	\$ 15,600,000	2027	Complete construction
Jensen Electrical Upgrades – Stage 3	\$ 76,200,000	2030	Complete preliminary design
Jensen Modules 2 & 3 Basin Rehabilitation	\$ 34,300,000	2030	Complete preliminary design
Jensen Site Security Upgrade	\$ 26,700,000	2029	Begin construction
Jensen Solids Mechanical Dewatering Facility	\$ 57,800,000	2029	Complete design
Mills Basin Solids Removal System Rehabilitation	\$ 8,600,000	2030	Complete preliminary design
Mills Fluorosilicic Acid Tank Replacement	\$ 2,600,000	2027	Complete construction
Mills Perimeter Security and Erosion Control Improvements	\$ 9,700,000	2027	Begin construction
Skinner Fluorosilicic Acid Tank Replacement	\$ 1,400,000	2028	Begin construction
Skinner Ozone Contactor Roof Elastomeric Coating	\$ 2,900,000	2029	Complete construction
Skinner Sodium Hypochlorite Tank Replacement	\$ 1,900,000	2027	Begin construction
Skinner Sulfuric Acid Tank Farm Transfer Pipe Rehabilitation	\$ 3,100,000	2029	Complete design
Weymouth Administration and Control Buildings Seismic Upgrades	\$ 38,200,000	2028	Complete construction
Weymouth Filter Valve Replacement	\$ 11,100,000	2029	Complete design for Filter Building No. 1

Diemer Project Group

Diemer Administration Building HVAC Replacement

The existing HVAC system in the Diemer plant's Administration Building consists of two 20-ton, chilled and hot water coiled air-handling units, which maintain multi-zone work-space environments on both floors. The 61-year-old units are beyond their expected operating life, and regular maintenance activities have become challenging. This project will replace the existing HVAC units with new energy-efficient units and upgrade the temperature control system for the building. The project will also replace chiller, boiler, compressor, and make ductwork modifications. Seismic anchorage of the equipment will be incorporated to meet the current building code.

Diemer Basin 8 Slope Toe Improvement

The north slope below Diemer plant's Basin 8 has experienced creep movements and minor sloughing failures since its partial reconstruction in 1999-2000. Particularly, a minor toe slump failure at the toe of Basin 8 was identified in 2010-2011. Metropolitan has coordinated with DSOD an action plan to stabilize the slope toe and rehabilitate the slump failure. This project will rehabilitate the slump failure located at the toe of the slope supporting Basin 8, per DSOD requirements.

Diemer Caustic Feed System Rehabilitation

The chemical tank farms for sodium hydroxide at the Diemer plant have aged, and their reliability has deteriorated over the years. Most equipment is over 25 years old and has experienced failures. Some of the repair parts are no longer manufactured and are difficult to obtain. Loss of chemical feed or inadequate feeding capacity could disrupt plant operations. In addition, design criteria for some of the chemicals have changed, and the existing equipment is unable to cover the required range for chemical feed. This project will replace the aging equipment and optimize the system design to improve system reliability and maintain treated water quality.

Diemer Chemical Feed Facility Improvements

The Diemer plant's fluorosilicic acid feed facility consists of two chemical storage tanks, control and feed equipment, a secondary containment structure serving both tanks and feed lines, and a roof structure encompassing all components within the feed facility. This central chemical feed facility was built in 1963 as part of the original plant construction and has been repurposed for various chemical uses since then. The existing fluorosilicic acid storage tanks were installed in 2003 and were originally used to store sulfuric acid for several years until they were repurposed in 2008 for fluorosilicic acid. After more than 20 years of continuous use, these tanks have also reached the end of their service life and require replacement. A dry polymer tank farm was added in 1991 on the northern side of the facility, and its tanks and equipment have also reached the end of their service life. This project will rehabilitate both the polymer and the fluorosilicic acid tank farms. Project scope includes replacing two fluorosilicic acid storage tanks, refurbishing and replacing chemical feed equipment and piping, improvements to the secondary containment layout, including relocation of controls and addition of safety features, conversion of the polymer tank farm into a multipurpose feed facility which will serve as temporary chemical feed system during construction, and replacement of the roof structure including asbestos removal and abatement.

Diemer Chemical Feed System Improvements

The chemical feed equipment for ammonia, alum/ferric chloride, sodium hydroxide, fluorosilicic acid, liquid polymer, and dry polymer at the Diemer plant has aged, and its reliability has deteriorated over the years. Most equipment is over 25 years old and has experienced failures. Some of the repair parts are no longer manufactured and are difficult to obtain. Loss of chemical feed or inadequate feeding capacity could disrupt plant operations. In addition, design criteria for some of the chemicals have changed due to changing source water and water demand conditions, and the existing equipment is unable to cover the required range for chemical feed. This project will replace the worn-out feed equipment and optimize the system design to improve system reliability and maintain treated water quality.

Diemer Chemical Tank Farms Rehabilitation

The Diemer plant uses tanks to store the chemicals used during the treatment process. Most chemical tank farms were installed or rehabilitated between 2000 and 2010. Polymer and fiber-reinforced plastic (FRP) tanks are past the end of their service life of 10 years. The expected life for steel tanks can be several decades long, but once corrosion begins, it rapidly worsens when the chemical and metal are exposed to air. Many of the Diemer plant chemical storage tanks and associated equipment are near or have already reached the end of their service life. Dynamic changes in source water conditions and water demand outside of the original design criteria shorten the expected life of the equipment. This project will rehabilitate the chemical storage tanks, equipment, and support infrastructure located within the vicinity of the chemical tank farms at the Diemer plant.

Diemer Chlorine System Rehabilitation

The chlorination system at the Diemer plant was originally constructed in 1995 and has been in operation for over 30 years. The existing chlorination feed equipment and evaporators have become obsolete, and their manufacturers no longer support these types of units, which makes replacement parts difficult to obtain. This project will rehabilitate the chlorination feed equipment, evaporators, and other appurtenances to improve the reliability of the Diemer plant's treatment processes and prevent chlorine system failures.

Diemer East Filter Building and Slope Deformation Rehabilitation

This project will rehabilitate Diemer plant foundation and slopes of the eastside module to enhance the structural integrity of the east filter building. The project will evaluate the existing conditions and recommend and implement rehabilitation measures.

Diemer Filter Rehabilitation

The Diemer plant has 48 independent filter units that are normally operated from the main control room, although they also have the capability to be operated locally if needed. Over the life of the Diemer plant, staff has performed regular maintenance on the filters to support reliable plant operation. However, as regulations and source water conditions have changed, filter performance reliability has decreased. Metropolitan's Water Quality Team recently developed recommendations for the rehabilitation of all Diemer filters, including reconfiguration of underdrains, media, troughs, and surface wash systems. This project will rehabilitate all of the Diemer plant's filters to improve their performance and enhance treatment plant reliability. The planned rehabilitation work includes replacing the filter media with optimized size and depth specifications; replacing the surface wash system with larger piping and improved flow configuration; replacing the underdrains; modifying flow distribution flumes; and raising and replacing the existing troughs to accommodate a higher depth of filter media. This project will also replace valve actuators on the east filter valves and upgrade filter control consoles to match the recently completed improvements at the plant's west side filters.

Diemer Fire Alarm Panel Upgrades

The Diemer plant's fire alarm panels are a critical system that is directly connected to first responders. These panels are obsolete and no longer supported by the manufacturer. This project will upgrade the fire-life safety systems at the Diemer plant to comply with safety codes.

Diemer Hydrogen Peroxide and Sodium Hypochlorite Tank Improvements

This project will replace two above-ground hydrogen peroxide tanks and one above-ground sodium hypochlorite tank, including associated piping, equipment, instruments, and controls.

Diemer Industrial and Potable Water System Upgrades

The Diemer plant uses raw, industrial, and potable water sources to support the treatment processes throughout the plant. However, raw water is not ideal to use at the filter inlet since it bypasses the ozonation, flocculation, and sedimentation stages of the treatment process. Industrial water is used as an additional water source for chlorine ejectors, power generator cooling, belt presses, and hose bibs in the contactor galleries on the roofs of the ozone and contactor buildings. The industrial water system consists of a network of piping, valves, and pumps installed throughout the plant. The current industrial water system is undersized and unreliable. When an industrial water pump is in service, it must operate at over 95 percent speed to maintain pressure. The Diemer plant cannot perform simultaneous tasks that require industrial water, causing it to be an unreliable source. This project will replace the filter-influent chlorine ejectors' raw water system with potable water and upgrade the industrial and potable water systems to support the treatment processes throughout the Diemer plant.

Diemer Sedimentation Basin Column Rehabilitation

This project will rehabilitate the concrete columns at the sedimentation basin clarifiers and launders at Diemer's Basins 1 through 8 to address corrosion issues and wear and tear. These improvements will enhance plant reliability.

