



Engineering, Operations, and Technology Committee

3/9/2026 Committee Meeting

6c

Subject

Integrated Strategy for Infrastructure Reliability Progress Update

Executive Summary

In April 2025, Metropolitan staff initiated a series of workshops to foster collaboration with member agencies and develop broad agreement on a pathway for enhancing regional reliability, focusing on new infrastructure needs and system improvements. These workshops are intended to develop an Integrated Strategy for Infrastructure Reliability (ISIR). To date, four ISIR workshops have been conducted, during which staff and member agency representatives developed the process goals and objectives, discussed methodologies, reviewed relevant infrastructure development policies, and provided updates on ongoing activities.

The overall planning effort is expected to be a two-year process, during which staff will propose an integrated strategy, including recommendations for policy adjustments and future infrastructure investments. The ISIR workshop series with member agencies is ongoing, and staff will provide periodic updates to the Board and seek feedback.

Fiscal Impact

None

Applicable Policy

Not applicable

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

Not applicable

Details and Background

Background

To ensure continued regional reliability, Metropolitan periodically conducts system evaluations to assess its ability to store and convey water under evolving conditions. These evaluations also identify and assess infrastructure improvements and programs that could enhance water supply and improve delivery flexibility. In response to recent periods of extreme weather variability associated with climate change and impacts from natural hazards, staff are undertaking several studies to reassess the region's water system reliability with a focus on new infrastructure needs and system improvements.

Following discussions with the Business Model Engineering Subgroup, in March 2025, staff proposed a series of workshops to coordinate these ongoing and planned studies and to support the development of an ISIR. The purpose of the ISIR workshops is to foster collaboration between Metropolitan and its member agencies and to build broad agreement on a path forward for enhanced regional reliability. Following multiple iterations and

feedback from member agencies, the goals and objectives of the ISIR workshop series have been defined as follows:

- Goals
 - Identify infrastructure improvements that increase resilience, reduce vulnerabilities, and ensure reliable water service for all member agencies.
 - Develop a broad agreement on a draft Integrated Strategy for Infrastructure Reliability (ISIR) framework for Metropolitan Board consideration.
- Objectives
 - Establish and refine a collaborative workshop process to inform planning and strategy development.
 - Promote a common understanding of key concerns related to infrastructure reliability among stakeholders.
 - Review the Level of Service elements and policies, and identify any areas that may require board consideration.
 - Investigate system operational challenges for meeting regional demand, including infrastructure capacity constraints, invasive mussels, water quality issues (e.g., nitrification), and spatial storage limitations.
 - Evaluate regional flexibility to withstand unplanned Metropolitan service disruptions and identify strategies and mitigation measures for board consideration.
 - Promote a common understanding of infrastructure-related policies.

The ISIR participants also agreed to incorporate two additional activities currently being undertaken by Metropolitan into the ISIR objectives – the Equitable Supply Reliability Projects and the Strategic Infrastructure Resilience Strategy. Including these activities in the ISIR process will create a more efficient and coordinated framework by bringing all planning efforts, including reliability and resiliency initiatives, under a single umbrella. This approach will enable participants to view upcoming activities holistically.

There have been four ISIR workshops to date. The workshops have covered the goals and objectives, methodology, policy discussions, and updates on proposed and ongoing activities. The following is a summary of the discussion items from each workshop.

Workshop #1 – April 28, 2025

- Discussed proposed workshop goals, objectives, scope, and approach.
- Discussed the scope of this working group compared to the CAMP4W and the Finance and Water Resources Ad hoc working groups.
- Presented proposed and ongoing activities.

Workshop #2 – June 25, 2025

- Presented proposed ISIR Goals & Objectives and solicited feedback from the group.
- Presented major strategic policy milestones in Metropolitan's history related to infrastructure development for providing services to member agencies, with the intent to:
 - Chronicle the historical development of Metropolitan's system and provide a context for the evolution of policies.
 - Discuss the extent to which current policies meet the region's development needs and identify any necessary modifications, improvements, or clarifications.
- Discussed the need to document these policies and history in a single document for future reference.

Workshop #3 – September 19, 2025

- Solicited comments on revised ISIR Goals and Objectives, with no further comments received.
- Presented the purpose and outline of Metropolitan's Infrastructure Policy Reference Guide that is under development. The Reference Guide is intended to be a living document that serves as a reference to the board's adopted infrastructure policies and the subsequent practices that established precedents for future applications.
- Provided updates on Equitable Supply Reliability Projects/Actions (Surface Water Storage, Regional East/West Conveyance, Sepulveda Feeder Pump Stations Stage 2, and Near-term Project Status Updates), System Flexibility Study, Operational System Overview Study, Spatial Storage Assessment, and Coordination with CAMP4W.

