

General Manager's Monthly Report



March 2022



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Message from the General Manager

Twice this month, dangerous weather conditions prevented me from visiting the “Shutdown” work on the Colorado River Aqueduct. This was disappointing and inconvenient, but I had to practice what I preach: “Safety first.”

Safety must be a top priority. It is why we are working with the National Safety Council (NSC) to undertake an organization-wide assessment to identify improvements that we can make to keep our workforce safe. I am pleased to see how engaged the staff has been in this process, with a 75% response rate to a recent NSC survey.

Further groundwork for improved safety has laid the goals and visions of the Strategic Priorities presented for Board approval this month, which include references to workplace safety and to the growing threats to Metropolitan infrastructure.

Priorities help ground us when we must balance competing interests, weigh costs and benefits, and make tough choices.

At the Municipal Water District of Orange County Water Policy Dinner this month, State Water Resources Control Board Chair E. Joaquin Esquivel, spoke about the Board’s priorities, which overlap in many areas with our own, such as water conservation, water quality protection, equity and climate resiliency.

At this and many other events across our service area, I have continued to express that my priority is our working together. Our success will make Metropolitan a safer, stronger and even more resilient organization.

We are one,

Adel



“Our success will make Metropolitan a safer, stronger and even more resilient organization.”



Executive Summary

This executive summary is added to this report to provide a high-level snapshot of a key accomplishment from each area of the organization. Detailed information is reported in the pages following this summary.

Administrative Services

Midway through the fiscal year, the Administrative Services Section has processed 15,161 mailroom transactions; 2,016 facility related requests; 130 transit reimbursements; 4,207,397 network file migrations; 3,294 contracting transactions; 26,230 warehouse transactions; and 221 imaging services jobs including 455,780 impressions.

Bay-Delta Initiatives

With collaborative funding by Metropolitan, the State Water Contractors, and U.S. Bureau of Reclamation, a scientific paper was published in the Environmental DNA journal titled “The artemis package for environmental DNA analysis in R” (<https://onlinelibrary.wiley.com/doi/10.1002/edn3.277>). The paper reported on results from a study to develop a statistical programming package named artemis to evaluate environmental DNA (eDNA) data from environmental field samples. The eDNA surveys provide an indirect, noninvasive, affordable, and rapid way to detect organisms in the environment. The artemis tool represents the first open source models developed specifically to design eDNA detection surveys and analyze data from eDNA surveys in a tidal system like the San Francisco Bay-Delta Estuary. This publication will support wider acceptance for the use of eDNA monitoring by regulatory agencies. The artemis model is already being applied locally and nationwide for a variety of projects including restoration, invasive species monitoring, and listed species monitoring. Use of eDNA surveys could potentially prove beneficial to improve how water project operations are managed efficiently for both environmental protection and water supply reliability.

Chief Financial Officer

Metropolitan staff completed the aggregation, transfer and verification of Metropolitan’s outstanding debt portfolio into the SymPro Debt Module. The new software platform will include functionality for calculating debt payments and measuring outstanding debt by mode (fixed and variable), and by lien (senior and subordinate).

Colorado River

Following another dry month on the Colorado River, efforts are continuing in California and Arizona to develop new projects that could add water to Lake Mead as part of the 500+ Plan (Plan). The Plan seeks to add 1 million acre-feet of conserved water to Lake Mead by the end of next year to help Lake Mead avoid reaching critically low elevations. Metropolitan is participating in a workgroup with Mexico to explore the potential for new conservation activities in Mexico that could potentially contribute to the Plan.

Engineering Services

The Colorado River Aqueduct (CRA) was shut down for 27 days beginning on February 1, 2022 and ending on February 27, 2022. In partnership with Water System Operations, Engineering Services worked on 300 feet of the Cholla Wash cut-and-cover conduit lining as a pilot project to increase the CRA’s hydraulic capacity; a flowmeter and support equipment were installed at the Mile 12 monitoring station; cracked concrete canal panels were replaced; electrical protection panels were upgraded at Eagle Mountain; station batteries were replaced at Hinds, Gene and Intake pumping plants; pumping plant improvements were installed to enhance pumping plant operation at high flows; and water-bearing facilities were inspected.

Environmental Planning

Environmental Planning staff supported the 2022 CRA shutdown by providing Desert Tortoise and Environmental Awareness Training to over 185 Metropolitan employees and contractors scheduled to work the shutdown. Staff also provided environmental monitoring of all CRA dewatering locations, tunnel cleaning operations, and canal maintenances activities performed by WSO staff, as well as environmental monitoring of the Mile 12 Power and Flow Meter Upgrade, Freda Siphon Barrel #1 Conduit Inspection and Seal Repair, and Cholla Wash Relining projects. Staff also supported the unplanned, emergency repair located at CRA Mile Marker 33.46. All work was performed without incident and no desert tortoise were observed during this year’s shutdown. During the course of the shutdown, staff encountered two grey foxes protecting a prospective fox den and assisted in rescuing a red fox that fell into the canal.

External Affairs

Launched the next phase of the district's water conservation advertising campaign on radio, billboards, bus shelters, digital platforms and social media, including co-branded assets with the San Diego County Water Authority, Calleguas MWD and Las Virgenes MWD.

Human Resources

Human Resources staff are focused on supporting the organization as we start the transition to a hybrid work environment. Webinars and communication will focus on assisting teleworking employees with the transition into the office.

Information Technology

IT Group continued to successfully execute and migrate applications to the cloud. Currently, testing is underway for the migration of WorkTech time keeping system and the Facility Equipment Application (FEA) to the Oracle Cloud Infrastructure (OCI). Once fully migrated, the benefits of having these applications in the cloud include enhanced reliability and resiliency.

Real Property

The Diamond Valley Lake (DVL) Marina hosted a twenty-five-mile segment of the "Gravel and Whine" bicycling event. The event which started at a winery near Lake Skinner incorporated the full length of the DVL Marina's Lakeview Trail. Over three hundred cyclists from many parts of the State participated in this event and served to introduce many Californians to the natural beauty of DVL.

Security Management

Metropolitan's operations went uninterrupted during a surge of catalytic converter thefts among public utilities, due to a swift and effective deployment of mitigation measures by Metropolitan's security.

Water Resource Management

Metropolitan continued its activities to increase conservation within the service area, particularly within the State Water Project dependent areas.

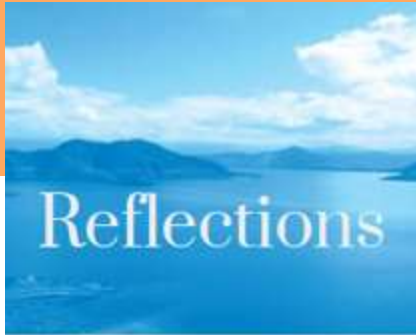
Water System Operations

The 2022 CRA shutdown was completed this month, focused on several key capital projects and critical maintenance of the aqueduct system. Several improvements were also made to optimize maximum 8-pump flow operations that will begin in March, considering the current drought conditions. It took nearly 300 employees and contractors to successfully coordinate and safely complete this critical work that helps keep the over 80-year-old aqueduct system delivering Colorado River supplies reliably for years to come.

Upcoming Board Items

ANTICIPATED KEY ITEMS OF FOCUS – NOT AN EXHAUSTIVE LIST
SCHEDULE SUBJECT TO CHANGE

Month	Key Board Items
April	<ul style="list-style-type: none"> • Approve proposed biennial budget for fiscal years 2022/23 and 2023/24 • Review and discuss Bay Delta Policies (Workshop #2) • Appropriate funding for Sites Reservoir planning • Report on actions that improve SWP reliant area reliability for long-term • Authorize securing one-year water transfers from North-of-Delta water districts • Report on Colorado River Tribal Partnerships • Update on Status of Recommendations from Independent Review of Workplace Concerns • Update on Antelope Valley-East Kern Water Agency (AVEK) High Desert Groundwater Storage Program • Board Adoption of the 2020 IRP Regional Needs Assessment • Release of State Auditor's Report
May	<ul style="list-style-type: none"> • Report on Bond Financing CY 2022 • Presentation by Delta Conveyance Authority Regarding Delta Conveyance EIR Technical Support • Approve the Climate Action Plan
June	<ul style="list-style-type: none"> • Approve Bay-Delta Policies • Authorize payment for support of the Colorado River Board and Six-Agency Committee for FY 2022/23 • Approve 500+ Plan Implementation Agreements
July	<ul style="list-style-type: none"> • Authorize an increase to agreement with Roesling Nakamura Terada Architects for final design and architectural services in support of the District Housing and Property Improvement Program. • Update on Public Draft EIR Release on Delta Conveyance Project (Invited Presenter from California Department of Water Resources)
August	<ul style="list-style-type: none"> • Update on Delta Conveyance Public Draft EIR and Comments



“The immense support from all levels of the Organization with more than 100 people involved during the entire project life cycle made it a successful one with a pleasant experience. We Are One.”

*Veena Konanur, IT Program Manager and
Jeany Wong, Senior Engineer*

PROGRAM DESCRIPTION

A major technology upgrade project has been completed to install state-of-the-art audiovisual (AV) technology systems in Metropolitan’s Board and Committee rooms. Engineering Services lead this project as part of the upgraded architectural design remodeling and structural engineering of the board room. Several concurrent construction projects were in progress requiring a high level of coordination with the tasks and schedules, including organizations within Metropolitan as well as outside contractors.

IMPORTANCE TO METROPOLITAN

The Board and Committee rooms at Metropolitan’s Headquarters are used regularly by the Board of Directors, external organizations, and staff. The AV systems in each of these meeting rooms support presentations, voting, recording, broadcasting, and web streaming. This technology upgrade significantly improves the functionality and reliability of Metropolitan’s widely used, publicly faced system.

MEMORABLE MOMENT

Staff worked through pandemic-related challenges and other hurdles through collaboration and communication with stakeholders, while always providing a safe work environment. When obstacles arose, such as delayed materials, limited storage space, structural design issues or technology integration challenges, our engineers, construction management and technical design teams came together to brainstorm and resolve the issues, keeping Metropolitan’s best interests as their goal. The key players on this project were IT, Engineering, Board staff, Facilities, and Security teams within MWD; and external contractors and consultants who helped to deploy this state-of-the-art technology.



Water Resources and Engineering



Water Resource Management

GM Strategic Priority #1: Resiliency

Objective #5 Ensure reliable State Water Project (SWP).

On February 15, 2022, the Sacramento County Superior Court (Court) issued a tentative decision on the Validation Complaint to DWR's [Water Supply Contract Extension Amendments](#) (Contracts Extension Amendments). California Department of Water Resources (DWR) filed an action in the Court to validate the SWP Contracts Extension Amendments following the approval of the [Water Supply Contract Extension Project](#) in December 2018. However, in 2019, lawsuits were filed against DWR on the validation of the Contract Extension Amendments, alleging that DWR violated the California Environmental Quality Act (CEQA). In the February 2022 decision, the Court ruled that the Contracts Extension Amendments are valid and denied the CEQA writ petitions. Although currently labeled as a "tentative" decision, it is unlikely that the Judge will change the substance of the ruling, even if any party objects and seeks corrections. This decision will pave the way for DWR to implement the contract extension amendments to 2085, allowing DWR to again sell bonds with 30-year terms or longer to help finance SWP capital expenditures.

Metropolitan staff attended DWR's Annual Financial Management Conference. DWR's Chief Financial Manager outlined SWP Financial Management Strategies and Priorities, including the following:

- Keeping the overall State Water Project contractors' costs flat for 2022 and 2023
- Providing Cost Allocation and Billing (CAB) Deployment and Training
- Increasing SWP Workforce positions (~150 positions) for the next four fiscal years to help address aging SWP infrastructure

In addition, DWR is currently targeting a billing transition date of January 1, 2024, for the Contracts Extension Amendments. It is anticipated that following the transition date, DWR will be able to issue long-term bonds with maturity beyond 2035 to help finance SWP capital expenditures.

Objective #6 Ensure access to sufficient water supplies to operate a full Colorado River Aqueduct in times of drought.