Diemer Sewer Metering System Upgrades

The Diemer plant has two metered sewer discharge points, one located at the western main entrance and the second one on the south slope of the property. Sewer effluent data is collected and reported to the Orange County Sanitation District (OCSD) on a monthly basis as required by the wastewater discharge permit. The new sanitation requirements specify enhanced metering functions, which the current meters lack. This project will upgrade the sewer metering structures to incorporate new, updated sewer flow meters to enhance metering reliability and meet regulatory compliance.

Diemer Slope Stabilization and Drainage Improvements

The Diemer plant is located on the top of a hill in the city of Yorba Linda and consists of numerous fill slopes. Some of these slopes are within the State of California Department of Water Resources Division of Safety of Dams (DSOD)'s jurisdiction. Some slopes within the Diemer plant have eroded and need rehabilitation. This project will rehabilitate multiple slope erosion sites and provide site improvements for grading, drainage, and erosion/sediment control to erosion-damaged slopes at the plant.

Diemer Solids Thickener Rehabilitation

The Diemer plant's dewatering and solids waste handling system removes water from the water treatment residual solids to reduce the overall volume of the dewatered solids, making handling and disposal more cost-effective. The Diemer plant's solid thickeners N1 and S1 were constructed and installed in 1992 and have reached the end of their service life. Inspections of the two thickeners confirmed significant corrosion on the center columns. These thickeners have been removed from service until structural conditions are addressed. This project will rehabilitate the Diemer plant's dewatering and solids waste handling equipment and facilities to enhance the reliability of the plant's waste management process.

Diemer Turbidimeter Replacement

The Diemer plant uses turbidimeters to monitor turbidity and comply with water quality regulatory compliance requirements. Most of the turbidity instrumentation in the Diemer plant is deployed at the filtration phase of the water treatment process. A dedicated turbidimeter is deployed at each of the 48 parallel filter units, which comprise the Diemer filtration phase of treatment. These turbidity indications are closely monitored, and the resulting data is subject to compliance requirements. Additional turbidity monitoring points include the plant influent and effluent, the settling basins, the reservoir, and the washwater reclamation plant. The existing turbidimeters have reached the end of their service life, and some parts are no longer supported by the original equipment manufacturer. This project will procure and replace obsolete turbidimeters, controllers, and appurtenant equipment at the Diemer plant to comply with regulatory requirements.

Diemer Washwater Reclamation Facilities Reliability Improvement

Approximately 40 percent of Diemer plant's existing Washwater Reclamation Plant (WWRP) is constructed on long slender piles and earthen fill, which form a level surface at the top of a slope. Seismic rehabilitation is required to ensure the reliability of the WWRP facility. In addition, submerged WWRP equipment is continually subjected to abrasive and corrosive operating conditions caused by the solids in the used filter backwash water. The WWRP's two identical treatment trains share a common influent channel, and both must be removed from service during maintenance. This project will add an L-shaped caisson wall to stabilize the seismically vulnerable fill portion of the pad, relocate the utilities at the west slope, and retrofit the WWRP with reliability improvements, including a new headworks to allow independent shutdown of each individual process train and modifications to the existing chemical feed system and sludge line.

Diemer Yard Paving Improvements

This project will improve access to storage and staging locations for emergency responders and vehicles for plant maintenance. Areas for asphalt paving and seal coating include the open-graded areas serving the Diemer warehouse buildings and the helicopter hydrant facility.

Western Region Security Camera System Upgrade - Area 6 - Diemer WTP

The existing security camera system used throughout Metropolitan's system has reached the end of its life and is no longer supported. The replacement of cameras and related security systems is crucial at this time to increase operational flexibility, improve security, lower maintenance costs, and ensure regulatory compliance. Delays will result in: 1) undetected incidents such as vandalized, stolen, and damaged equipment, 2) an increase in the yearly maintenance cost, 3) possible penalties, and 4) potential non-compliance with future critical infrastructure security legislation. This project will replace all existing cameras and related security equipment at the Diemer plant.

Jensen Project Group

Jensen Aqua Ammonia Tank Farm Seismic Upgrades

The Aqua Ammonia Tank Farm at Jensen is located on the west side of the plant near the Module 3 basins. This tank farm was constructed in 1998 and houses four chemical storage tanks. Aqueous ammonia is injected into the combined filter effluent channel after chlorine injection to form chloramines. Metropolitan practices chloramination to meet federal and state water quality standards for the total trihalomethane maximum contaminant level. A seismic preliminary assessment recently conducted by Metropolitan staff, revealed that the steel moment frames and braced frame connections, including their lateral bracings, will not withstand a major earthquake. Further detailed seismic evaluation will be conducted to develop upgrade options. This project will replace and/or refurbish all equipment associated with the Jensen Aqua Ammonia chemical tank farm and upgrade the structural components to meet current seismic standards.

Jensen Bromate Control Upgrades

At the Jensen plant, sulfuric acid is added to suppress the pH and control bromate formation, and then caustic soda is added to reduce corrosion in the distribution system. This project will modify the chemical feed system by adding ammonia and chlorine upstream of the ozone contactor. This approach would significantly reduce the plant's usage of both sulfuric acid and caustic and reduce overall chemical costs, which is consistent with current water quality design criteria for bromate control. To efficiently implement the ammonia-chlorine process to control bromate formation, the existing caustic soda tank farm will be decommissioned and replaced with a new facility built specifically for adding caustic soda to the filtered water line. Additional rehabilitation work is required for the existing tank farm, including refurbishment of the sulfuric acid storage tanks, reconfiguration of the transfer piping, and removal of the liquid polymer building and decommissioned tank farms.

Jensen Building Fall Protection Improvements

The Jensen buildings were built to meet current regulations at the time of their construction. Temporary fall protection, tethers, and safety harnesses are currently used to provide maintenance for the skylights on several of these buildings. This project will install permanent guard rails to enhance fall protection around building edges, skylights, and process areas.

Jensen Bull Creek Rehabilitation

The Bull Creek channel, located on the east side of the Jensen plant, has experienced significant erosion from continued stormwater flow during the past wet seasons. This project will rehabilitate approximately 800 feet of the Bull Creek channel to prevent erosion through the use of biological and engineered solutions. The work includes installation of rip rap and slurry backfill along the channel, restoration of the damaged concrete liner on the channel sides, restoration of the broken apron next to the railroad bridge, and revegetation of native species to keep sediments in place and reduce erosion. In addition, a catch basin and other stormwater management infrastructure will be constructed along the San Fernando service road to the Jensen plant to mitigate excessive erosion on the north bank of the Bull Creek.

Jensen Chemical Tank Farm Rehabilitation

The Jensen plant's chemical tank farms house the chemicals, feed equipment, and analytical instruments necessary to treat water. The chemical storage tanks and associated equipment are nearing the end of service life. Most chemical tank farms have been in service for 15 to 20 years. Polymer and fiber-reinforced plastic (FRP) tanks are past the end of the design life of 10 years. The expected life for steel tanks can be several decades long, but once corrosion begins, it rapidly worsens when the chemical and metal are exposed to air. Losing a single tank would, at a minimum, reduce operational flexibility at a local level and put the plant at risk of violating water quality requirements if anything happened to the remaining tanks or the delivery. This project will rehabilitate the chemical storage tanks, equipment, and support infrastructure located within the vicinity chemical tank farms at the Jensen plant.

Jensen Chlorine System Rehabilitation

The chlorination system at the Jensen plant was originally constructed in 1972 and upgraded in 2005. The existing system components are nearly 20 years old and have reached the end of their service life. Replacement parts for equipment such as the evaporator system have become increasingly challenging to source and will soon be unavailable. Additionally, the scrubber tanks leak at the access flanges, and the piping has deteriorated beyond repair. The system lacks appropriate metering to determine the inventory within the railcars upon their return to the manufacturer. This project will rehabilitate the Jensen chlorination and feed system components to enhance the reliability of the Jensen plant's treatment operations.

Jensen Control Room HVAC System Upgrades

The occurrence of wildfires in the vicinity of the Joseph Jensen Water Treatment Plant has increased in recent years. During these fire events, smoke and embers travel onto the plant site, prompting staff to use enhanced respiratory personal protective equipment in the main and secondary control rooms so that they can maintain critical plant operations. This project will complete upgrades to the existing heating, ventilation, and air conditioning (HVAC) systems in both control rooms to mitigate smoke infiltration, enhance personnel safety, and increase operational resiliency.