Workshop #4 – January 23, 2026

- Provided updates on the development of equitable supply reliability-enhancing projects, Surface Storage Study, Sepulveda Feeder Pumping Operation (Stages 1 and 2), and Regional Conveyance Study.
- Provided an update on the System Flexibility Study, including coordination with member agencies to collect necessary data and a proposed methodology to assess the impacts of an extended period of outage due to natural hazards.
- Provided an update on the Operational System Overview Study, including the steps to identify systemic issues and the coordination with internal stakeholders.
- Discussed an operating scenario run to demonstrate the effectiveness of near-term drought mitigation projects in a three-year drought sequence, and the need for a balanced portfolio including both supply and conveyance projects to sustain a more extended drought. The findings would inform the CAMP4W process in portfolio development.

Proposed and ongoing activities that have been presented within the workshops include the following:

- **Equitable Supply Reliability Identification** – The purpose of this process is to identify areas within the Metropolitan system that may not have access to available supplies under certain system constraints. Infrastructure development policies guide the determination of what constitutes a system constraint and require the development of mitigation measures. A Metropolitan Infrastructure Policy Reference Guide is being developed following the workshop discussion.
- **System Flexibility Study** – The System Flexibility Study is being conducted in two phases. Phase 1 will assess the ability of Metropolitan's member agencies to withstand short-duration outages of up to seven days to evaluate operational reliability. Phase 2 focuses on a longer-duration outage with the goal of evaluating regional resilience against natural hazards. Both phases consider the combined system flexibility of Metropolitan and the member agency to respond to outages and will identify options to improve flexibility.
- **Operational System Overview Study** – The purpose of this study is to investigate Metropolitan's system to address operational challenges effectively. In contrast to previous system overview studies, which focused on population growth and projected demand increases, this study will emphasize operational system challenges and capacity constraints through a comprehensive approach that integrates needs from operations, supply management, water resources, engineering, and input from member agencies. Due to aging infrastructure and increased demands on the system, Metropolitan has an increasing need to refurbish and replace its existing assets in a timely and cost-effective manner. The study results will inform Metropolitan's Capital Investment Plan (CIP) program and facilitate its planning and execution.
- **Spatial Evaluation of Regional Storage Portfolios** – The purpose of this study is to evaluate storage assets and identify system considerations to assess the effectiveness of the spatial distribution and the adequacy of emergency storage.

- **Equitable Supply Reliability Projects** – This has been an ongoing effort to identify and implement equitable supply reliability projects to mitigate future droughts in the State Water-dependent area (SWPDA) and improve regional supply reliability. Projects that meet the CAMP4W criteria for evaluation are considered within that process. Below are the current projects and studies.
 - **Rialto Pipeline Water Supply Reliability Improvement Projects** – Four separate projects were approved by the Board to achieve the improvement. Each project provides incremental infrastructure improvements that significantly increase operational flexibility and enable the movement of water from DVL and, potentially, the Colorado River Aqueduct into the Rialto Pipeline. With the completion of the Badlands Tunnel Surge Protection Facility described below, Metropolitan can deliver water to the San Bernardino Valley Municipal Water District to facilitate the exchange of State Water Project (SWP) supplies.
 - **Wadsworth Pump Plant Bypass Line** – This project constructs a pipeline connecting the Wadsworth Pump discharge pipeline to the Inland Feeder at the Wadsworth Pumping Plant. Construction is expected to be completed in the first half of 2026.
 - **Badlands Tunnel Surge Protection Facility** – This facility will protect Metropolitan's Inland Feeder from potential negative pressure conditions in the pipeline if there is an unplanned pump shutdown when pumping water from DVL to Rialto Pipeline. Construction was complete in October 2025.
 - **Inland Feeder/Rialto Pipeline Intertie** – The Inland Feeder-Rialto Pipeline Intertie is located at the California Department of Water Resources' Devil Canyon Facility. This project will connect the Inland Feeder to the Rialto Pipeline, enabling direct water delivery into the Rialto Pipeline. Construction is expected to be complete in the summer of 2026.
 - **Inland Feeder/SBVMWD Foothill Pump Station Intertie** – The existing pump station will provide the lift required to permit direct delivery of DVL storage to the Rialto Pipeline. Final design is complete, and the environmental permits are pending. The construction award is expected in the first half of 2026.
 - **Burbank Service Connection B-5 to B-5A Shift** – This project will increase reliability for the western SWPDA by constructing a new pump station at Burbank's Valley Blending Facility. It will allow Burbank Water and Power to receive supply before the Greg Avenue Pump Station and preserve the station's full pumping capacity to deliver more Colorado River Aqueduct (CRA) water to the western SWPDA. The feasibility study is complete, and staff are working with the City of Burbank to commence with preliminary design.
 - **TVMWD Miramar Pumpback Upgrades** – The purpose of this project is to offset SWP supply (from TVMWD Miramar Treatment Plant) with treated CRA water (from Weymouth Plant). The project involves upgrading three pump stations and installing new air-release vacuum valves. The upgrade will enhance the pumping capacity from 15 cfs to 30 cfs. The feasibility study is complete. The next step is to develop a conceptual site layout and start the preliminary design phase.
 - **Surface Storage Study** – This study identifies potential locations for new surface storage south of the Bay-Delta to improve the reliability of SWPDA's supply and provide benefits to the entire service area. Ten likely sites have been identified from the initial phase. Three new sites have been identified since, and the current study phase will screen all options using comprehensive criteria to determine the preferred sites.
 - **Regional Conveyance Study** – The regional conveyance study examines the benefits of interconnecting the existing SWP and CRA supplies, along with potential future supplies such as Pure Water Southern California, to improve delivery flexibility for as many member agencies as possible. Staff is currently working with consultants to identify preferred alignments for the raw water pipeline, which involves evaluating right-of-way, environmental, geological, geotechnical,