Staff attended a three-day virtual meeting of the Colorado River Basin Salinity Control Forum Work Group (Work Group). United States Bureau of Reclamation (USBR) staff shared the most recent progress on their seismic risk analysis of the Paradox Valley Unit (PVU), a deep injection well designed to reduce salt flows to the Colorado River by approximately 100,000 tons per year. Metropolitan staff expressed concerns regarding salinity impact to the Colorado River supplies since USBR suspended PVU operations in March 2019 because of detection of increased levels of seismic activities. USBR also shared an update on their latest round of funding for salinity control projects in the Upper Colorado River Basin, and the Work Group discussed potential solutions to address salinity control funding shortfalls now and in the future. Metropolitan staff will follow closely on salinity control issues to ensure adequate Colorado River supplies.

Water Resources and Engineering

(continued)

Staff attended two online 500+ Plan Implementation meetings. Both meetings focused on the development of a framework for implementing water-saving projects that would be funded as a result of the Memorandum of Understanding (MOU) approved by Metropolitan's Board of Directors in December 2021. The MOU laid out the basic funding agreement for the 500+ Plan, according to which Metropolitan will contribute up to 10 percent of the funding to facilitate actions to conserve water across the Lower Colorado River Basin. The 500+ Plan project is aimed at supporting the elevation of Lake Mead from dropping to critically low levels during ongoing dry conditions in the Colorado River Basin.

Staff attended an online N-Drip Pilot project (Pilot) meeting. In the meeting, representatives of N-Drip—an Israeli drip-irrigation technology company—gave updates on the implementation and performance-to-date of the Pilot, which is partially funded by Metropolitan. Thus far, N-drip technology has been implemented on alfalfa and cotton fields in the Harquahala Valley, near Phoenix. Compared with standard flood irrigation practices, N-drip technology has reduced applied water by between 35 percent and 60 percent on these fields. In the next phase of the pilot, N-Drip plans to implement their drip irrigation technology on fields within the Colorado River Indian Reservation. The implementation of the N-Drip technology has the potential to create additional water savings in the Colorado River basin. Staff will continue to follow the pilot project and evaluate the results.

Staff attended multiple online Seven Basin States Modeling Team meetings led by USBR. USBR representatives updated the Modeling Team on their progress to revise aspects of the Colorado River Simulation System (CRSS), the primary model used for long-term water supply planning in the Colorado River Basin. Revisions focused on changes designed to correct the model's systematic underestimation of inflows to Lake Powell. The Modeling Team also began discussing a scope-of-work for the sensitivity analysis of CRSS planned to begin in April 2022. Metropolitan supports the work of the Modeling Team insofar as CRSS is a critical modeling tool that will be used to support the development of the new post-2026 guidelines for managing the Colorado River.

Objective #8 Implement Local Resources Program

Staff attended a groundbreaking ceremony in the City of Santa Monica for the Santa Monica Sustainable Water Supply Project (Project). The Project is a \$72 million improvement project designed to further evaporate the amount of water the city imports by expanding and modernizing the Arcadia Water Treatment Plant. The Project will provide up to 2,300 acre feet per year (AFY) of recovered groundwater for potable use in Santa Monica's service area. The Project is part of Metropolitan's Local Resources Program and helps Metropolitan increase regional water supply reliability and reduce future demands for imported water supplies.



Santa Monica Sustainable Water Supply Project Groundbreaking Ceremony

Staff provided a presentation to the WaterReuse Los Angeles Chapter on recycled water legislation and regulations. The presentation reviewed the legislative calendar, recent water legislation, and updates on regulations affecting water recycling. In addition, information on both state and federal funding opportunities were discussed. Approximately 50 agency representatives and consultants attended the meeting.

GM Strategic Priority #2: Sustainability

Objective #1 Complete the 2020 Integrated Water Resource Plan.

Staff discussed and received additional comments on the revised draft findings of the Phase 1 Regional Needs Assessment at a special Member Agency Managers Meeting and through written comments received in early February. Staff met with member agencies on an individual basis to receive additional feedback and provide clarification. Staff is considering all member agency feedback and will incorporate revisions before submitting the IRP Phase 1: Regional Needs Assessment Findings to the IRP Special Committee for their consideration in March.

Objective #6 Maintain and enhance groundwater production in Metropolitan's service area.

Staff delivered a presentation to the Southern California Water Coalition's Stormwater Taskforce. The presentation detailed the characteristics of stormwater flows to the ocean and challenges in capturing stormwater supplies for groundwater recharge during extreme precipitation events.

Objective #7 Participate in Federal, State and Local Water-Energy Nexus processes to support Metropolitan Energy Sustainability and Climate Action Plans

Staff delivered a presentation on the Water-Energy Nexus to the Southern California chapter of the Association of Energy Engineers (AEE). The presentation featured a discussion of how the link between water and energy is affected by climate change and extreme weather events such as the current drought. Staff also discussed

Metropolitan's sustainability goals in the Integrated Resources Plan, Climate Action Plan, and Energy Sustainability Plan. Over 20 participants attended the presentation, which was requested by the AEE for their monthly luncheon.

Objective #8 Implement Regional Conservation Program.

Metropolitan is one of the first agencies to achieve Exemplary Wholesaler status on the new Alliance for Water Efficiency (AWE) G480-20 Leaderboard. G480-20 is an American Water Works Association (AWWA) Water Conservation and Efficiency Program Operation and Management Standard. The G480-20 standard had previously been designed primarily for retail-level water providers but has recently been expanded to include water wholesalers. The Standard describes critical elements of effective water conservation and efficiency programs and encompasses activities undertaken by a utility to improve water use efficiency. Components include metering and distribution system management and also customer billing, education, and implementation of water use efficiency incentive programs. Recent revisions to the standard include a new requirement for water shortage or drought planning, updated requirements related to metering, rate structures, and billing, and a new section related to landscape transformations. A new section was also added to reflect the integration of water efficiency into land-use planning and clarified that wholesale agency requirements should be appropriate and consistent with governing authorities. Metropolitan has achieved the Exemplary Wholesaler status once before when the standard was expanded to include wholesale agencies.

GM Strategic Priority #3: Innovation

Objective #2 Collaborate with member agencies, water agencies and associations, and provide leadership for policy development, advocacy, outreach and education.

Staff sponsored CalDesal's and the Multi-State Salinity Coalition (MSSC) conferences in February. CalDesal held its annual conference virtually on February 9 and 10 and featured panels on innovation and environmental sustainability for seawater desalination. Jim Wunderman of the Bay Area Council delivered the keynote address. MSSC's annual summit was held in Las Vegas on February 23 to 25. Panels included innovation in salinity management for agriculture, the impact of climate change on salinity, and international desalination projects. Staff presented Metropolitan's long-term sustainability plans in a panel discussion. Metropolitan is a founding member and sits on the boards of both CalDesal and MSSC.

Objective #4 Implement Future Supply Actions Funding Program.

Staff organized a Peer-2-Peer meeting with Singapore PUB on managing reservoir water quality on February 16. The meeting featured presentations from PUB and Metropolitan's Water Quality section on advanced approaches and technologies for monitoring and addressing reservoir water quality challenges. WRM staff also collaborated with External Affairs and LADWP to implement a virtual Canadian Technology Roadshow. The roadshow, held on February 16 and 17, featured presentations from 16 Canadian companies with technologies for asset management, condition assessment, operations, and water quality monitoring. Metropolitan collaborated with LADWP and Consulate General of Canada for the roadshow, which is the third organized by Metropolitan since 2016.

Water Resources and Engineering

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Objective #9 Promote Metropolitan's technical capabilities and innovation efforts to advance the understanding of water resources management.

The Water Resources Management (WRM) Group has been hosting quarterly research forums as a way for staff to share their work and to identify opportunities for learning and collaboration. At the WRM's most recent research forum, staff presented current work that looks at innovative ways to estimate water use. One of these projects involves classifying several years of USDA National Agriculture Imagery Program (NAIP) imagery of Metropolitan's urban service area to understand changing patterns of grass and other land-use types over time. The overall goal is to uncover trends in irrigated areas and resulting outdoor water demands. The second project involves analyzing methods to estimate water savings from fallowing programs in agricultural areas along the Colorado River. This research interprets and aggregates data from many sources, such as historical crop information, crop coefficients, weather station data, and water order data. These research forums help WRM staff build camaraderie and establish synergies across teams.

Examples of Land cover Change 2018 vs. 2020

Example: LA

Classified Image 2018



Classified Image 2020



Machine learning models allow us to decipher land cover types (i.e. bare/undeveloped land, grass, trees/shrubs, artificial turf, impervious, water bodies)



Proposed Methodology

- Use historical crop information, published crop coefficients, and Yuma-specific weather information to estimate water savings.
 - USBR Evapotranspiration and Evaporation Reports
- Use historical farming trends and practices that are specific to each parcel.
- Water savings are not impacted by non-participating parcel farming activities

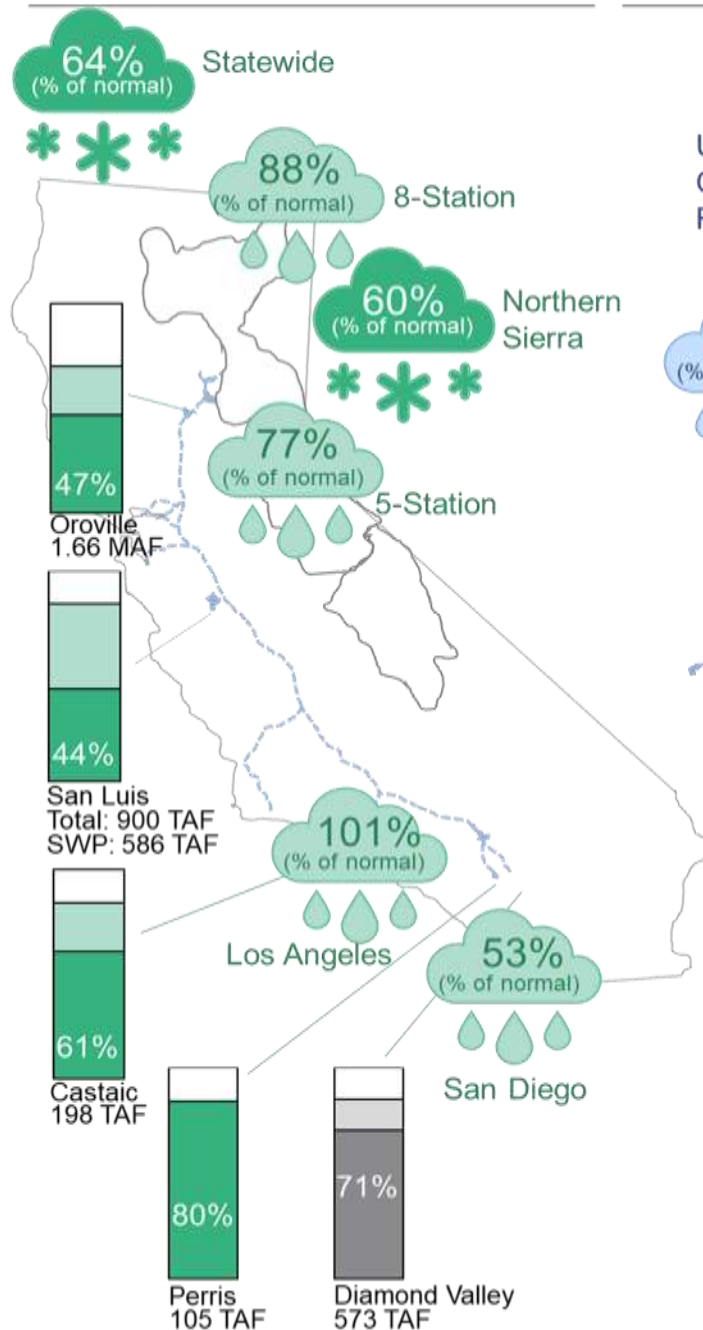
Overview of methodology to estimate savings from agricultural fallowing programs