Jensen Electrical Upgrades - Stage 3

The Jensen plant's electrical system was designed to meet then-current electrical codes when the plant was constructed over 46 years ago. The aging electrical equipment has deteriorated through long-term continuous use, lacks redundancy, and is difficult to maintain and repair. Much of the original equipment is underrated by current standards and does not have adequate short-circuit interrupting capability, which results in an elevated risk of unplanned outages and equipment damage. This project will replace aging equipment and provide needed redundancy for critical components of the plant's electrical system. Stages 1 and 2 of the electrical upgrades work were completed in recent years. Stage 1 work improved the medium voltage switchgear on the western portion of the plant and provided electrical infrastructure for the Jensen solar power plant. Stage 2 work included upgrades to UPC-7, UPC-9, and their associated motor control centers to support critical process equipment such as the washwater pumps, service water pumps, washwater return pumps, filters, thickeners, sludge pumps, and ammonia facilities. Stage 3 improvements are underway will upgrade the remaining components of the electrical system on the eastern portion of the plant. A geotechnical seismic analysis of the east side of the plant will be conducted under Stage 3 work to determine areas of seismic vulnerability that can impact the installation of new electrical equipment in this area.

Jensen Entrance Improvements

Both main Jensen plant gates at San Fernando and Balboa entrances need to be redesigned to improve security and traffic flow consistent with Metropolitan's other water treatment plants. This project will enhance the security of the Jensen plant's entrances. The project scope includes replacement of security gates, installation of traffic control devices to improve security at the entrance points of the Jensen plant, and installation of fire-resistant plants and irrigation along the west side of the plant.

Jensen Flocculator Upgrades

This project will upgrade the structural anchorage of the flocculator system within the basins at Jensen plant's Modules Nos. 2 and 3 to meet Metropolitan's standards.

Jensen Hazardous Waste Containment Facility

The Jensen plant currently stores its hazardous waste in a storage area that was repurposed from a general equipment storage area. The existing site has inadequate storage space for the facilities' needs. In addition, the waste containment area roof covering does not provide adequate protection from rain and sun. This project will upgrade the Jensen plant's hazardous waste consolidation site (commonly known as 90-day storage).

Jensen Low Flow Capacity Improvements

Due to persistent drought conditions and system-wide water conservation efforts to reduce State Project Water (SWP) usage, Metropolitan is implementing projects to reduce the minimum sustainable plant flow at Jensen. The existing infrastructure must be upgraded/modified to meet these turndown requirements, ensure reliable operation, and maintain regulatory compliance. If the treatment equipment and infrastructure are not upgraded/modified, the Jensen plant will not be able to reliably meet the low-flow treatment requirements, resulting in the need to utilize more SWP supplies than would otherwise be necessary. This project will upgrade critical components of the Jensen plant to reduce the minimum sustainable flow to below 90 cfs to support system-wide water conservation efforts during low SWP allocation years.

Jensen Maintenance and Machine Shop

At the Jensen plant, the mechanical team's workstations are immediately adjacent to machine shop equipment. During maintenance activities, team members are subject to loud noises, fumes from lubrication and machining activities, and flying chips and sparks from cutting operations. In addition, mechanical storage is currently spread between the basement at the administration building, portable shipping containers, and an open canopy. None of these areas provide adequate coverage and safe storage for replacement parts and maintenance equipment. This project will construct a new building to house electrical and mechanical staff shops, a new machine shop area, equipment storage, and a dedicated chlorine maintenance room.

Jensen Module No. 1 Washwater Pump Rehabilitation – Stage 1

This project will replace and/or refurbish two of the three vertical turbine pumps, motors, valves, and other associated equipment and appurtenances to rehabilitate the Jensen Module No. 1 Washwater Lift Pump system.

Jensen Module No. 1 and Washwater Pump Rehabilitation

Washwater pumps are used to pump water from the combined filter effluent to the washwater tanks. The tank water is then used to back wash filters. If washwater pumps are unavailable, the plant cannot perform filter backwashes that are necessary to maintain operation of the filtration process. Jensen's Module No. 1 washwater (WW) lift pumps were installed with the original plant construction and have been in service for 56 years. Inspection and testing have revealed significant corrosion in the pumps' housings, and diminished pump output. The pumps have reached the end of their useful life and should be rehabilitated. This project will rehabilitate or replace the Module No. 1 vertical turbine washwater lift pumps, modify the piping for the Module No. 1 service water and washwater lift pumps, replace the single-speed open motors with closed motors with VFDs or soft start function, and other appurtenances to reliably operate the service water and washwater systems.

Jensen Modules Nos. 2 & 3 Basin Rehabilitation

This project will rehabilitate Modules Nos. 2 and 3 sedimentation basins at the Jensen plant to enhance solids removal efficiency. Planned work includes replacing the existing traveling bridge end-truck structure, drive system, rails, and racks; replacing suction pumps and flexible hoses; retrofitting the suction piping; replacing sludge line piping, rehabilitating/replacing launder gates and launders; upgrading the bridge control system and power supply; replacing the existing basin inlet gate actuators and basin guardrails; recoating bridge trusses; and installing improvements to prevent bird nesting within the basin.

Jensen Module Nos. 2 & 3 Filter Rehabilitation

This project will upgrade filter support infrastructure and equipment at the Jensen plant's Module Nos. 2 and 3 filters to meet Metropolitan's current standards. The work will include replacing the filter media, and filter valves, gates, actuators, and other associated equipment and appurtenances.

Jensen Ozone HVAC System Refurbishment

The current California Fire Code (CFC) requires the ozone generation building to be mechanically ventilated with no less than six air changes per hour (ACH). Additionally, it is the industry standard to provide 12 ACH during emergency operations. The HVAC system serving the ozone generation building consists of one air handling unit and six exhaust fans with a total airflow capacity that can provide 9.5 ACH. However, the existing HVAC system's regular operation is based on one air handling unit and three roof-mounted exhaust fans. The remaining three fans are off. This arrangement provides only 5 ACH, below the 6 ACH required by the current CFC. This project will rehabilitate the HVAC system serving the ozone generation building at the Jensen plant to ensure compliance with the current California Fire Code and meet industry standard for emergency operations.

Jensen Ozone System Rehabilitation

The ozone generation system at the Jensen plant has been operational since 2005 to serve as the primary disinfectant, aiming to minimize the production of disinfection by-products. Several crucial components of the ozone generation system are nearing or have surpassed the end of their useful life. This project will upgrade critical components of the ozone system at the Jensen plant to address aging infrastructure and control system improvements.

Jensen Raw Water Emergency Bypass

The Jensen plant is located within proximity of a number of faults that are capable of generating large seismic events, which can result in extensive damage to critical plant facilities and reduce its water treatment capability. The plant does not have an emergency raw water bypass to deliver raw water under a boil water order if such a need were to occur. This project will improve resiliency against severe earthquakes and enhance operational flexibility by constructing a raw water emergency bypass for the Jensen plant.

Jensen Reservoir Bypass Gate Refurbishment

The Jensen plant's existing reservoir bypass gates were installed in 1972 and allow the reservoirs to be isolated in case of water quality issues. The bypass gates are corroded and are currently inoperable because portions of the bronze bearings are degraded and missing. This project will replace the reservoir bypass gates to enhance infrastructure safety, security, and resiliency, and improve the reliability of the Jensen plant's water deliveries.

Jensen San Fernando Road Entrance Pavement Rehabilitation

The existing pavement from the Jensen San Fernando entrance to bridge crossing Bull Creek has not been replaced in over 50 years and has become worn over time. Large parts of the pavements have deteriorated into potholes and ruts that can damage cars and trucks. Temporary pothole repairs have become a quarterly maintenance activity that is not sustainable due to the temporary nature of the repairs. This entrance is critical for truck deliveries, and the inability of chemical trucks to use this road could impact chemical deliveries. This project will remove and replace approximately 30,000 square feet of deteriorating asphalt concrete pavement at the Jensen plant's San Fernando Road entrance. Following installation of new asphalt, entrance road will be restriped, and new rubberized speed bumpers placed along newly paved area.

Jensen Site Security Upgrade

This project will implement needed upgrades to the existing Jensen plant site security system, which is undersized and aged. Planned upgrades include installation of additional card readers and motion-activated lights in sensitive areas; replacement of existing aging security cameras with high resolution cameras; addition of new cameras, motion detection devices, and public announcement speakers to monitor the perimeter of the plant and deter intruders; replacement of security signage to meet current code; security upgrades of first floor windows; addition of horizontal structural support to strengthen the existing gates; and addition of new defensive barrier plants and trees to screen the west side of the Jensen plant.

Jensen Solids Mechanical Dewatering Facility

Metropolitan currently uses four lagoons on the grounds of the Los Angeles Department of Water and Power (LADWP) for solids processing and handling for the Jensen plant. Settled solids collected from the Jensen plant's sedimentation basins are thickened on-site and pumped through a solids-transfer system to LADWP lagoons. At the lagoons, the residual materials are dried and then transported for off-site disposal. Through an existing agreement with LADWP, Metropolitan has exclusive use of two lagoons through 2062, and the remaining two lagoons will revert back to LADWP by December 2033. This project will design and construct a new mechanical solid handling facility at the Jensen plant to meet the Jensen plant's long-term solids handling needs. The new facility will be sized to handle all of Jensen plant's solids handling needs when treating as much as 500 mgd.