- and constructability issues. The study scope also includes assessing the feasibility of using the new pipeline to convey water from west to east during wet years to manage surplus SWP supplies. This scope will revisit a conveyance concept originally identified in the 1960s to connect the SWP West Branch to the Weymouth and Diemer treatment plants. In addition, it evaluates opportunities to reduce SWP pumping by reassessing the Lower Tehachapi Tunnel concept envisioned by the Department of Water Resources in the 1960s. Collectively, these concepts expand upon the study's primary scope as a drought mitigation effort to develop a new pipeline capable of conveying up to 300 cubic feet per second of raw water between the east end of the San Fernando Tunnel and the west end of the Glendora Tunnel.
- **Sepulveda Feeder Pump Stations Project** – The Sepulveda Feeder Pump Stations Project will improve system flexibility by enabling Metropolitan to deliver treated Colorado River and Diamond Valley Lake water supplies to the westernmost portions of the service area during prolonged droughts that impact SWP supplies. The project is being advanced in two stages:
 - **Stage 1 (Implementation):** This project installs two pump stations on the Sepulveda Feeder. The pump stations will have an initial pumping capacity of 30 cfs. A progressive design-build project delivery method is being used to execute the project. Construction of the first component, the Venice Pump Station, was awarded in July 2025. The other two components are to construct the pump station and to stabilize the site slope at the Sepulveda Canyon Facility. They are expected to be awarded in 2026.
 - **Stage 2 (Planning):** This project would expand the Sepulveda Feeder Pumping Operation to up to 160 cfs. The higher pumped flow would result in higher pipe pressure, requiring additional modifications to the existing infrastructure, such as relining the Sepulveda Feeder PCCP pipe and upgrading the Inglewood Lateral. The feasibility study includes developing alternative schemes to expedite the implementation and is expected to be completed in the first half of 2026.
 - **Strategic Infrastructure Resilience Plan** – The purpose of this plan is to identify projects that improve Metropolitan's infrastructure resilience. Phases 1 and 2 are complete. This included identifying characteristics of resilience; identifying hazards; developing a maturity scale; conducting a survey on resilience, maturity, hazards, and priorities; establishing target maturity levels; assessing resilience gaps; developing strategies to close the gaps; and establishing infrastructure resilience goals. Phase 3, which involves developing an implementation plan to mitigate maturity gaps, is underway.
 - **Strategic Asset Management Plan** – Metropolitan has a Strategic Asset Management Plan serving as a high-level long-term planning document that sets forth the goals and proposed initiatives of the Asset Management Program. The purpose of the Strategic Asset Management Plan is to outline how organizational strategic priorities are to be translated into asset management objectives. It takes a long-term view, considering the combination of organizational needs, stakeholder expectations, and the realities of existing assets and asset management capabilities, while establishing a clear vision of what future asset management practices will be. A key outcome of the Strategic Asset Management Plan is to further expand the use of asset data for enhanced risk-informed decision-making, improved planning, maximizing the value of infrastructure assets, and enhancing the longer-term visibility of its Capital Investment Plan. The findings from the Operational System Overview Study will inform the asset management plan, and the consolidated recommendations will be considered in CIP program planning and execution.


Staff will continue to coordinate with member agencies and schedule ISIR workshops to update the progress of all studies and projects under this process. Periodic board updates will continue throughout the development process until recommendations for an ISIR are submitted to the Board for its consideration.



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Date



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2/16/2026

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