Water Resources and Engineering

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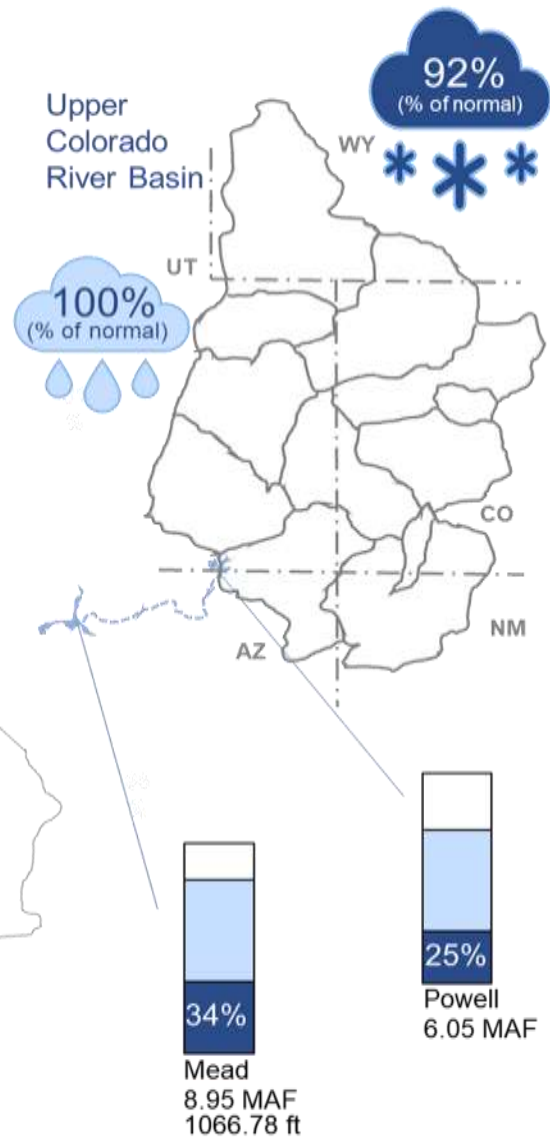
State Water Project Resources

SWP Table A – 15% - 286,725 AF



Colorado River Resources

Projected CRA Diversions – 1,138,000 AF



Extended Report:
<http://mwdh2o.com/WSCR>

As of February 28, 2022

Bay-Delta Initiatives

Resiliency

Staff continued to participate in the collaborative groups called for in the 2019 Biological Opinions for the State Water Project (SWP) and Central Valley Project and in the 2020 Incidental Take Permit (ITP) for Long-Term Operation of the SWP, to address science needs and inform management and operation of the water projects. The Delta Coordination Group is developing science and monitoring plans for planned operations of the water projects and implementation of the summer-fall habitat actions in 2022. The technical workgroup charged with developing a Juvenile Production Estimate (JPE) for Spring-run Chinook salmon, a requirement of the ITP, is currently focused on developing performance metrics to evaluate objectives related to development of a JPE. Development work also continued on a monitoring program for steelhead populations in the San Joaquin River basin, a requirement of the Biological Opinion. The technical workgroup developed specific hypotheses to guide monitoring and submitted a draft outline of the monitoring plan to state and federal agencies for review.

Sustainability

Delta Conveyance

The California Department of Water Resources (DWR) is continuing to develop an Environmental Impact Report (EIR) under the California Environmental Quality Act. The U.S. Army Corps of Engineers (USACE), as part of its permitting review under the Clean Water Act and Rivers and Harbors Act, continues its preparation of an Environmental Impact Statement to comply with the National Environmental Policy Act. DWR and USACE are planning to release draft environmental documents for public review in mid-2022.

In February, DWR posted new planning and outreach materials to its Delta Conveyance Project website. These materials include a Public Outreach and Community Engagement Plan for 2022 that outlines ongoing public outreach and engagement activities ([DCP Public Outreach and Community Engagement Plan for 2022 \(ca.gov\)](#)). Other new materials include digital articles highlighting information from informational webinars on operations, climate change, environmental justice and fisheries held in 2021, and a new Delta Conveyance Deep Dive video on fisheries. These materials can be found on the project website ([Delta Conveyance \(ca.gov\)](#)).

Joint Powers Authorities

During the Delta Conveyance Design and Construction Authority (DCA) Special Board of Director's Meeting on February 17, 2022, the DCA extended a resolution authorizing virtual board and committee meetings pursuant to AB 361.

During the Delta Conveyance Finance Authority (DCFA) regularly scheduled February meeting, the DCFA adopted a resolution to continue remote teleconference meetings pursuant to the Brown Act Section 54953(e) for meetings of the DCFA.

Innovation

Science Activities

In February, a scientific paper published in the Environmental DNA journal titled “The artemis package for environmental DNA analysis in R” (<https://onlinelibrary.wiley.com/doi/10.1002/edn3.277>) reported on results from a study to develop a statistical programming package named artemis to evaluate environmental DNA (eDNA) data from environmental field samples. The eDNA surveys provide an indirect, noninvasive, affordable, and rapid way to detect organisms in the environment. The study was funded through a collaboration of Metropolitan, the State Water Contractors, and U.S. Bureau of Reclamation. The artemis tool represents the first open source models developed specifically to design eDNA detection surveys and analyze data from eDNA surveys in a tidal system like the San Francisco Bay-Delta Estuary. This publication will support wider acceptance for the use of eDNA monitoring by regulatory agencies. The artemis model is already being applied locally and nationwide for a variety of projects including restoration, invasive species monitoring, and listed species monitoring. Use of eDNA surveys could potentially prove beneficial to improve how water project operations are managed efficiently for both environmental protection and water supply reliability.

Staff continued participating in the Collaborative Science and Adaptive Management Program (CSAMP), including participation on the Collaborative Adaptive Management Team (CAMT). In February, activity focused on the two projects addressing improvement of Delta smelt and salmon. The technical working group for the Delta Smelt Structured Decision-Making project is refining portfolios of management actions to benefit Delta smelt and is planning the analysis of the portfolios. The portfolios of management actions will be evaluated using a combination of quantitative life-cycle models and expert judgement to characterize predicted Delta smelt outcomes. The costs and benefits of management approaches will be evaluated as well once the management approaches are refined.

Staff continued collaboration with non-government environmental organizations and public water agencies on the CSAMP Salmon Recovery Initiative. In February, the project team started presentations to stakeholders throughout the Central Valley watershed, including tribes, to make them aware of this effort and ask for their participation in Phase 2 of the process. Phase 2 is focused on engaging with stakeholders to solicit actions planned for salmon recovery, and in phase 3 the actions will be analyzed to help determine which actions may best achieve salmon recovery while meeting other objectives (e.g. cost, water supply, agricultural production, etc.).

Colorado River

Efforts to Increase Conservation Continue to Offset Dry Winter

February was another dry month in the Colorado River Basin, and the water supply outlook continues to decline. Lake Mead, which is already at a record low level of 1,067 feet, is forecast to drop 20 feet in the next six months. As Lake Mead drops, Metropolitan's ability to recover Intentionally Created Surplus (ICS) from Lake Mead is reduced, making it more difficult to fill the Colorado River Aqueduct. If Lake Mead were to fall below 1,025 feet, Metropolitan would not be able to access any of its ICS reserves in Lake Mead. Additionally, power generation from Hoover Dam would be significantly curtailed. Fortunately, however, water agencies can change the modeled projections of Lake Mead. Over the past 10 years, Lower Basin water users, including Metropolitan, have reduced demands for Colorado River water that have added a total 65 feet to Lake Mead's elevation. Last December, those same agencies signed the 500+ Plan, which has the goal of adding 1 million acre-feet (AF) of water to Lake Mead by the end of next year. To date, water conservation activities have added about 175,000 AF to Lake Mead from projects in both California and Arizona. The Central Arizona Project will be taking a suite of new conservation activities to its board for approval in March for conserving about 210,000 AF of water in Arizona in 2022. In California, in addition to the Palo Verde Irrigation District system conservation program, which was approved last year, Metropolitan staff is in discussions with agricultural agencies in California to develop new conservation projects. If successful, new projects would be brought to Metropolitan's Board for approval as early as spring of 2022.

Minute 323 Projects Workgroup Meeting

On September 21, 2017, the U.S. and Mexican Sections of the International Boundary and Water Commission signed Minute No. 323, titled "Extension of Cooperative Measures and Adoption of a Binational Water Scarcity Contingency Plan in the Colorado River Basin". Following Minute No. 323's adoption, a number of workgroups were established to implement the provisions of the minute. Metropolitan staff regularly participate in many of the workgroups, including the Projects Workgroup, which was established to seek opportunities for joint cooperative projects with the potential for increasing delivery or exchange of Colorado River water benefitting both nations. In February, the workgroup reviewed Mexico's progress to develop new efficiency programs, including replacement of existing gate structures on the main canals in the system for better management of water deliveries. Additionally, the Workgroup discussed a New Water Projects Study, which has been finalized by Conagua and is seeking funding to move forward. The Workgroup recommended Mexico conduct a pilot project using a new drip irrigation system in the Mexicali area with additional technical and financial support from the United States. The pilot project could be part of the 500+ effort to add new water to Lake Mead and, if successful, could be a long-term conservation project in Mexico.

Engineering

GM Strategic Priority #1: Resiliency

Objective #1 Manage and execute Board-authorized projects within the Capital Investment Plan (CIP) to ensure the reliable delivery of water to Metropolitan's member agencies.

Distribution System Reliability Program

This program maintains reliable water deliveries through specific repair and rehabilitation projects on Metropolitan's pipelines, reservoirs, and control structures. Recent activities include the following:

- **Etiwanda Pipeline Rehabilitation, Stage 3**—This project, which replaces delaminated mortar lining in 5.5 miles of pipeline with polyurethane lining, was conducted in three stages. Stages 1 and 2, which included 3 miles of polyurethane lining are complete. Stage 3 will reline 2.5 miles of pipeline with polyurethane lining and include installation of 1,300 feet of new internal steel pipe in areas with more extensive corrosion. Procurement of internal steel liner pipe was awarded by the Board in November 2021 with expected deliveries by June 2022. Final design of Stage 3 work, which includes installation of the steel liner, is complete and a board action of a construction contract is planned for June 2022.
- **Lake Mathews Wastewater Replacement**—The project consists of installing a wastewater system in place of the existing septic tank system at Lake Mathews. The new wastewater system connects various facilities at Lake Mathews that ultimately connect to the Western Municipal Water District main wastewater line at El Sobrante Ave. The Notice to Proceed was issued to the contractor in January 2022.
- **Right of Way and Infrastructure Protection Improvements, Western San Bernardino County, Stage 1**—The project consists of construction of erosion-control features to protect critical infrastructure that includes concrete culverts, grading to divert stormwater away from pipeline structures, and roadway improvements to facilitate access and protect existing infrastructure. Final design is complete and a board action for award of a construction contract is planned for March 2022.
- **Orange County Feeder Lining Repairs**—This project replaces the deteriorated internal lining along an 11-mile portion of the Orange County Feeder within the cities of Santa Ana, Costa Mesa, and Newport Beach. Rehabilitation is proceeding in three stages. Construction of stages 1 and 2 are complete. Final design for the remaining third stage is complete and a board action for award of construction contract is planned for April 2022.

Colorado River Aqueduct (CRA) Reliability Program

This program maintains the reliability of Metropolitan's CRA conveyance system. Recent activities include the following:

- **Gene Wash Reservoir Discharge Structure Rehabilitation**—This project replaces the existing deteriorated discharge valve and refurbishes the valve house and discharge structure at the base of the Gene Wash Reservoir dam. If the reservoir needs to be drained rapidly in the event of an emergency, the valve would be opened to safely release the water. The contractor completed the valve house refurbishment and the

sluiceway pipe relining and began installation of the discharge valve and actuator. Construction is 90 percent complete and is scheduled to be complete by April 2022.

- **CRA Storage Buildings at Hinds, Eagle Mountain, and Iron Mountain**—This project furnishes and installs two new storage buildings (six total) and constructs associated site improvements at the Hinds, Eagle Mountain, and Iron Mountain pumping plants. Final design is 97 percent complete and scheduled to be complete by June 2022.