Jensen Sulfuric Acid Tanks Rehabilitation

- **Jensen Sulfuric Acid Tank Feed System Replacement**

Currently at the Jensen plant, sulfuric acid is added to suppress the pH and control bromate formation. The Jensen plant's sulfuric acid tank farm was constructed in 2005 as part of the Jensen Oxidation Retrofit Program. Inspections of the sulfuric acid tank farm conducted between 2019 and 2022 revealed corrosion in the tank material and welds, as well as leakages and clogging of the unloading, transfer, and drain systems. This project will rehabilitate the Jensen sulfuric acid tank farm system piping, equipment, and other components supporting the storage or feed systems. This project will also procure and install the equipment requiring urgent replacement at the sulfuric acid feed system.

Jensen Upper Service Center HVAC Replacement

The heating, ventilation, and air conditioning (HVAC) units for the Jensen plant's upper service center building have reached their service life. Lack of available replacement parts makes regular maintenance challenging. This project will replace these outdated HVAC units with new, certified energy-efficient units featuring a modernized HVAC controller. This project will also include the addition of any appurtenances and construction of support facilities for more reliable and efficient HVAC operation.

Jensen Upper Service Center Roof Rehabilitation

This project will replace the roof of the Jensen Upper Service Center Building, along with all associated equipment and appurtenances.

Jensen Washwater Reclamation Plant Flocculation Basin Refurbishment

The Jensen plant currently uses two washwater reclamation plant (WWRP) basins to treat used filter backwash water and supernatant from the gravity solids thickeners. This system is critical to the water treatment process. Despite receiving regular maintenance, the shafts and associated baffle wall boards in the flocculation basins have deteriorated from 30 years of continuous operation. One WWRP basin was refurbished in 2017. This project will provide similar rehabilitation to the other WWRP basin, including replacement or refurbishment of mechanical components of the flocculation basin, including drive shaft assemblies, flocculator paddle boards, baffle wall boards, flocculator stuffing box, flocculator paddle arm shaft assemblies, and shaft bearings.

San Fernando Road Rail Crossing Rehabilitation

The Jensen plant receives water treatment chemical supply by rail. Metropolitan's chlorine vendor is transitioning to heavier chemical railcars, which require heavier gauge rails to meet Federal Railroad Administration regulations for hazardous chemical transportation requirements. This project will rehabilitate the deteriorated railroad crossing at San Fernando Road, upgrade the strength of the rails and turnout, add concrete crossing panels to handle heavy truck traffic, replace damaged asphalt, and install crossing arms and signage.

Mills Project Group

Eastern Region Security Camera System Upgrade - Area 2 - Mills WTP - Etiwanda HEP PCS

The existing security camera system used throughout Metropolitan's system has reached the end of its life and is no longer supported. The replacement of cameras and related security systems is crucial at this time to increase operational flexibility, improve security, lower maintenance costs, and ensure regulatory compliance. Delays will result in: 1) undetected incidents such as vandalized, stolen, and damaged equipment, 2) an increase in the yearly maintenance cost, 3) possible penalties, and 4) potential non-compliance with future critical infrastructure security legislation. This project will replace all existing cameras and related security equipment at the Mills plant and Etiwanda Pressure Control Structure.

Mills Basin Solids Removal System Improvement

Currently, the Mills plant removes solids from each sedimentation basin using a bridge-mounted siphon system and discharges the solids to the retention basins. However, the flow cannot be adequately controlled. As a result, excessive amounts of water are often siphoned to the retention basins, causing increased solids drying time and reduced retention basin capacity. This project will upgrade the traveling bridges' solids removal equipment and controls to improve the solids removal process at the Mills plant's Modules Nos. 3 and 4. The new equipment and controls will allow the plant to optimize its solids removal process by simultaneously reducing the amount of water removed from the basin and reducing excessive solids build-up in the basins.

Mills Chemical Tank Farms Rehabilitation

The Mills plant's chemical tank farms house the chemicals, feed equipment, and analytical instruments necessary to treat water. The chemical storage tanks and associated equipment are nearing the end of service life. Most chemical tank farms have been in service for 15 to 20 years. Polymer and fiber-reinforced plastic (FRP) tanks are past the end of the design life of 10 years. The expected life for steel tanks can be several decades long, but once corrosion begins, it rapidly worsens when the chemical and metal are exposed to air. Losing a single tank would, at a minimum, reduce operational flexibility at a local level and put the plant at risk of violating water quality requirements if anything happened to the remaining tanks or the delivery. This project will rehabilitate the chemical storage tanks, equipment, and support infrastructure located within the vicinity chemical tank farms at the Mills plant.

Mills Chlorine Evaporator Replacement

The chlorine evaporators and their associated components have exceeded their useful life and have deteriorated beyond repair. Properly functioning capabilities of all chlorine evaporators are critical to maintaining the feed system's reliability and redundancy. This project will replace end-of-service-life chlorine evaporators, their associated components, and appurtenances to enhance the reliability of the plant's chlorination system.

Mills Chlorine Leak Detection Panels Upgrade

The Mills plant relies on two chlorine leak detection panels to continuously monitor for chlorine leaks, automatically activate safety protocols when needed, and transmit both alarm notifications and concentration level readings to a remote-control room via the SCADA system. These units have reached the end of their service life as the manufacturer has stopped supporting them and no longer manufactures replacement parts. This project will replace the required programmable logic controllers (PLCs) and associated appurtenances.

Mills Electrical Upgrades - Stage 3

The electrical system at the Mills plant has deteriorated through long-term use, is difficult to maintain and repair, and needs improved backup capability. Failure of a single electrical device could impact the treatment process. This project upgrades the electrical system with dual-power feeds to key process equipment to comply with current codes and industry practice, improve plant reliability, and enhance worker safety. The electrical upgrades at the Mills plant will be completed in three stages. Stage 1 is complete and included replacement of obsolete circuit breakers, expansion of the electrical building for UPC-9, installation of new air conditioning system, installation of MCCs and distribution of power feed to chemical feeds systems, washwater return pumps, modules 3 and 4 filter surface wash pumps, and improvement of power reliability for key process equipment. Stage 2 upgrades are complete and include a second incoming 12 kV service from Riverside Public Utilities and upgraded plant's main switchgear and standby generator switchgear. Stage 3 upgrades will install climate control systems and doors at electrical buildings, modify electrical manholes, replace digital metering modules, add fiber optic cabling and high voltage disconnect switches, and modify electrical manholes as needed.

Mills Enhanced Bromate Control Facility

The Mills plant is currently using a temporary system built for bromate reduction. This system has been running successfully and has proven the effective use of chloramines in bromate control and the reduced operational costs over a wider range of influent water quality conditions. This project will replace the temporary feed, metering, monitoring, and injection (chlorine and ammonia) system with a permanent system which will incorporate new doubled-walled piping, double-wall containment, new flow metering, new chlorinators, new analyzers, and new ammonia feed tank. The full implementation of this project will significantly reduce the current operational costs of bromate control as well as provide greater control of bromate formation over a wide range of influent water quality conditions. The project also includes replacement of two existing chlorinators with new units for lower chlorine dosage control flexibility.

Mills Filter Valves Rehabilitation

The Mills plant Modules 3 & 4 were constructed in 1996 and are utilized in coagulation, flocculation, sedimentation, and filtration. During the filtration process, water settles through the filter media and is then collected in the combined filter effluent channel and conveyed to the finish water reservoirs. Modules 3 & 4 have 32 biologically active filters (16 each). The filters are designed for high filtration flow rates while reducing turbidity to ensure a high-quality filtrate. The treatment effluent must also meet water quality regulatory compliance. These filters and their associated equipment are over 26 years old. Due to age and usage, the filter, drain, and backwash valves have corroded, leading to unscheduled maintenance and failures. This project rehabilitates the filter valve systems in Modules 3 & 4, including filter, backwash, drain valves, actuators, and associated equipment.

Mills Fluorosilicic Acid Tank Replacement

The Mills plant relies on two 6,250-gallon cross-linked high-density polyethylene (HDPE) tanks for the storage of fluorosilicic acid. These tanks have a recommended service life of 10 years and have been in service since 2007. Recent inspections have identified leakage at the bolted connections of both tanks. This project will replace the fluorosilicic acid storage tanks with higher-capacity tanks and improved mechanical properties to provide an expected service life of 20 years. The project will also replace coating in the containment area as necessary.

Mills Modules 3 & 4 Basin Rehabilitation

The Mills plant currently has two active treatment modules, Modules 3 and 4, which were constructed in 1996 and include flocculation and sedimentation basins and filters. These modules have a combined capacity to treat flows of up to 220 million gallons per day. Each module performs the critical water treatment processes of flocculation and sedimentation. These two modules have not undergone major rehabilitation since their original construction, and major components and systems of the basins have deteriorated over time and have exceeded their service life. This project will rehabilitate the structure, associated equipment, and systems for both Modules 3 and 4.