Gene Wash Reservoir Discharge Structure Rehabilitation

Workers completing concrete repairs on the weir wall, catwalk, and platform support piers.

Treatment Plant Reliability Program

This program was initiated to maintain reliability and improve the operating efficiency of Metropolitan's water treatment plants through specific improvement projects. Recent activities include the following:

Jensen Plant

- **Jensen Electrical Upgrades, Stage 2**—This three-stage project upgrades the electrical system with dual power feeds to key process equipment to comply with current codes and industry practice; improves plant reliability; and enhances worker safety. Stage 1 work is complete. Stage 2 improvements will upgrade Unit Power Centers 7 and 9 and their associated motor control centers (MCCs) to support critical process equipment. Cutover work for Building 12 and other MCCs was successfully completed during the January plant shutdown. The contractor completed transferring and commissioning Thickener No. 4 and No. 6 and is continuing work at Thickener No. 5 and other solids-handling facilities. Construction is 96 percent complete and is scheduled to be complete by August 2022.

System Reliability Program

The System Reliability Program consists of projects to improve or modify facilities located throughout Metropolitan's service area to use new processes and/or technologies and to improve facility safety and overall reliability. Recent activities include the following:

Water Resources and Engineering

(continued)

- **Headquarters Building Improvements**—This project provides seismic upgrades and other needed improvements to the Metropolitan Headquarters Building. Construction related to the original contract scope and the UVC air disinfection system are substantially complete. The contractor continues installation of additional cooling equipment for electrical and AV/IT rack rooms. Because of the long lead time on equipment, the anticipated contract completion date is being reassessed.
- **Headquarters Physical Security Upgrades**—This project implements comprehensive security upgrades for the Metropolitan Headquarters Building. These upgrades are consistent with federally recommended best practices for government buildings. Stage 1 work enhances security related to perimeter windows and doors. Construction of Stage 1 improvements is complete. Stage 2 improvements will provide security system upgrades inside the building with a focus on the main entry rotunda area, boardroom, executive dining lounge, and security control room. Construction of Stage 2 improvements is 91 percent complete and is scheduled to be substantially complete by the end of March 2022. The contractor completed security equipment installation on all floors, began testing and cutover to the new security system, and is continuing the rotunda equipment installation. Stage 3 improvements will provide security system upgrades around the perimeter of the building. Design of Stage 3 improvements is complete and board award of a construction contract is planned in mid-2022.
- **Headquarters Building Fire Alarm and Smoke Control System Upgrades**—This project upgrades the Metropolitan Headquarters Building fire life safety systems, which includes replacement of the fire detection and alarm system and HVAC system improvements for smoke control. The fire alarm and smoke control systems in the Metropolitan Headquarters Building provide detection, notification, and control of building functions so that occupants and visitors can safely exit in the event of a fire. The contractor completed installation of the risers for the fire alarm distributed antenna system, resumed the fire alarm system cutover on the first floor, and is continuing installation of the electrical closets, Emergency Radio Responder System, and the carbon monoxide controller. Construction is 37 percent complete and the anticipated project completion date is being reassessed.



Headquarters Building Improvements
Installation of new security camera in P1 parking area

Operations

Water System Operations

GM Strategic Priority #1: Resiliency

Objective #1 Provide Reliable Water Deliveries

Metropolitan member agency water deliveries were 106,960 acre-feet (AF) for February with an average of 3,450 AF per day, which was 684 AF per day higher than in January. Treated water deliveries increased by 11,020 AF from January for a total of 55,320 AF, or 52 percent of total deliveries for the month. The Colorado River Aqueduct (CRA) was shut down for the majority of the month to perform critical maintenance and work on capital projects that enhance CRA reliability. State Water Project (SWP) imports averaged 1,050 AF per day, totaling about 32,560 AF for the month, which accounted for about 30 percent of Metropolitan's deliveries. The target SWP blend remained at zero percent for the Weymouth, Diemer, and Skinner plants.

Objective #2 Ensure Water Quality Compliance, Worker Safety, and Environmental Protection.

Metropolitan complied with all water quality regulations and primary drinking water standards during January 2022.

Staff developed new training for raw Colorado River water releases and quagga mussel control associated with dewatering of pipelines for maintenance or capital projects. The purpose of this training is to prevent discharge flows beyond authorized limits, adhere to conditions of the raw water discharge plan and permits, and ensure effective communication across multiple units to improve shutdown coordination. This training is required for all staff involved in CRA raw water dewatering operations and is consistent with Metropolitan's Quagga Mussel Control Plan.



Training for Raw Colorado River Water Releases and Quagga Mussel Control

This month, staff published and posted a variety of Safety Talks on the IntraMet to promote employee safety during on-the-job activities. Topics include Proper Use and Donning of Hearing Protectors; Safe Lifting and Rigging; Working in Cold, Wet and Windy Weather; Welding Safety; Purchasing Genuine Face Coverings and COVID-19 Test Kits; and Crane Use and Travel.





New Safety Talks published and posted to the IntraMet

Staff updated an Environmental Bulletin for Portable Equipment Powered by Diesel-Fueled Engines, adding requirements for the use of stationary emergency engines during Public Safety Power Shutoff (PSPS) events and the use of cleaner tiered portable engines. Staff also published a new Custodian Air Quality Checklist for Shutdown Activities, which serves as a short checklist to help identify air quality compliance requirements before and during shutdown activities.

[illegible]

New Air Quality Checklist for Shutdown Activities

Objective #3 Actively Engage in Capital Project Planning and Execution

Staff wired and tested signal cables at Garvey Reservoir following a contractor's installation of a temporary chemical feed system. This work is part of a larger capital project to rehabilitate Garvey Reservoir. The temporary feed system at Garvey Reservoir will ensure that Metropolitan meets its water quality goals during project construction.



Temporary sodium hypochlorite feed system at Garvey Reservoir

Staff are upgrading Eagle Mountain's transformer protection devices as part of Southern California Edison's 230kV Local Breaker Failure project. Transformer protection devices are fast-acting relays that isolate electrical problems and prevent serious injuries or equipment damage. During construction of this project, many of the plant systems had to be moved to backup power systems in order to de-energize the power system to safely install and commission this critical equipment.



Staff testing a new transformer system at Eagle Mountain pumping plant



Installation of new protection panels for an upgraded transformer bank at Eagle Mountain pumping plant

Objective #4 Optimize Maintenance.

The 2022 CRA shutdown was performed over 27 days throughout the month of February. This annual shutdown allowed contractors and staff to work on several capital projects and staff to complete maintenance, repairs, and inspections along the 242-mile long aqueduct and five desert pump plants. Capital projects included Gene Wash Reservoir discharge valve replacement, CRA flow monitoring upgrades, and the Cholla Wash re-lining project. Operations and maintenance work included performing regulatory-required high-voltage system and transformer maintenance and testing, servicing the 230-kV transmission system, replacing direct current (DC) station battery banks for emergency power and critical equipment, completing coating repairs and inspections, servicing valves and gates, and cleaning canals and tunnels. A custom tunnel cleaning machine, designed and built by Metropolitan staff, travels over 150 miles underground cleaning and smoothing out concrete to maximize CRA flows.

Staff also installed three new recirculation lines at the Eagle Mountain Pumping Plant, with components manufactured at the La Verne Shops. These recirculation lines allow operators to safely and efficiently perform eight-pump flow operations and avoid pinching discharge gates to reduce flow, which can cause wear and tear on CRA equipment. During the shutdown, staff also coordinated an outage of the Lakeview Siphon on the CRA and the interconnected San Diego Canal to perform a minor leak repair and install an enhanced dewatering sump to expedite canal dewatering. During this overall shutdown, it took nearly 300 employees and contractors to safely coordinate and complete the critical work that helps keep the over-80-year-old aqueduct delivering Colorado River water reliably for many years to come.



Staff removing lids at Lakeview Siphon inlet transition to install isolation gate



Staff lifting gate to be installed for safe isolation of the work zone in the Lakeview Siphon



Staff monitoring quagga mussel filters during discharge of raw CRA water ahead of Lakeview Siphon work



Staff prepping Lakeview Siphon repair area for installation of internal rubber seals and metal bands



Staff removing silt and debris from the San Diego Canal



Welded reinforcing beams on San Diego Canal radial gate to reduce vibration



Clean, smooth canal walls after the tunnel cleaning machine passes



Scaffold construction for recirculation pipe assembly installation at Eagle Mountain pumping plant



La Verne Shops staff packaging valve assemblies for delivery to Eagle Mountain pumping plant



Fabrication of re-circulation line components (left and center) and installed tee (right) for Eagle Mountain pumping plant



Staff performing transformer bushing maintenance at Hinds pumping plant



Staff installing new pumping plant station battery banks

Staff completed cleaning of the San Diego Canal from San Jacinto to Lake Skinner. A long-reach excavator was used to clean sand traps, transition structures, and by-passes. The San Diego canal conveys water from San Jacinto towards Diamond Valley Lake and terminates at Lake Skinner.



Staff using a long reach excavator to clean the San Diego Canal

Staff coordinated with a local motor shop and reviewed testing and refurbishment of the armature and exciter assemblies for a unit at the Hinds pumping plant. The armature and exciter assemblies are components of the CRA pump motors and their refurbishment is critical to efficient and reliable operations.



Staff overseeing final electrical testing of a pump unit's armature for Hinds pumping plant

The La Verne Shops fabricated four flow balancing drop gates for the Hinds and Iron Mountain pumping plants. These gates will be used during eight-pump flow operations to balance the aqueduct while reducing wear and tear on the original head gates used for flow control.



Fabrication of gate frame (left) and installed gate skin with square openings (right) for Desert pumping plants

Staff performed repairs at Yorba Linda Hydroelectric Plant to correct bearing lubrication issues and oil leaks. As part of the planned improvements, innovative scale mockups were used for model testing to ensure adequate bearing lubrication, cooling, and sealing for this complex equipment.



Staff performing measurements of the bearing seal (left) and evaluating performance of improvements on a scale model (right) at Yorba Linda HEP

Staff repaired sections of copper pipe used for domestic water at the Skinner plant. Several pipe joints and fittings started to degrade and leak. To complete the repairs, staff removed the degraded copper piping and fittings and replaced the impacted sections. The replaced sections were connected using specialized copper fittings and a crimping tool, which allowed them to be replaced more easily than with a torch soldering method. Unlike soldering, press fitting systems do not require an open flame to fuse pipe joints together. This creates a safer work environment and also saves time by not requiring a hot work permit.



Corroded pipe in hard to reach corner at the Skinner Plant



Staff using copper pipe crimping tool to perform repairs in tunnel at the Skinner plant



Copper piping joints after replacement with crimps at the Skinner plant

Staff have been working on the electrical rehabilitation of the San Gabriel Pressure Control Structure since late 2021. The structure had flooded several years ago, and electrical components of the facility were no longer serviceable or reliable. The work included installation of new motor controls, power panels, lighting, and power and instrumentation conduits and controls. The final phase of this work involves retrofitting the incoming utility electrical service. Staff installed the enclosures, and Southern California Edison will make the final connections and restore normal electrical service to the facility.



Staff setting new utility pull section (left) and completed pull section and 480-volt panel (right) at San Gabriel PCS

Objective #5 Manage the Power System.

Staff reviewed the Resource Adequacy (RA) requirements for CRA pumping operations for April 2022. An RA deficit of 4 MW was identified, because of a projected eight-pump flow and declining Hoover power generation. (Forecasted Hoover power generation for 2022 indicates a decline of about a third of Hoover's maximum generation output.) Staff submitted an RA purchase Request for Offer for the required RA capacity for April to Metropolitan's scheduling coordinator (ACES/AEPCO). A supplier was identified and the purchase completed, ensuring availability of maximum CRA pumping operations amid the current drought. Staff also submitted a revised RA plan for May 2022 reflecting a planned increase in flow from seven pumps to eight pumps.

Staff received a North American Electric Reliability Corporation (NERC) Cybersecurity Alert regarding preparation for potential state-sponsored cyber activity linked to the Russian government on February 15. Staff reviewed the recommendations and acknowledged the NERC alert on February 17.