Mills Operations Building Upgrade

The Mills Plant Operations Building was constructed as a one-story building in 1976, and a two-story annex was added in 1992. The building houses equipment and storage rooms, a small control room, a laboratory facility, a dedicated treatment plant control center, and office and meeting spaces. Due to the age of the building, the current infrastructure is obsolete and does not meet today's security standards. The building does not have smoke detection and fire alarm monitoring, and there are also no fire sprinklers installed. The HVAC software, controllers, and mechanical equipment are also obsolete, lacking any controls, and have no way for staff to access the programming. This project will upgrade the Mills Operations Building, including replacement of plumbing fixtures, restoration of damaged areas, replacing the HVAC systems to meet Title 24 with temperature monitoring and control, and upgrading security features to meet Metropolitan standards and Department of Homeland Security recommendations.

Mills Ozone Critical Components Upgrade

Metropolitan's five water treatment plants use ozone as the primary disinfectant to reduce the formation of disinfection by-products (DBP) for compliance with the U.S. Environmental Protection Agency's Disinfectant/DBP rule. The Mills plant was the first treatment plant to incorporate ozone into the water treatment process. The ozone generation system at the Mills plant has operated since 2003, and several critical components of the system have exceeded their service life and are no longer supported by the original equipment manufacturer. Continued deterioration of the ozone system could require the plant to switch to chlorine as the primary disinfectant, which would increase the regulated disinfection by-products, trihalomethanes, and halo acetic acid levels. This project will upgrade the critical components of the ozone generation system at the Mills plant.

Mills Ozone HVAC System Refurbishment

This project will refurbish the HVAC system at the Mills plant's Ozone Generation Building. The work encompasses a comprehensive suite of upgrades designed to enhance system performance, improve energy efficiency, and ensure compliance with regulatory standards.

Mills Pavement Refurbishment

The asphalt concrete pavement in most areas of the Mills plant is over 30 years old and has exceeded its useful life. This project will rehabilitate deteriorating pavement, including demolition and removal of existing asphalt pavement, grading, placement of new asphalt, concrete pavement, new crushed aggregate base; re-compaction of existing crushed aggregate base, slurry seal, traffic striping, concrete drainage improvements, and other appurtenant work as required.

Mills Perimeter Security and Erosion Control Improvements

The Mills plant has approximately 14,500 linear feet of perimeter fencing that is primarily a chain link with a height of six to eight feet. The fencing and several of the entry gates are deteriorating and may be vulnerable to security breaches. In addition, stormwater runoff has eroded an area on the southern boundary of the plant. This project will replace 7,700 feet of the existing fence with security fencing along the plant's southern, northern and western boundaries, replace existing guard shack and motorized sliding gate at the Barton Street entrance with motorized double swing gate with associated controls, replace three existing secondary gates with taller security gates with security cameras, and install one security camera at each of the sliding gates. Grading and erosion control improvements, such as installation of v-ditches and flow re-direction, will also be performed to prevent sediment from leaving the site. All improvements will be consistent with Mills plant's architectural design guidelines, and with Metropolitan's approach to facility security.

Mills Raw Water Emergency Bypass

The Mills plant is located within proximity of a number of faults that are capable of generating large earthquakes. In the event of a large earthquake that results in extensive damage to the plant and disables the water treatment capability, the plant does not have an emergency raw water bypass to deliver raw water under a boil water order if such a need were to occur. This project will improve resiliency against severe earthquakes and enhance operational flexibility by constructing a raw water emergency bypass for the Mills plant.

Skinner Project Group

Eastern Region Security Camera System Upgrade - Area 1 - Skinner WTP

The existing security system that serves the Eastern Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, and is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage the available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment at the Skinner plant.

Skinner 480V Circuit Breakers Rehabilitation

The Skinner plant's 480-volt (480V) breakers protect equipment and personnel by cutting power to an electrical circuit when the circuit is overloaded or fails. They are a critical component of the electrical power supply system. Electrical lines, which include 480V circuit breakers, supply power to the ozone facilities, the sulfuric acid tank farm, washwater reclamation plants, and peroxide tank farm. The circuit breakers are reaching the end of their life, and some mechanisms within the breakers are failing. Failing breakers would disrupt water treatment related to those systems. This project will refurbish or replace existing 480V breakers and other appurtenances to keep the Skinner plant reliable.

Skinner Chemical Tank Farm Rehabilitation

The Skinner plant uses tanks to store the chemicals used during the treatment process. Losing a single tank would, at a minimum, reduce operational flexibility at a local level and put the plant at risk of violating water quality requirements. The Skinner chemical tank farms were installed or rehabilitated in the early 2000's. Polymer and fiber-reinforced plastic (FRP) tanks are past the end of their design life of 10 years. For steel tanks, the expected life can be several decades long, but once corrosion begins, it rapidly worsens when the metal is exposed. The Skinner chemical storage tanks and associated equipment are nearing or have reached the end of life. This project will rehabilitate the chemical storage tanks, equipment, and support infrastructure located near the chemical tank farms at the Skinner plant.

Skinner Electrical Equipment Building No. 3 Roof Upgrade

The Skinner Electrical Equipment Building No. 3 (EB3) was constructed during the second plant expansion in 1983 and houses two critical unit power centers (UPCs), which power the chlorine building and two chemical tank farms. The building has a screw type metal roof, and recent inspections have identified several water leaks through the ceiling. Water intrusion in EB3 poses a significant risk of damaging the UPCs, which could result in loss of power to critical water treatment systems. This project will replace the roof of the EB3 and other appurtenances as required to ensure that critical electrical equipment is adequately protected.

Skinner Fire Hydrant System Expansion

The installation of a new Battery Energy Storage System (BESS) at the Skinner plant requires improvements to the plant's fire protection system. This project constructs a new fire hydrant, water pipes, and other improvements to provide a permanent fire protection water source for the Skinner's solar facility and BESS to comply with the fire codes.

Skinner Fluorosilicic Acid Tank Replacement

The Skinner plant's fluorosilicic acid tanks will be removed and replaced with two new high-density polyethylene (HDPE) tanks with related appurtenances as required. To minimize changes in the tank farm, the new tanks will match the dimensions and capacity of the existing tanks. The scope will include modifications to the tank farm to provide access during construction and associated piping work to connect the new storage tanks.

Skinner Medium Voltage Protective Relay Replacement

The Skinner plant uses circuit breakers and associated protective relays to protect the plant and control the power distribution. The protective relays are used to isolate only the affected area in the event of a power disturbance. Failure of any of the protective relays may leave the entire plant in the dark and unable to treat water during a power disturbance event. The plant has exhausted all spare units, and the current protective relays installed are the original relays and are no longer supported by the manufacturers. This project will upgrade the existing sixty-six (66) obsolete microprocessor protective relays, including associated equipment and panel doors at the Skinner plant.

Skinner Ozone Contactor Building Off-Gassing Improvements

The Skinner plant's ozone system features ozone contactors where the disinfection of water takes place. Ozone gas is generated in the ozone generator building and routed to the main header on the roof of the ozone contactor building, which then splits into individual contactor headers. Ozone is fed into each contactor through a diffuser array at the bottom of the chambers within the contactor. This allows the ozone gas to spread throughout all the chambers in a pattern of fine bubbles to maximize the contact with raw water. The excess ozone retained in the water is being released into the atmosphere through the effluent gates or vents on the roof of the contactor building. Under certain conditions, this can result in regulated and reportable excess ozone that lingers on the roof deck, preventing plant staff from performing preventive and corrective maintenance on the roof, as it's unsafe for staff to be around high levels of ozone. This project will determine the location and cause of ozone off-gassing and develop and implement solutions to reduce ozone off-gassing, including modifications to the Skinner plant's ozone contactor building.

Skinner Ozone Contactor Roof Elastomeric Coating

Leakage through cracks in Skinner plant's ozone roof deck was found in 2010. Cracks in the concrete roof deck can allow rain and nuisance water to be drawn down into the contactors, which then mixes with the freshly ozonated water, creating a potential cross-connection. The water and air penetrating through the existing concrete roof decks expose the rebar and structural steel in the decks, creating the potential of eventual structural failure to the roof decks. In addition, to keep the constant vacuum in the contactors, the Ozone Destruct Units have to work excessively, which consumes additional electricity and affects the Destruct Units' reliability and long-term life span. This project will abrasive blast, apply primer, and coat 61,000 square feet of the Ozone Contactor Building concrete roof deck with an elastomeric coating to reduce potential structural damage and operational impact, as well as remove and replace concrete joint sealant and backer on the ozone contactor building roof.

Skinner Ozone Critical Components Upgrades

Metropolitan's five water treatment plants use ozone as the primary disinfectant to reduce the formation of disinfection by-products (DBP) for compliance with the U.S. Environmental Protection Agency's Disinfectant/DBP rule. Several critical components of the ozone generation system at the Skinner plant have exceeded their service life and are no longer supported by the original equipment manufacturer. Continued deterioration of the ozone system could require the plant to switch to chlorine as the primary disinfectant, which would increase the regulated disinfection by-products known as trihalomethanes and haloacetic acids. This project will rehabilitate and upgrade the critical components of the ozone generation system at the Skinner plant.