Objective #6 Improve Emergency Preparedness and Response.

Staff continued to support efforts to develop specific emergency preparedness plans throughout Metropolitan. Plans in development include hazard mitigation planning and dam emergency action planning. The Department of Water Resources is also working with Metropolitan to develop implementation plans to enhance DWR's Emergency Preparedness Program in the future. This continued outreach enhances future coordination during emergencies.

The Super Bowl brought many fans to the downtown Los Angeles area in mid-February who traveled through Union Station adjacent to Metropolitan's headquarters building. Staff participated in pre-game planning with emergency management and security officials from Union Station, LA Metro, City of Los Angeles, and other agencies to be prepared for the big game, as well as the follow-up victory parade. Security and Emergency Management staff monitored the situation and provided additional resources to ensure the safety of staff and Metropolitan property during these events. These planning efforts also helped foster continued collaborative relationships between Metropolitan and our Union Station neighbors.

Objective #7 Optimize Water Treatment and Distribution.

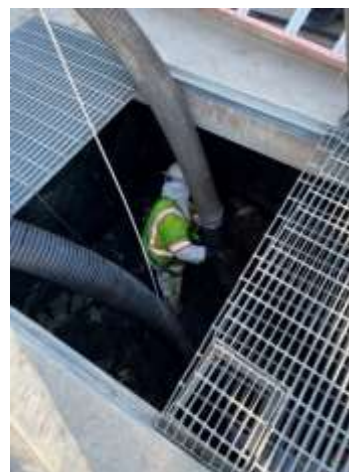
The State Project water (SPW) target blend entering the Weymouth and Diemer plants was zero percent in February 2022. Because of the CRA shutdown, Lake Skinner received SPW from Diamond Valley Lake (DVL) from mid-February to the end of the month.

Flow-weighted running annual averages for total dissolved solids from January 2021 through December 2021 for Metropolitan's treatment plants capable of receiving a blend of SPW and CRA water were 575, 570, and 577 mg/L for the Weymouth, Diemer, and Skinner plants, respectively.

Staff performed maintenance and coal removal at the Diemer Wash Water Reclamation Plant. The plant has had increased material accumulation in the reclamation plant influent channel and basins, leading to failures of the flocculation equipment. Staff removed the accumulated material, performed repairs, and conducted preventative maintenance to maintain reliability of the equipment.



Sludge and coal accumulation in a flocculation basin at the Diemer wastewater reclamation plant



Contractor and staff vacuuming sludge and coal out of the influent channel at the Diemer Wash Water Reclamation Plant



Installation of new flocculator paddles at the Diemer Wash Water Reclamation Plant

Staff began replacing filter media lost during the filter backwash process at the Weymouth plant. The media is added using a hopper-fed eductor system that allows the media to be evenly distributed throughout the filter. Using a mobile crane, staff load an average of 20 one-ton-bags daily. At the completion of this project, the filter media will be at design level, providing maximum filter performance to meet regulatory standards and ensure high quality water produced by the treatment process.



Staff unload a one-ton bag of filter media into a hopper at the Weymouth plant

Staff performed the annual certification of hopper scales at the solids handling facility at the Weymouth plant. To complete this work, certified weights were suspended from the hoppers' framing to calibrate the four scales. Staff verified the output signals to the SCADA system and checked for proper status. One failed load cell was identified and repaired.



Certified weights offloaded at the Weymouth plant



Staff preparing to suspend weights from the solids hopper at the Weymouth plant



Staff verifying signal output for the solids hopper at the Weymouth plant

Objective #8 Manage Water Reserves.

Water reserves continued to be managed according to Water Surplus and Drought Management (WSDM) principles, operational objectives, and the current 15 percent State Water Project (SWP) allocation. Deliveries of SWP supplies were minimized to preserve SWP Carryover and Flexible Storage. Releases from DVL through PC-1 to connections on the Lakeview Pipeline, as well as the DVL to Mills plant operation, continued in February to conserve SWP use in that area. Returns from the Semitropic and Kern Delta SWP Banking Programs also continued in February. Staff continued Greg Avenue pump operations to minimize SWP usage by about 3,300 AF per month. In addition, staff continued coordination with member agencies, shifting their deliveries from SWP connections to Colorado River water connections, when possible. Staff continue to develop additional drought mitigation actions to prepare for the potential of a low SWP allocation in 2022.

Objective #10 Manage Vacancies.

WSO filled 13 vacant positions in January 2022.

Objective #11 Prepare Employees for New Opportunities.

The Water System Operations Apprentice and Technical Training Programs develop and train personnel to become qualified mechanics and electricians responsible for maintaining Metropolitan's water treatment and distribution systems. This month, three electrical apprentices assisted with testing and maintenance at the Whitsett Intake pumping plant during the CRA shutdown. Rotating to different teams and assisting with special projects and shutdowns is an important aspect of on-the-job learning. These rotations broaden the apprentices' experience and knowledge of Metropolitan's systems and contribute to their future success as journey-level employees. In addition, the Class of 2023 mechanical apprentices attended welding and fabrication training during the period.



Class of 2023 electrical apprentice performing routine high-voltage maintenance test at Whitsett pumping plant
(Note: The light is sun's reflection, not electrical arc)



Class of 2023 electrical apprentice performing contact resistance testing at Whitsett pumping plant



Class of 2023 mechanical apprentice participating in weld shop

Objective #13 Ensure Accurate Billing Infrastructure.

Metropolitan's distribution system contains a variety of meters for operational flow monitoring and revenue billing. This month, staff serviced several large venturi meters at a number of service connections. After coordinating with the affected member agencies, short-term outages were scheduled to facilitate maintenance. Part of the work involves opening access ports and inserting a rodding tool to remove mineral and debris deposits that build up in the venturi tubes over time and potentially affect the accuracy of the meters. Occasionally, the venturi access port fittings corrode and need to be replaced as part of the scheduled maintenance. Staff successfully replaced a venturi access port fitting at the FM-01 service connection for Foothill Municipal Water District.



Staff successfully replacing a venturi access port fitting at the FM-01 service connection

Staff prepared to install a new automatic meter reading (AMR) equipment cabinet at the CM-13 service connection for the city of Costa Mesa. Over several years, environmental conditions have damaged the cabinet coatings. The existing cabinet is being replaced with a new cabinet with an enhanced coating material. This advanced epoxy material will provide superior protection of the cabinet and its components from harsh coastal environmental conditions.



Staff inspecting CM-13 service connection equipment cabinet before installation

Staff continued supporting member agencies on service connections and tie-ins. This month's work included a study on a new 4 cubic feet per second (cfs) service connection for Central Basin Municipal Water District on the West Coast Feeder in the city of South Gate, and design of a new 20 cfs service connection for West Basin Municipal Water District on the Sepulveda Feeder that will serve Culver City.

Staff are supporting a new 100 cfs service connection for Eastern Municipal Water District (EMWD) on the Inland Feeder. The design of the new service connection, EM-25, is complete and EMWD's board awarded a construction contract in January 2022. Metropolitan's inspection of this new service connection is scheduled for completion by August 2023.

Staff supported the Los Angeles Department of Water and Power for final design and planning the final tie-in for service connection LA-30 on the Sepulveda Feeder. This service connection was constructed in the early 1990s and was isolated with a bulkhead for a future tie-in to the agency's system.

GM Strategic Priority #2: Sustainability

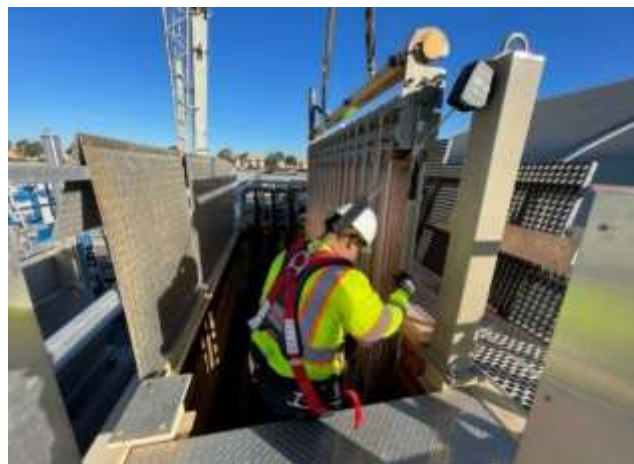
Objective #1 Prepare for Future Legislation and Regulation.

Effective January 26, the Federal Occupational Safety and Health Administration (Fed-OSHA) withdrew its COVID-19 Vaccination and Testing Emergency Temporary Standard (ETS). The federal ETS required large employers with more than 100 employees to develop, implement, and enforce a mandatory COVID-19 vaccination policy or undergo weekly COVID-19 testing. Given this withdrawal, the California Occupational Safety and Health Administration will not require a vaccine mandate in its COVID-19 ETS, which is currently in effect through April 14, 2022. Fed-OSHA is anticipated to reintroduce the proposed standard under regular rulemaking. Staff will continue to monitor for COVID-19 related updates at the federal, state, and local level and assess their impacts to Metropolitan.

On February 7, Metropolitan submitted a comment letter supporting the Environmental Protection Agency and the Army Corps' (collectively, Agencies) proposed Revised Definition of "Waters of the United States." This rulemaking is the first of two parts to revise the definition of "Waters of the United States" (WOTUS). Metropolitan's comments supported the Agencies' proposed rule that reinstates the pre-2015 definition of "WOTUS" reflecting recent Supreme Court decisions and, consistent with previous comment letters, asked that artificial water supply infrastructure be excluded from the definition of WOTUS. Staff will continue to track this regulatory effort, including part two of the rulemaking process.

Objective #3 Support the Regional Recycled Water Program.

During February, staff began operation of the Regional Recycled Water Advanced Purification Center demonstration facility for the secondary membrane bioreactor (MBR) operations, treating primary effluent from the Los Angeles County Sanitation Districts. Staff supported clean water testing and primary effluent functional testing through the demonstration facility and began seeding the bioreactor. Staff also performed onsite maintenance activities to prepare for secondary MBR testing, including critical drain and process pump repairs, piping modifications, SCADA troubleshooting, and various other improvements with the plant operating in a new configuration. Staff also supported snail mitigation activities and inspections to eliminate or reduce the potential for membrane damage.



Inspecting an MBR membrane to ensure the efficacy of snail mitigation measures

On February 25, staff met with the Regional Water Quality Control Boards for the Los Angeles and Santa Ana Regions and the Division of Drinking Water (DDW) to discuss their comments on the secondary MBR testing and monitoring plan. Staff also met with the DDW Direct Potable Reuse (DPR) subgroup on February 11 to discuss potential approaches to implement DPR through raw water augmentation for the Regional Recycled Water Program, based on the state's draft DPR criteria.

A technical paper published in the February issue of the Water Research journal included two Metropolitan staff as co-authors. The paper, titled "Distributions of waterborne pathogens in raw wastewater based on a 14-month, multi-site monitoring campaign", describes high-quality data on pathogen concentrations in wastewater that will be important in determining the amount of treatment needed for direct potable reuse projects. The research was partially funded by Metropolitan through the Future Supply Actions Funding Program under a grant administered by the Water Research Foundation.

Objective #5 Manage Power Resources and Energy Use in a Sustainable Manner.

Metropolitan's hydroelectric plants generated an average of just over 14.5 megawatts, or 10,825 megawatt-hours and approximately \$487,660 in revenue, for the month of January 2022. Metropolitan's solar facilities totaling 5.4 megawatts of capacity generated approximately 566 megawatt-hours in January 2022.

Staff is exploring various options for moving non-CRA electric load to "green" retail electric rates. These rates are offered by such providers as the Los Angeles Department of Water and Power, Southern California Edison, and Community Choice Aggregators such as the Clean Power Alliance. Staff is reviewing options to minimize financial impact and ensure there are no adverse operational implications.

GM Strategic Priority #3: Innovation

Objective #1 Develop New Solutions to Enhance Operational and Business Processes.