Skinner Ozone Gas Valve Replacement

Ozone disinfection has been the primary water disinfection process at the Skinner plant since 2010. This process relies on the proper functioning of valves in the ozone feed, destruct, and off-gas systems. A valve failure in any of these systems can compromise or halt the plant's primary disinfection process, disrupting plant operations. To date, 10 of the plant's over 60 ozone gas valves have failed, requiring repairs. This project will replace or refurbish all valves in the ozone feed, destruct, and off-gas systems to enhance overall plant reliability.

Skinner Plant 1 and Ozone Lab Turbidity Meters Replacement

Turbidity meters are required for water quality reporting. The current turbidimeters at Skinner Plant 1 (filter effluents) and the ozone laboratory (plant influent and return washwater) were installed in 2014. The original equipment manufacturer no longer supports the current turbidimeter model, and the plant will no longer be able to maintain the existing turbidimeters when spare part supplies run out. Regulatory requirements do not allow turbidity meters to be out of service for any longer than 5 days. Long lead times may mean a reduction in plant capacity if a turbidity meter fails. This project will replace all remaining obsolete turbidimeters, controllers, and other appurtenances within the Skinner plant.

Skinner Plant 1 Basin Rehabilitation

The Skinner Plant 1 basins consist of three treatment modules and have a combined capacity to treat flows of up to 240 million gallons per day. Modules 1 and 2 began operating in 1976, while Module 3 was added in 1979. Each module performs the critical water treatment processes of flocculation and sedimentation. The Plant 1 basins have not undergone major rehabilitation since their original construction, and major components and systems of the basins have deteriorated over time and have exceeded their service life. This project will rehabilitate the structure, equipment, and systems for the Skinner Plant 1 basins.

Skinner Plant 1 Filter Rehabilitation

Skinner Plant 1 consists of three treatment modules, each featuring flocculation, sedimentation, and filtration unit processes. Plant 1 was constructed in 1977 and is rated to treat flows as high as 240 mgd. Several filter system components in Plant 1 have become obsolete or have deteriorated over time. Filters are a necessary part of the treatment process, and a failure of the filter system would reduce the treatment capacity at Plant 1. This project will rehabilitate all the Skinner Plant 1 filters to improve their performance and enhance treatment plant reliability. The rehabilitation work includes upgrades to the structure, equipment, and systems for the filters.

Skinner Plantwide Chemical Flow Meter Replacement

The chemical flow meters at the Skinner plant were installed in 2007 with a plant-wide chemical system upgrade and chlorine building construction. The manufacturer no longer supports these flow meters. As a result, replacement parts are no longer available, significantly affecting the staff's ability to maintain each flow meter. The Skinner plant's chemical flow meters operate in real-time and report current chemical flow and feed rates to the SCADA system. The operators use flow meter readings to adjust the chemical dosages. This project will procure and install replacements for all remaining obsolete chemical flow meters within the Skinner plant.

Skinner Plantwide Potable Water System Rehabilitation

Skinner's potable water system is a combination of its original 1970s-era construction, as well as a major system upgrade that was part of the 2005 plant expansion. Potable water is necessary for drinking water, sewer, and chemical feed system carrier water. Plant staff have encountered several leaks along the potable water system, many of which have been difficult to isolate for repair due to broken or inoperable valves. To enhance the safe and reliable operation of the Skinner plant, this project will rehabilitate or replace valves, piping, and other equipment serving the Skinner plant's potable water system.

Skinner Potable Water Pumps VFD Rehabilitation

The Skinner plant's variable frequency drive (VFD) potable pumps are essential to multiple plant processes, including service water for required and critical treatment chemical injections (e.g., chlorine), water for safety showers and facilities such as bathrooms and kitchens, and surface washwater for filters. This project rehabilitates all obsolete VFD pump systems at the Skinner plant including the VFDs, the potable pumps, and other necessary appurtenant components.

Skinner Potable Water System Expansion

Skinner plant's potable water system is required to operate the plant's safety systems, including fire protection and safety showers. Continuous function of these systems is necessary to comply with Cal/OSHA requirements due to the bulk storage of hazardous chemicals onsite. Potable water is also required for health and sanitation needs, such as for drinking water and sewer. These functions are interrupted during a full plantwide shutdown and dewatering of the plant's finished water reservoir. This project will install a new potable water line and any other necessary appurtenances from an Eastern Municipal Water District water main to the existing Skinner potable water system to maintain the health, safety, and sanitation of the Skinner plant by maintaining the continuous function of Skinner's fire protection, safety shower, drinking water, and sewage systems.

Skinner Raw Water Emergency Bypass

The Skinner plant is located within proximity of a number of faults that are capable of generating large earthquakes. In the event of a large earthquake that results in extensive damage to the plant and disables the water treatment capability, the plant does not have an emergency raw water bypass to deliver raw water to the treated water lines under a boil water order if such a need were to occur. This project will improve resiliency against severe earthquakes and enhance operational flexibility by constructing a raw water emergency bypass to treated water lines for the Skinner plant.

Skinner Service Building No. 1 Rehabilitation

This project will replace the sanitation facilities and roofing system and improve the staff work/meeting/lunch areas at the Skinner Building No. 1. The scope includes the following: replace the roofing system; replace/upgrade all mechanical, electrical, plumbing, and HVAC components consistently with current building codes; comply with ADA requirements; improve employees shared facilities and offices (bathroom, locker rooms, break rooms, meeting rooms, cubicles); and abate all hazardous materials. The option to replace the building will be considered during the early phases of this project.

Skinner Sodium Hypochlorite Tank Replacement

The Skinner plant relies on two cross-linked high-density polyethylene (HDPE) tanks for storing sodium hypochlorite, which serves as initial backup disinfection to ozone treatment, ensuring that primary disinfection requirements are continuously met during unexpected events such as power outages. The tanks are 10 feet in diameter and 12 feet tall, with a storage capacity of 6,250 gallons each. The tanks have been in service since 2007 and have exceeded their recommended service life of 15 years. Recent inspections revealed leakage from a propagating crack in one of the two tanks, which was repaired on a temporary basis. This project will replace the two existing sodium hypochlorite tanks and their associated equipment, such as piping, pumps, and sensors, necessary for the operation of the sodium hypochlorite system.

Skinner Solids Waste Handling Rehabilitation

Efficient recovery of water from residual solids is critical for the operation and efficiency of the Skinner plant. The plant's dewatering and solids waste handling system recovers water by processing large volumes of residual solids, producing dry solids for disposal. Housed in the Dewatering Building, its three belt presses are critical to its continual function. The belt presses were constructed and installed in 2003 and are increasingly undergoing frequent maintenance and repairs due in part to their exposure to a corrosive environment. This project will upgrade plant's dewatering and solids waste handling equipment and facilities to ensure the continued functionality of the solids handling system.

Skinner Sulfuric Acid Tank Farm Transfer Pipe Rehabilitation

This project will rehabilitate the sulfuric acid transfer and feed systems, which have experienced a leak due to their condition, to improve safety and warning mechanisms in the transfer line.

Skinner Washwater Reclamation Plant 2 Rehabilitation and Return Wash Pumps Replacement

The Washwater Reclamation Plant 2 (WWRP-2) processes washwater from the treatment modules at the Skinner plant. It reclaims water used in filter backwashes and sedimentation basin sludge processing during treatment. Solids settle out of the water, and the reclaimed water is returned to the inlet control structure at the ozone contactor building to be put through the treatment process. The WWRP-2 is the oldest working reclamation plant on site. Much of the equipment and infrastructure has deteriorated with time. In 2011, minor modifications to the WWRP-2 were made during the plant's Oxidation Retrofit Program, but other improvements were not addressed. Over time, WWRP-2 has experienced repeated equipment failures. This project rehabilitates the WWRP-2, including replacement of return wash pumps and improvements of associated equipment as required to meet Metropolitan standards.

Weymouth Project Group

Water Quality Demonstration Plant Rehabilitation

The Water Quality Demonstration Plant (WQDP), formerly known as the Oxidation Demonstration Plant was placed into service in 1992 to perform demonstration-scale testing of ozone processes in advance of ozone retrofits at Metropolitan's water treatment plants. Since testing to support the ozone implementation was completed, this facility has been used continuously to determine the feasibility and application of emerging water treatment processes. The 5.5 MGD plant provides a demonstration-scale test facility that is approximately a 1:100 scale version of Metropolitan's full-scale plants and is needed to ensure that Metropolitan continues to meet all current and future drinking water regulations. Following 30 years of continuous use, many equipment items at the testing facility have deteriorated and become less reliable. This project will remove obsolete equipment; install new ozone equipment, chemical systems, a new liquid oxygen (LOX) storage tank, and associated equipment; install variable frequency drives (VFDs) for the backwash pumps; rehabilitate secondary containment system for all chemicals used at the plant; and upgrade other electrical, mechanical, instrumentation, and control systems to make the plant operation more efficient.

Western Region Security Camera System Upgrade – Area 8

The existing security system that serves the Western Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will replace the existing security system with a new enhanced camera system and install other security-related equipment in this region to enhance theft and trespassing detection and deterrence, lower maintenance costs, and better leverage the available bandwidth and data storage capabilities to provide better video feeds and recordings. This project will replace all existing cameras and related security equipment at the Weymouth plant and Michael J. McGuire Water Quality Laboratory.

Weymouth Administration and Control Buildings Seismic Upgrades

The Weymouth Administration Building has been in service since 1941 and is an essential facility that supports treatment plant operations. The building is comprised of two separate reinforced concrete structures: a two-story structure of approximately 15,200 square feet that houses offices, support spaces, restrooms, a demonstration room, and a water quality laboratory; and an adjacent, four-story structure (typically referred to as the Control Building) of approximately 20,000 square feet that houses the plant control room, chemical piping systems, lockers, conference rooms, and an equipment storage area. The plant's outlet conduit passes underneath the building. This project will strengthen the two structures that comprise the Administration Building to increase their capability to withstand a major earthquake and retain their functionality as an essential facility. Seismic upgrades include the addition of micro-piles to supplement existing caisson footings, reinforcement of the walls for the plant's filter outlet channel; filling of below-ground openings with structural concrete, and addition of new shear walls and drag beams. Electrical, mechanical, information technology and telecommunications and plumbing components will also be reconfigured and modernized. The plant's water quality sampling laboratory and office spaces will be updated and optimized where required. This project will relocate existing chemical lines into a new trench and also upgrade the Weymouth plant's natural gas system, which serves all buildings throughout Metropolitan's La Verne site, and install a new fire protection system consistent with California Fire Code Standards.

Weymouth and Diemer Solids Handling PLC Replacement

This project will replace obsolete programmable logic controllers (PLC) at the Diemer and the Weymouth plants, including main, dry polymer, and belt press units. The project scope includes modern PLC replacements, programming, SCADA integration, and startup testing to ensure the continued reliability and operational integrity of solids dewatering systems.

Weymouth Aqua Ammonia and Caustic Tank Farm Upgrades

The Filter Effluent Ammonia and Caustic Tank Farm at Weymouth is located on the northwest side of the plant. This tank farm was completed in 1997 and houses three aqua ammonia tanks and four caustic soda tanks. Aqueous ammonia is injected into the Combined Filter Effluent channel after chlorine to form chloramines to disinfect the water. Metropolitan practices chloramination to meet federal and state water quality standards for the total trihalomethane maximum contaminant level. Caustic soda is also injected into the Combined Filter Effluent channel to adjust and stabilize the pH to aid in preventing corrosion problems in the distribution system. A rapid seismic evaluation recently conducted by Metropolitan staff revealed that the steel moment frames and braced frame connections, including their lateral bracings, will not withstand a major earthquake. Further detailed seismic evaluation will be conducted to develop upgrade options. This project will upgrade the Weymouth Filter Effluent Ammonia and Caustic Tank farm to meet current seismic standards. This project will also include mechanical, instrumentation, and electrical upgrades at the tank farm.

Weymouth Basins 1 and 2 Rehabilitation

Basins Nos. 1 and 2 were built in 1939 as part of the original Weymouth plant construction. Each basin has a treatment capacity of 57.5 million gallons per day. These basins were originally designed to treat Colorado River Water (CRW). With the addition of State Project Water (SPW), the plant periodically requires higher coagulant dosages than CRW. As a result, the basins operate at a higher solid loading rate than the rate for which the basins were originally designed, impacting basin operations and particle loading to the downstream filters. Most of the equipment used in Basins Nos. 1 and 2 has deteriorated over time and exceeded its service life. In addition, the adjacent Filter Building No. 1 experiences accumulation of sludge on the washwater sump floor from backwash operations and requires manual labor to maintain the sump. This project includes the rehabilitation and upgrades to the structure, equipment and systems inside and adjacent to Basins Nos. 1 and 2, and rehabilitation of the washwater sump floor at Filter Building No. 1.

Weymouth Basins 1 to 4 Inlet Channel Structural Upgrade

Constructed in 1940, the Weymouth plant's inlet channel located within basins 1 to 4 is a concrete box culvert that carries flow from the plant's rapid mixing structure to feed the flocculation and sedimentation basins. A structural assessment of the basin inlet channel has found that it is structurally inadequate to resist a strong earthquake. The assessment also recommends separating the inlet channel of Basins 1 and 2 from Basins 3 and 4 to provide independent rapid mix trains to each of the basin's pairs. A failure of the inlet channel would cause the Weymouth plant to shut down or limit its treatment capacity until the damage can be repaired. This project will structurally upgrade the inlet channel and reconfigure flow from the rapid mix structure to the basins.

Weymouth Buildings 2 and 3 Roof Replacement

Some of the quadrants in Buildings 2 and 3 were converted to storage rooms many years ago. Leaks from the roof have caused damage to the flooring system in these rooms. Further rain events without replacing the roof would result in additional damage to the flooring and may result in mold if the rooms are not ventilated afterwards. Replacing the roof will prevent leaks, mold intrusion, health and safety concerns, and additional damage to these historical buildings. This project will replace Weymouth Buildings 2 and 3's existing built-up asphalt roofing system (approximately 20,000 square feet), roof drains, vents, and other associated components.

Weymouth Chemical Tank Farms Rehabilitation

The Weymouth plant's chemical tank farms house the chemicals, feed equipment, and analytical instruments necessary to treat water. The chemical storage tanks and associated equipment are nearing the end of service life. Most chemical tank farms were constructed or rehabilitated between 2000 and 2010. Polymer and fiber-reinforced plastic (FRP) tanks are past the end of the design life of 10 years. The expected life for steel tanks can be several decades long, but once corrosion begins, it rapidly worsens when the chemical and metal are exposed to air. Losing a single tank would, at a minimum, reduce operational flexibility at a local level and put the plant at risk of violating water quality requirements if anything happened to the remaining tanks or the delivery. This project will rehabilitate the chemical storage tanks, equipment, and support infrastructure located within the vicinity chemical tank farms at Weymouth plant.

Weymouth Chlorine Delivery Railroad Tracks Replacement

The Weymouth plant receives chlorine deliveries via rail cars. The railroad spur to the Weymouth plant was originally installed in the 1930s to transport material and equipment for the construction of the Weymouth plant. This project will replace the track dedicated to the Weymouth plant, upgrade traffic control devices and signals at each track crossing to comply with Burlington Northern Santa Fe (BNSF) standards and design requirements and City of La Verne safety codes, install a new sidewalk adjacent to existing tracks, and install new railcar scales.

Weymouth Chlorine Maintenance Shop Expansion

With the completion of the Weymouth Chlorine System Upgrades project, the amount of equipment to maintain has increased, resulting in insufficient space in the existing shop to perform necessary maintenance and accommodate storage of equipment and spare parts. Storage cabinets and electrical panels have been added where desks and workspaces were located. Also, due to the space limitations, spare equipment is currently stored in the two storage bays, which poses the potential of the equipment being compromised in the event of a leak. This project will expand the existing Chlorine Maintenance Shop, including a room addition to ensure adequate working space and storage to address these space, storage, and maintenance needs to reliably maintain the chlorine equipment for the expanded chlorine process.

Weymouth Dry Polymer System Upgrade

Cationic polymers are used as a coagulant aid for the washwater reclamation plant, and nonionic polymers are needed to meet filter performance regulations when treating high State Project Water (SPW) blends. Depending on the quality of the source water, both dry polymers may need to be applied simultaneously. However, the current dry polymer system only has one mixing train available. Since these feed systems share a common polymer mixer, it is difficult to operate both systems at the same time. Additionally, the existing dry polymer mixer uses a type of batch mixer that can only make a single batch at a time and frequently clogs. The mixer is housed in a metal structure that does not meet current seismic codes, although it was constructed to meet the codes at the time of construction. This project will construct a new dry polymer mixing facility. The project scope includes construction of a new building designed to meet current seismic standards, installation of a dry polymer mixing system to allow simultaneous mixing and feeding of cationic and nonionic polymers, independently, and construction of a covered containment area to house feed equipment and new polymer storage tanks.