Staff engaged with local, national, and international experts to learn more about innovative research, products, and projects that could be used at Metropolitan and by its member agencies to improve processes, manage assets, and optimize conveyance, treatment, and operations. Metropolitan was represented on the judging panel for the 2022 Environmental Engineering and Science Awards presented by the American Academy of Environmental Engineers & Scientists. On February 16, staff participated in a discussion and exchange of best practices on reservoir management with the Public Utilities Board of Singapore, which included a presentation on Metropolitan's source water monitoring and management program. Staff also participated in a two-day "Canadian Water Innovation Roadshow to Southern California" on February 16–17, which covered technologies in asset management, cybersecurity, robotics, wastewater, sensors and analytics, water quality, and infrastructure maintenance.



Staff discussing reservoir management strategies and practices with colleagues from Singapore Public Utilities Board

Objective #2 Support and Engage with Member Agencies on Technical Matters.

On February 17, staff participated in the Association of California Water Agencies Quarterly Committee Forum including presenting an update on microplastics monitoring, methods, and regulatory developments. A variety of regional agencies are collaborating on developing and validating sampling protocols and alternative methods to detect microplastics in drinking water and other matrices, which may affect the state's upcoming microplastics monitoring program.

Operations

(continued)

Monthly Update as of:

2/28/2022

<u>Reservoir</u>	<u>Current Storage</u>	<u>Percent of Capacity</u>
<i>Colorado River Basin</i>		
Lake Powell	6,038,000	25%
Lake Mead	8,938,000	35%
<i>DWR</i>		
Lake Oroville	1,655,179	47%
Shasta Lake	1,689,813	37%
San Luis Total	900,217	44%
San Luis CDWR	586,331	55%
Castaic Lake	197,878	61%
Silverwood Lake	67,125	90%
Lake Perris	105,197	80%
<i>MWD</i>		
DVL	573,537	71%
Lake Mathews	122,802	67%
Lake Skinner	30,310	69%



Information Technology

GM Strategic Priority #1: Resiliency

Objective #1 Strengthen Metropolitan’s cybersecurity capabilities by deploying new and emerging technologies and implementing enhanced security countermeasures.

The Information Technology (IT) Cybersecurity Unit continued on-going initiatives and key cyber projects to improve Metropolitan’s security posture. IT staff works in partnership with the Networking team to provide proactive monitoring of the network and remote connectivity to ensure secure and reliable service for employees’ teleworking and to identify potential vulnerabilities and remediate findings. Maintaining a secure computing infrastructure requires application of on-going cyber countermeasures to protect against new threats that are identified on a continual basis.

During the period, the cybersecurity team continued to work on the Security Operations Center (SOC) and conducted design workshops for the Security Information and Event Management (SIEM) project. Both the SOC and SIEM are a key part of the Information Technology Strategic Plan. Additional project details and updates are provided to executive management and the Board through cybersecurity briefings.



GM Strategic Priority #2: Sustainability

Objective #1 Provide IT Services in support of the Headquarters Improvement Program.

IT Staff continued to make enhancements at Metropolitan Headquarters by deploying technologies that support our customers. During the period, IT worked in collaboration with Facilities to install additional SMART Interactive Whiteboards at Metropolitan’s Headquarters. The new interactive white boards replace existing end-of-life audio visual equipment in conference rooms and will provide staff with current technology once the staff returns to the office.



GM Strategic Priority #2: Sustainability

Objective #2 Manage Information Technology Projects within the Capital Investment Plan to ensure sustainability of IT Systems and Infrastructure.

A significant milestone was achieved during this period as the new Fuel Master system has been installed at a pilot location (Metropolitan's Sunset Garage). The pilot phase allows the project team to gain critical experience with the installation of key components (Proximity Card Reader and Automotive Information Module devices) installed into Fleet vehicles and provide knowledge gains for installation and implementation at the remaining fueling sites. Upgrading our Fuel Management System will enable management controls over fuel inventories, dispensing, and security to ensure operability, vendor support, and system reliability.



GM Strategic Priority #3: Innovation

Objective #6 Enhance workforce productivity by simplifying access to business information and deploy technologies to support our customers in business decisions.

The Information Technology Group continued the Maximo Mobile Computing project to replace existing mobile devices used in Water System Operations (WSO) with the latest tablet technology and deploy additional devices to other business units. This effort will reduce the need for desktop computers at field sites and vastly increase the functionality of the existing Maximo mobile devices.

As part of the Maximo Mobile project, IT recently distributed iPads to WSO's Conveyance & Distribution, and Power & Equipment Reliability Units. In addition, a new mobile security tool was implemented on the iPads as part of an IT pilot and is proceeding according to plan. IT staff is working closely with key stakeholders to monitor performance and usability of the new mobile technology to simplify access to business information in support of WSO operations.



Real Property

GM Strategic Priority #1: Resiliency

Objective #1 Provide right-of-way planning, valuation, and real property acquisition support services for the protection and reliability of existing infrastructure.

A two-year Right of Entry and License agreement was acquired from Eastern Municipal Water District to install a temporary dewatering pipeline and a temporary water treatment plant in support of the Perris Valley Pipeline project. The temporary dewatering line and treatment plant will aide to control construction water at the shaft locations and treat water before release, allowing Metropolitan to tie into the existing pipeline. This project will provide continuous water delivery reliability to Western and Eastern Municipal Water Districts.

A permanent easement was acquired from the County of Orange, through the Right of Way and Infrastructure Protection Program. The easement will provide access to the Allen McColloch Pipeline at Peter's Canyon Regional Park for Metropolitan's monitoring and maintenance purposes.

A fallowing easement for 29 water toll acres was exchanged with a landowner in the Palo Verde region. Metropolitan and the Palo Verde Irrigation District's (PVID) Fallowing Program allows participating landowners the opportunity to exchange their existing lands enrolled in the program, with equitable and eligible property, within the property boundaries. Metropolitan and PVID quitclaimed the easement and received the same number of water toll acres elsewhere on the property.

An access easement was obtained from a private developer to perfect access rights to a portion of Metropolitan's Orange County Feeder Pipeline in the City of Pomona. This easement provides Metropolitan with continuous access rights to the pipeline during and after the private development is completed.

Objective #2 Foster staff training and development.

Staff attended International Right of Way Association-sponsored classes to study various methods to resolve negotiation disputes; and to gain a greater understanding of partial acquisitions and techniques for appraising the partial area of interest.

The Appraisal Institute's 29th annual Los Angeles/Orange County Market Trends Seminar provided Metropolitan's appraisers understanding of specific property type and pricing trends in Metropolitan's service areas for future appraisal report preparation.

GM Strategic Priority #2: Sustainability

Objective #2 Provide right-of-way planning, valuation, and real property acquisition support services for the sustainability and reliability of both imported and regional water supplies, and protection of water rights.

The existing leases with D & L Farms (Bacon Island) and Sierra Cattle (Bouldin Island East) have been amended to extend the term for an additional one-year period. Farmable acres were reduced by 15 percent in the amended lease as a water conservation effort in alignment with the state's voluntary curtailment order.

Core Business: Real Property Acquisition, Management, and Revenue Enhancement

Objective #3 Efficiently maintain and operate assets not related to the treatment and distribution of water.

In coordination with the security upgrade project, the replacement of carpet and paint color in the security control room to meet new building standards was completed.

The DVL Marina hosted a twenty-five-mile segment of the “Gravel and Whine” bicycling event. The event, which started at a winery near Lake Skinner, incorporated the full length of the DVL Marina’s Lakeview Trail. Over three hundred cyclists from many parts of the State participated in this event and served to introduce many Californians to the natural beauty of Diamond Valley Lake.



Objective #4 District Housing Maintenance and Management.

Twenty work orders from the previous reporting period were completed, including seven tenant requests, five preventative maintenance, and eight corrective maintenance efforts. Pre-occupancy preparations on two Metropolitan houses at the Iron and Gene Villages were completed.



House 73 Kitchen (Before)—operable appliances and fixtures. House 73 Kitchen—(After) repairs

To combat the increased domestic water temperatures in the summer months, Staff has implemented various efforts to decrease water temperatures, including insulation of the distribution pipe line, application of a cooling road seal, system flushes, and as a last effort, the installation of a domestic water chiller before the start of the summer season.



Environmental Planning

GM Strategic Priority #1: Resiliency

Objective #1 Provide planning, California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA), and regulatory permitting support for programs and projects that focus on infrastructure reliability and redundancy.

Colorado River Aqueduct Projects

- Negotiated and obtained the California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA) in support of the CRA Lakeview Siphon shutdown.
- Completed biological resources analysis surveys and initiated surveys for hydrologic analysis in support of the newly installed Gene Wash Discharge Valve testing activities.

Perris Valley Pipeline

- Coordinated final design activities.

GM Strategic Priority #2: Sustainability

Objective #2 Provide planning, CEQA/NEPA, and regulatory permitting support for projects and activities that address the challenges of sustainability, including aging infrastructure, contaminants of concern, and affordability of water supplies.

Lake Perris Seepage Recovery Project

- Coordinated with California Department of Water Resources regarding groundwater modeling, water quality, and geology in support of the Final Environmental Impact Report.

Regional Recycled Water Program (RRWP)

- Coordinated with Metropolitan staff, Los Angeles County Sanitation Districts, and various consultants (Helix Environmental Planning, Stantec, Black & Veatch, Katz Associates) for environmental planning phase activities.

Objective #3 Continue to actively manage Metropolitan's more than 30,000 acres of conservation lands through cooperative relationships with public agencies and non-governmental conservation organizations to promote sustainability of reserve resources.

Lake Mathews Multiple Species Reserve

- Completed seeding of a 1.5-acre area of degraded coastal sage scrub habitat.
- Monitored invasive species and incorporated results of surveys into reserve GIS database.
- Eradicated populations of invasive vegetation (stinknet and mustard).
- Coordinated with Cal Fire regarding a future prescribed burn in spring or summer 2022.

Southwestern Riverside County Multi-Species Reserve

- Continued implementation of riparian restoration project in Tualota Creek.
- Applied for a Cal Fire grant to obtain new equipment for the reserve and fund fuel reduction in the Engelmann Oak grove in the Lopez Canyon section of the reserve.
- Completed annual burrowing owl artificial burrow maintenance; three burrowing owls have been observed regularly on the reserve.
- Coordinated with Cal Fire in preparation for future prescribed burns.

Objective #4 Develop a Climate Action Plan (CAP) and prepare CEQA documentation to be used to offset greenhouse gas (GHG) emissions from future construction projects. Identify new and continuing conservation efforts for the purpose of reducing future GHG reductions, as well as highlighting Metropolitan's effort to achieve those reductions, and develop a tracking methodology to ensure that Metropolitan is meeting its goal.

Climate Action Plan

- Continued to prepare the Final CAP Program Environmental Impact Report (PEIR) (Findings of Fact, Statement of Overriding Considerations, and Responses to Comments) and draft board letter to adopt the CAP and certify the Final PEIR.

GM Strategic Priority #3 Innovation

Objective #3 Partner and collaborate with regulatory and resources agencies, as well as other public agencies and external organizations, to build relationships and expedite/streamline environmental authorizations and clearances for Metropolitan projects.

- Participated in California Council for Environmental and Economic Balance Natural Resources Task Force monthly meeting with guest speakers Katharine Moore and Catherine Baxter, consultants for the Senate Committee on Natural Resources and Water.

Core Business: Regulatory Compliance

Objective #1 Provide timely and professional environmental planning services and CEQA and regulatory permitting support to ESG, WSO, WRM, External Affairs, and Real Property groups.

Engineering Services

- Provided design phase support for the following projects:
 1. Battery Energy Storage Project at the Weymouth Water Treatment Plant
 2. Black Metal Mountain 2.4kV Electrical Rehabilitation
 3. Copper Basin Access Road and Discharge Valve Repair
 4. CRA Delivery Line Rehabilitation
 5. CRA Housing
 6. CRA Pump Plant 2.3 kV and 480V Rehabilitation
 7. Etiwanda Pipeline Relining Stage 3
 8. Garvey Reservoir Rehabilitation Project
 9. Gene Communication Systems Upgrades
 10. La Verne Water Quality Building Improvements

11. Orange County Feeder Relining, Reach 3, 4, and 4A
 12. Perris Valley Pipeline Rehabilitation
 13. Western San Bernardino Right-of-Way and Infrastructure Protection Program Phase 2
 14. Weymouth Administration Building Seismic Upgrades
 15. Weymouth Basins 5–8 Rehabilitation
 16. Weymouth Battery Energy Storage System
- Provided construction phase support for the following projects:
 1. Cholla Wash Conduit Lining
 2. CRA Domestic Water Treatment System Replacement
 3. CRA Mile 12 Flow Monitoring Station Upgrades
 4. CRA Overhead Cranes
 5. Garvey Reservoir Drainage Improvements
 6. Gene Wash Discharge Valve Rehabilitation
 7. Live Oak Reservoir Asphalt Upgrades

Water System Operations

- Completed CEQA analysis and environmental planning support for WSO for the following activities:
 1. Middle Feeder North shutdown
 2. Santiago Lateral shutdown
 3. Inland Feeder Stations 740+00 to 840+00 road grading
 4. Upper Feeder road grading
- Submitted CDFW Notification of Lake or Streambed Alteration to support the Santiago Lateral shutdown.
- Completed Desert Tortoise and Environmental Awareness Training for over 185 staff and contractors in support of the 2022 CRA Shutdown.
- Provided environmental surveys and monitoring support for the 2022 CRA shutdown (see photos).
- Attended meetings and provided environmental planning support regarding an exposure of the Foothill Feeder pipeline.



A ferruginous hawk takes flight from a tree branch along the Colorado River Aqueduct.



Wasp nest identified along Colorado River Aqueduct.



Ocotillo buds observed at Coxcomb Chapel.



Desert lavender identified during dewatering surveys at Iron Mountain Pump Plant.

Bay-Delta Initiatives

- Participated in updates to Bay-Delta policies workshops.

External Affairs

- Finalized curation of archaeological and paleontological exhibits currently located at the DVL Visitor's Center in support of its conversion to the Apprenticeship Program Facility.

External Environmental Document Reviews

- Reviewed four CEQA notices for external projects and prepared comment letters for those that may affect Metropolitan facilities and/or operations.

Legislative Reviews

- Submitted comments to the Environmental Protection Agency and U.S. Army Corps of Engineers on the proposed rulemaking for Revised Definition of "Waters of the U.S."
- Provided legislative analysis on Assembly Bill (AB) 1676 (Greenhouse Gases: carbon capture, utilization, and sequestration); AB 1717 (Public Works: definition; prevailing rate for public works projects); Senate Bill (SB) 852 (Climate Resilience Districts: formation, funding mechanisms), and SB 905 (Natural Resources Agency Natural and Working Lands Climate Smart Strategy).
- Submitted comments on the "Draft Pathways to 30x30: Accelerating Conservation of California's Nature" initiative.

Real Property Support

- Provided CEQA analysis and determinations in support of one real property agreement.

Security

GM Strategic Priority #1: Resiliency

Objective #1 Develop and Refine Security's Strategic Plan

Catalytic converter thefts, which drastically increased across Southern California at the start of the global pandemic, pose a significant operational threat to public agency vehicle fleets. A catalytic converter is an exhaust system device composed of precious metal components (rhodium is about \$14,500 per ounce) that converts environmentally hazardous engine exhaust into less harmful gases.

Large vehicle fleets often experience rampant catalytic converter thefts because of the abundance of high-clearance vehicles in concentrated areas such as maintenance yards. Consequences to removing a catalytic converter are devastating (\$2,500 average replacement cost and one to three months of nonoperation because of current supply chain part shortages). While other local utilities have suffered massive losses, Metropolitan experienced only a few isolated thefts last year and quickly mobilized to counter the threat.

Metropolitan Security special agents worked with the California Metal Theft Investigators Association to research and procure protective theft-deterrent devices. CatClamp kits (around \$200 per kit), which attach directly to vehicle undercarriage frames at multiple points using aircraft-grade wire rope, greatly deter and significantly delay potential converter theft. Jensen Fleet Services staff installed 10 devices on Valley Conveyance and Distribution utility vehicles, and more are scheduled for procurement as crime threats and operational priorities evolve.



Metropolitan Fleet staff installing CatClamp theft deterrent device on Valley C&D utility vehicle

Extra low-cost/no-cost prevention measures (additional motion detectors and LED security lighting, rerouted security patrols inside vehicle lots, securing vehicles inside Fleet bays, using decoy vehicles, etc.) were also implemented at select Metropolitan facilities.

DON'T BE A VICTIM:

1. Park in a garage or a secured parking area.
2. Install a bright, motion sensor light to deter potential thieves.
3. Always lock vehicle and set alarm.
4. Install an anti-theft device.



These security tips can protect your own vehicles at home

Objective #2 Improve Security and Emergency Response

Metropolitan Security staff successfully partnered with Information Technology's Unmanned Aerial Vehicle (UAV) Program to integrate aerial mapping and overhead imagery using drone technology. The UAV Program can integrate precise geodetic information, digital mapping, and virtual flybys to assist Security staff in more accurately conducting security site surveys throughout Metropolitan's service area. Security surveys of high-voltage power line infrastructure were updated.

Organic drone capabilities are advantageous for Security staff to quickly conduct security assessments, particularly over difficult terrain. Additionally, vulnerabilities and potential physical security gaps around critical infrastructure can be rapidly identified and mitigated.



Metropolitan Security and IT UAV Program staff conducting powerline security surveys

Objective #3 Improve Employee Readiness for All Hazards Emergencies

Metropolitan stakeholders from Facility Management, Emergency Management, and Security Management joined a joint, multi-agency, Metro Security and Law Enforcement Planning Committee in preparation for Los Angeles hosting Super Bowl LVI at the SoFi Stadium in Inglewood, California. The weeks leading up to game day involved numerous pre-game events at the Los Angeles Convention Center and other venues throughout downtown Los Angeles. Multiple federal, state, and local law enforcement and public safety agencies meticulously planned security preparations and deployed task forces throughout the greater Los Angeles area.

Precautionary measures at the Metropolitan Headquarters Building included:

- Adding extra perimeter security patrols and law enforcement teams
- Removing potential objects that could be misused by celebratory crowds
- Eliminating flammable materials
- Securing construction materials
- Identifying potential safety hazards to pedestrians

(3) Metro Focused Events - Anticipated Fan Attendance Estimates

	Date	Day	Event Name	Time		Venue	Attendance
				Start	End		
1	5-Feb	Saturday	Super Bowl Experience	12:00 PM	10:00 PM	Los Angeles Convention Center & Xbox Plaza at L.A. Live	20,000
2	6-Feb	Sunday	Super Bowl Experience	10:00 AM	8:00 PM	Los Angeles Convention Center & Xbox Plaza at L.A. Live	20,000
3	9-Feb	Wednesday	Super Bowl Experience	3:00 PM	9:00 PM	Los Angeles Convention Center & Xbox Plaza at L.A. Live	15,000
4	10-Feb	Thursday	Super Bowl Experience	3:00 PM	10:00 PM	Los Angeles Convention Center & Xbox Plaza at L.A. Live	15,000
5	11-Feb	Friday	Bud Light Music Festival	8:00 PM	11:30 PM	Staples Center/ L.A. Live	17,000
6	11-Feb	Friday	SB Music Fest: Blake Shelton & Gwen Stefani	8:00 PM	12:00 AM	Staples Center/ L.A. Live	17,000
7	11-Feb	Friday	Super Bowl Experience	3:00 PM	10:00 PM	Los Angeles Convention Center & Xbox Plaza at L.A. Live	25,000
8	12-Feb	Saturday	Bud Light Music Festival	6:00 PM	12:00 AM	Staples Center/ L.A. Live	17,000
9	12-Feb	Saturday	SB Music Fest: Green Day & Miley Cyrus	8:00 PM	12:00 AM	Staples Center/ L.A. Live	17,000
10	12-Feb	Saturday	Super Bowl Experience	10:00 AM	10:00 PM	Los Angeles Convention Center & Xbox Plaza at L.A. Live	45,000
11	13-Feb	Sunday	GAME DAY	12:01 AM	6:30 PM	SoFi Stadium & Hollywood Park	70,000



Metro

**SYSTEM SECURITY AND
LAW ENFORCEMENT**

Super Bowl LVI crowds around Los Angeles swelled to over 70,000 anticipated attendees on Game Day

Finance and Administration

Finance



CFO Strategic Priority: Maintain Strong Financial Position

Provide timely and discerning financial analyses, planning, and management to ensure that forecasted revenues are sufficient to meet planned expenses and provide a prudent level of reserves consistent with board policy.

Objective #2 Manage risk to protect Metropolitan's assets against exposure to loss.

The Risk Management Unit completed 43 incident reports communicating instances of Metropolitan property damage, liability, workplace injuries, regulatory visits, and spills.

Risk Management completed 57 risk assessments on contracts, including professional service agreements, construction contracts, entry permits, special events, and film permits.

Core Priority: Business Continuity

Facilitate district-wide planning and training to prepare employees and managers to effectively carry out critical roles and recover mission essential functions thus ensuring continuity of operations and resiliency in the event of a disaster.

Objective #1 Manage the Business Continuity Management Program in accordance with Operating Policy A-06.

- Continued participating in Metropolitan's Employee Innovation Council (EIC) meetings.
- Partnered with Information Technology to develop an employee communications plan about the production data center move and business user testing/validation.
- Participated in meetings for the Hazard Mitigation core planning team to develop a Local Hazard Mitigation Plan in accordance with FEMA's grant funding requirements.
- Cybersecurity business continuity exercises were developed and scheduled with the WSO group.
- Participated in a cybersecurity internal audit.

Core Business: Financial Management

Manage Metropolitan's finances in an ethical and transparent manner and provide consistent, clear, and timely financial reporting. Update Metropolitan's capital financing plans and work with rating agencies and investors to communicate Metropolitan's financial needs, strategies, and capabilities, thus ensuring that Metropolitan has cost effective access to capital markets and the ability to finance ongoing future needs. In addition, actively manage Metropolitan's short-term investment portfolio to meet ongoing liquidity needs and changing economic environments.

Objective #1 Record and report the financial activities of Metropolitan in a timely, accurate, and transparent manner to the Board, executive management, member agencies, and the financial community.

- Water Transactions for January 2022 totaled 88.1 thousand acre-feet (TAF), which were 19.7 TAF lower than the budget of 107.8 TAF and translate to \$80.7 million in revenues for January 2022, which were \$19.5 million lower than the \$100.2 million budget.

- Year-to-date water transactions through January 2022 were 1,008.1 TAF, which were 45.6 TAF higher than the budget of 962.5 TAF. Year-to-date water revenues through January 2022 were \$906.6 million, which were \$27.3 million higher than the budget of \$879.3 million.
- In January 2022, Accounts Payable processed approximately 3,000 vendor invoices for payment and took advantage of about \$6,000 in discounts.

Objective #4 Update capital financing plans and work with rating agencies and investors to communicate financial needs and capabilities, ensure cost-effective access to capital markets, and maintain long-term bond ratings of AA or better.

Metropolitan staff completed the aggregation, transfer, and verification of Metropolitan's outstanding debt portfolio into the SymPro Debt Module. The new software platform will include functionality for calculating debt payments and measuring outstanding debt by mode (fixed and variable) and by lien (senior and subordinate).

Objective #5 Prudently manage the investment of Metropolitan's funds in accordance with policy guidelines and liquidity considerations.

As of January 31, 2022, Metropolitan's investment portfolio balance was \$1.36 billion; for the month of January 2022, Metropolitan's portfolio managers executed 26 trades.