Weymouth Filter Valve Replacement

The original filter valves in Building No. 1 were installed in the 1940s and were replaced in the early 1970s with similar valves. The original filter valves in Building No. 2 were installed during the second plant expansion in 1962 and were similar in dimension to the valves in Building No. 1. This project will replace all filter valves and actuators in both Filter Building Nos. 1 and 2 with Metropolitan-furnished AWWA-standard valves and current industry-standard actuators. This project will also replace or refurbish appurtenant equipment, which is ancillary to the reliable operation of the filter valves, such as flow meters, underdrain valves, electrical and control systems, instrumentation, pipes, and other equipment. Under this project, Metropolitan has procured 236 butterfly valves with actuators to replace the existing filter valves and actuators at the Weymouth plant. Replacement of valves and actuators in Filter Building No. 2 has been completed. Replacement of valves and actuators in Filter Building No. 1 is scheduled to proceed within the current biennium.

Weymouth Fluorosilicic Acid Tank Farm Improvements

The Weymouth plant relies on two 6,250-gallon cross-linked high-density polyethylene (HDPE) tanks for the storage of fluorosilicic acid. These tanks have a recommended service life of 10 years and have been in service since 2007. A recent inspection has identified cracks on the interior floor of one tank. Similar deterioration is expected in the other tank. This project will replace the fluorosilicic acid storage tanks to provide an expected service life of 20 years. In addition to tank replacement, improvements to the overall tank farm, including piping, equipment, and instrumentation adjacent to the fluoride tanks, are required to meet Metropolitan's latest safety and operational standards.

Weymouth Fueling System Upgrades

The Weymouth plant currently utilizes an underground storage tank (UST) fueling systems that provide fuel for servicing fleet vehicles, equipment, and generators that provide emergency backup power at the facility. This project will refurbish the Weymouth plant's UST fueling systems, including storage tanks, above and below ground piping, conduit, control and monitoring systems, vent systems, housings, and related appurtenances. This project will also evaluate whether aboveground storage tanks are a viable option.

Weymouth Ozone Contactor Building Off-Gassing Improvements

The Weymouth plant's ozone contactor building features four 10-chamber ozone contactors for ozone disinfection. Ozone gas is generated in the ozone generator building and routed to the main header on the roof of the ozone contactor building, which then splits into individual contactor headers. Ozone is fed into each chamber through a diffuser array at the bottom of the chambers within the contactor. This allows the ozone gas to spread throughout all the chambers in a pattern of fine bubbles for contact with raw water. The excess ozone not being used in the contactors is being released into the atmosphere through the effluent gates or vents on the roof of the contactor building. This results in ozone lingering on the roof deck and wafting over the side of the building, down to the ground level, and into the building gallery, which prevents plant staff from performing preventive and corrective maintenance on the roof or in the gallery, as it's unsafe for staff to be around high levels of ozone. This project will determine the location of ozone off-gassing and develop and implement solutions to reduce ozone off-gassing, including modifications to the Weymouth plant's ozone contactor building.

Weymouth Ozone Contactor Effluent Channel Bypass

The Weymouth plant does not have redundancy or the ability to bypass the ozone contactor effluent channel to deliver raw water to the water treatment process. A full plant shutdown will be required to perform necessary rehabilitation, inspections, and emergency repairs within the ozone contactor effluent channel. This project will improve and enhance operational flexibility by evaluating and implementing bypass or redundancy options.

Weymouth Ozone Contactor Expansion Joint Improvements

The Weymouth plant's ozone contactor building features four individual concrete contactors arranged in series along their length and two galleries that house essential instrumentation and control equipment. The building was designed with a one-inch-wide expansion joint located between the walls of Contactors 2 and 3. The expansion joint allows for thermal expansion and contraction resulting from temperature fluctuations. Water leakage and deterioration of caulking located in the ozone contactor's joint have been observed during routine inspections since 2021. This project will determine the source of the water leakage and implement solutions to eliminate leakage, including replacement of the existing expansion joint between Contactors 2 and 3, addition of a water stop, and minor structural modifications of the contactor/channel concrete walls to accommodate the joint replacement and water stop installation.

Weymouth Sedalia Avenue Perimeter Improvements

This project will upgrade the Weymouth plant's western perimeter along Sedalia Avenue by adding a new perimeter wall and related site improvements, including lighting, security, and access. This project will also include a comprehensive siting study to evaluate options to further develop the western perimeter and the potential relocation of districtwide control center functions to La Verne.

Weymouth Solids Handling Rehabilitation

Residual solids generated during the water treatment process are sent to the gravity thickeners to separate water from the solids before being sent to belt presses in the solids handling facility for further dewatering. Dewatered solids are then pumped to elevated hoppers for storage prior to off-site disposal. Mechanical equipment at the solids handling facility has experienced frequent failures, and the facility itself requires full-time staffing to operate. Regular failures occur with the system's bridge breakers, which break apart dewatered solids so that they can be pumped to the hoppers. The facility also experiences frequent issues with the hoppers. After the belt presses dewater the solids, polymer solution is added to the discharge side of the cake pumps to facilitate pumping. This produces a cake-like material that often sticks to the hoppers' mechanical components and impedes opening and closing of the hopper gates. Rehabilitation of the solids handling facility is necessary to maintain its long-term function, reduce maintenance and operational labor costs, and reduce chemical costs.

This project will identify and implement the most feasible rehabilitation of the facility and to evaluate the capacity of the facility's decant lines. Options for rehabilitation include: (1) eliminating the existing cake pumps and installing a conveyor belt system to transfer the dewatered solids to the hopper system without the addition of liquid polymer; (2) transferring solids to a separate storage area where the solids are held prior to being hauled offsite. This project will also evaluate modifications within the building that would facilitate future equipment repairs and replacement; and (3) constructing sludge lagoons that would replace the belt press facility as the main solids handling facility to process residual solids.

Weymouth Thickeners Upgrades

The Weymouth plant solids thickeners receive residual solids from the water treatment plant collector system and the washwater reclamation plant (WWRP). There are two identical 58-foot diameter thickeners and two newer identical 60-foot diameter thickeners located at the north end of the plant. Each thickener comprises an inlet well, circular basin, sweep arms and drive motor, a sludge removal hopper, and supernatant weirs. Residual solids enter the thickeners in the inlet well, settle, and accumulate at the bottom of the basin. The thickened solids are then scraped into the sludge removal hopper and pumped into one of the three belt presses at the solids handling facility. A rapid seismic evaluation of the thickeners and thickened solids pump room was recently conducted by Metropolitan staff, confirmed that the supports of the scraper blades comply with the strength design. However, the perimeter wall does not meet the strength design criteria under the current standards and is inadequate in the flexure capacity. This project will upgrade the Weymouth thickeners to meet current seismic standards. This project will also include mechanical, instrumentation, electrical, and associated upgrades.

Weymouth Wheeler Gate Security Improvements

Construction vehicles and chemical delivery trucks access the Weymouth plant through the Wheeler entrance gate. This project will provide safety and security improvements to the Weymouth plant's Wheeler gate, including construction of a new guard enclosure; improved lighting, security cameras, and communication features; crash-rated gates at vehicle and train entrances; perimeter wall and fencing along Wheeler Avenue; chemical delivery staging and containment area; traffic lane improvements, including lane widening and physical security features; and vehicle rejection turn-about lane. This project will also incorporate Metropolitan's current safety standards into the plant's vehicle traffic routing.

Water Treatment – General Project Group

CUF Dechlorination System Upgrade

The chemical unloading facility (CUF) is used to transfer liquid chlorine from railcars to cargo trailers for delivery to Metropolitan facilities. The goal of this project is to enhance compliance with discharge regulations and allow the transfer of liquid chlorine from rail cars to cargo trailers to occur over a wide range of operating conditions. This project will evaluate available technologies; perform a pilot study to determine the best technology; and explore methods and technologies of neutralizing chlorine to improve chlorine transloading ability throughout the year. This project will upgrade the existing system that neutralizes chlorine at CUF; implement safety-related infrastructure required to improve temperature and pressure conditions and relief equipment for trailers; and enhance CUF electrical reliability. This project will be staged to first rehabilitate the existing system to continue to operate the facility reliably. The second stage will implement a larger facility infrastructure upgrade based on study recommendations to provide an enhance system to handle a wide range of operating conditions.

CUF Railroad Track Rehabilitation

The chemical unloading facility (CUF) is used to transfer a liquid chemical from rail cars to cargo trailers for delivery to Metropolitan facilities. The railroad track for used was originally constructed in the 1920s. The recent inspection of the rail revealed deterioration and permanent deformation. Furthermore, the Federal Railroad Administration is expected to begin mandating the use of heavier railcars, which will further contribute to the deterioration of the railroad tracks. This project will enhance safety and reliability of operations by removing the deteriorated railroad track components, replacing them with new components, grading adjacent dirt areas to improve drainage and control erosion, and other appurtenant work as required.

Eastern Region CUF Security Camera System Software/Hardware Upgrade

The existing security system that serves the Eastern Region of Metropolitan's distribution system requires frequent maintenance, is obsolete, is not integrated with the current enterprise system, and its coverage is incomplete. This project will upgrade the security software and hardware at the CUF site to modernize the communication infrastructure and ensure seamless daily operation.