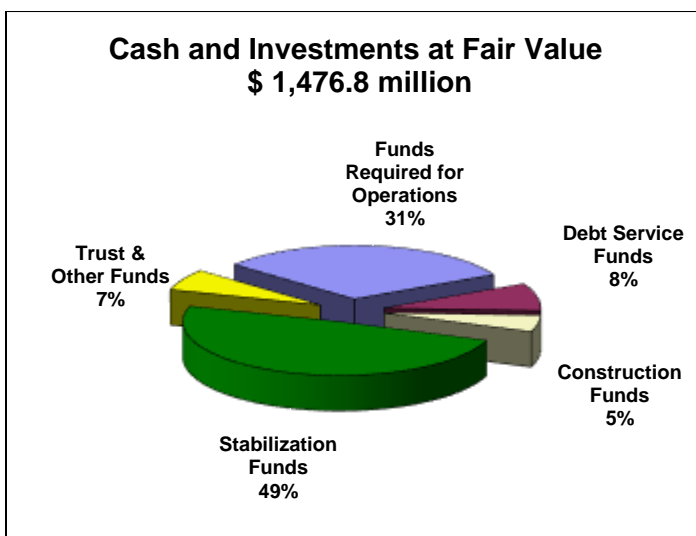
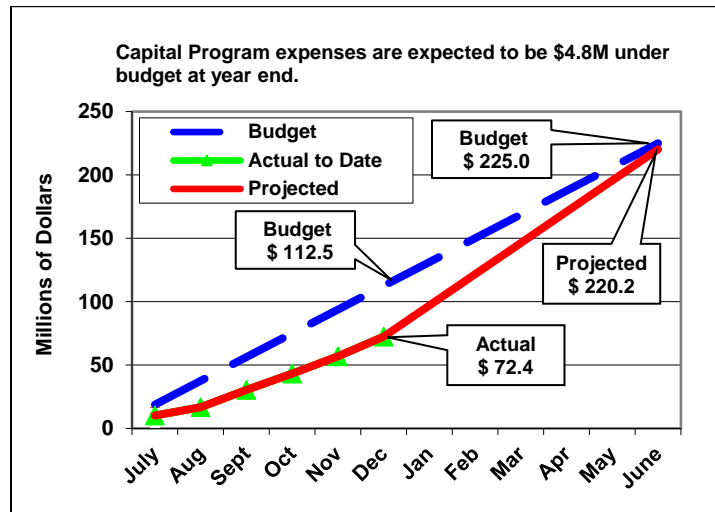
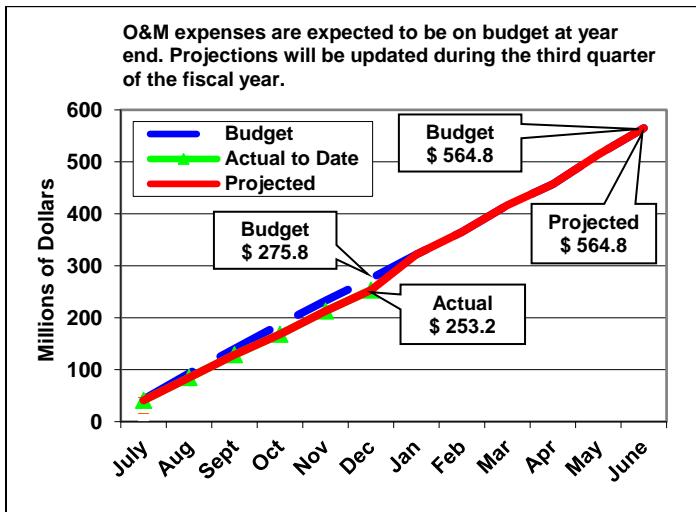
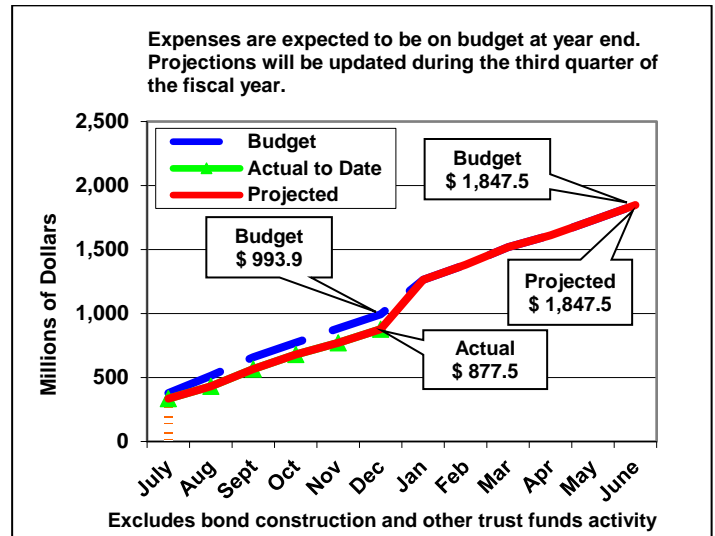
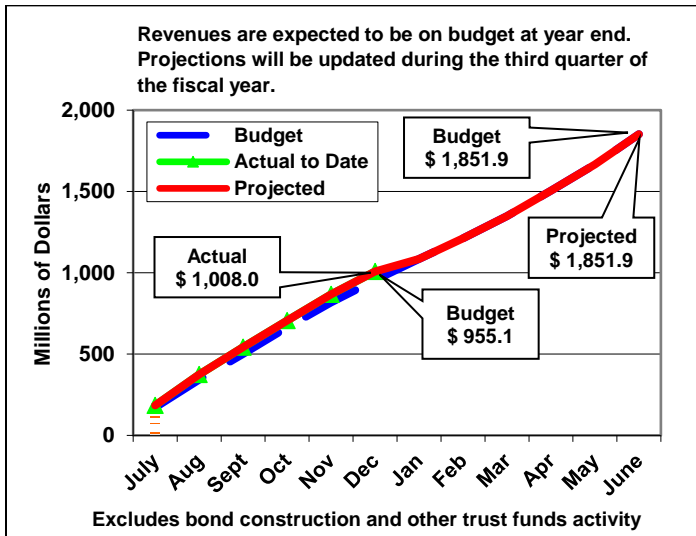
During the month of January 2022, Treasury staff processed 1,023 disbursements by check, 24 disbursements by Automated Clearing House (ACH), and 116 disbursements by wire transfer. Treasury staff also processed 76 receipts by check, 39 receipts by ACH, and 53 receipts by incoming wires and bank transfers.

Financial Summary—Charts & Graphics

Receipts	Expenditures
O&M Expenditures	Construction Costs
Cash and Investments	Summary of Financial Statements

Finance and Administration

(continued)



Summary Financial Statistics		
	Target	Year-End Projected
Fixed Charge Coverage	$\geq 1.20 \times$	1.97
Revenue Bond Coverage	$> 2.00 \times$	1.97
Revenue Bond Debt / Equity Ratio	$< 100.0\%$	55.5%

Senior Lien Revenue Bond Credit Ratings		
	Target	Current
- Moody's Investors Service	Aa2	Aa1
- Fitch Ratings	AA	AA+
- Standard & Poor's	AA	AAA

Administrative Services

Accomplishments

Administrative Services takes great pride in the variety of support services it provides across the entire district. The table below represents a sample of the Section's efforts midway through the fiscal year.

Administrative Services Section Activity July 1, 2021 through December 31, 2021		
Department Area	Transaction Type	Volume
Mailroom	Postage	13,334
	UPS/FedEx (Incoming/Outgoing)	1,827
Business Resource Center	Facility Related Requests Received:	469
	Furniture, Moves, Lighting	1,547
	Operator Facilitated Calls	
Rideshare	Transit Reimbursements (participants)	130
	Average Electric Vehicle Participants	93
ECM	Network Files Migrated	4,207,397
Procurement	Purchasing Documents Executed (Standard P.O., Blanket, Master, Informal Quotes, Request for Bids & Sole Source)	3,246
Professional Services	Professional Services Agreements Executed (RFP, RFQ, Gov Agency, Sole Source & Small Purchase)	48
Warehouse	Materials Transactions, Incoming & Outgoing	26,230
Reprographics	Imaging Services Jobs:	Total Jobs: 221
	99.6% Average on-time completion	Total Impressions: 455,780

Human Resources

GM Strategic Priority #1: Resiliency

Objective #1: Partner with Metropolitan leadership to support learning, development, and adaptive workforce planning initiatives.

The Organizational Development and Training Unit continued its virtual Management University (a ten-session, bi-monthly program for 25 newly promoted managers). Employee Relations staff attended February's session to provide feedback on group homework projects, which tested how participants would address and handle various employee relations issues.

In February, 598 Metropolitan employees attended other online classes, including Effective Communication Skills, Preventing Workplace Harassment, Excel, and Equipment Budgeting.

LinkedIn Learning, Metropolitan's online, e-learning content platform, was used for classes including topics on Time Management, Boosting Emotional Intelligence & Mindfulness, Planning for Retirement, and Working with Difficult People.

Objective #2 Seek diverse, high-quality talent, and establish partnerships to discover additional outreach opportunities that aid in staffing positions.

The Recruitment Unit successfully filled 9 positions for the month of February. Recruitment received 9 new staffing requisitions, which resulted in 193 positions in recruitment. Recruitment continues to conduct virtual interviews using Zoom.

Interviews for the Chief Sustainability, Resiliency, and Innovation Officer and the EEO Officer occurred with interviews scheduled for the Chief Diversity, Equity, and Inclusion Officer in March. The Hawkins Company is working on the next step in the recruitment process.

Continuing the Expert Training Series at the Diversity, Equity & Inclusion Council, the Civility Project, an organization that focuses on building healthy disagreement and constructive dialogue, attended a meeting in February focused on discussing "How we can work to communicate in ways that respect and help bridge gaps."

GM Strategic Priority #2: Sustainability

Objective #1 Implement employee retention and engagement programs to ensure Metropolitan's investment in employees is supported.

The new MET Rewards system was piloted with the HR staff to ensure that the system is functioning appropriately before rolling it out to the entire organization.

The Human Resources Group Manager COVID-19 pandemic Group Managers bi-weekly check-in meetings have continued. The meetings focus on sharing the latest information on employee illness or potential exposure, issues raised by the bargaining units, and strategies for working through the complexities of COVID protocols, recently revised by the California Department of Public Health. Staff continue work to facilitate the return of employees to their regular work locations, with the return-to-work transition scheduled to begin April 4.

Objective #2 Ensure Metropolitan managers have foundational knowledge, on-going support to effectively manage employees, and the tools to prepare for a changing workforce.

Human Resources staff continued to provide one-on-one coaching and mediation services for managers and employees in the developmental areas of team collaboration, emotional intelligence, delegation, and assertiveness.

GM Strategic Priority #3: Innovation

Objective #1: Continue to upgrade HR's technological capabilities and continue to seek out improved technologies to better serve HR's customers.

HRIS staff continued to configure and test capabilities in the MyHR system to track COVID vaccination status, testing results, and other key COVID metrics. This will support Metropolitan's ability to begin safely transitioning staff back to the workplace who have been working remotely.

Staff evaluated and selected a case management system focused on tracking and managing EEO investigations. The system will be implemented for EEO investigations first and then expanded to include other employee investigations and issues managed by Employee Relations staff.

HR Core Business: Provide Excellent Human Resources Services

Objective #1: Administer all HR services with efficiency and a focus on customer service excellence, consistency, and flexibility.

During February, Employee Relations staff continued negotiations with AFSCME Local 1902 to secure a three-year MOU extension, consistent with parameters approved by the OP&T Committee in November. Negotiations have also begun with the Supervisors Association. A comprehensive update on the status of negotiations will be provided to the OP&T Committee in March.

Employee Relations staff also continued ongoing collaborative discussions with the bargaining units over Metropolitan's response to the COVID pandemic. The focus has been on tracking updated federal, state, and local guidelines, as well as developing "toolkits" to assist managers and employees with the eventual transition back to in-person work.

HR Core Business: Comply with Employment Laws and Regulations

Objective #1: Effectively administer all Human Resources policies, programs, and practices in compliance with applicable federal and state laws and Metropolitan's Administrative Code, Operating Policies, and Memorandum of Understanding.

In February, five new Workers' Compensation claims were received. Four employees remain off work because of an industrial injury or illness. This reflects Metropolitan's effort to accommodate injured workers while enabling them to be productive and on the job.

In addition, staff is collaborating with other Metropolitan stakeholders to implement a new Incident Reporting and Case Management System Designed by Ventiv Technology. Staff continues to work closely with our new Workers' Compensation Third-Party Administrator, TRISTAR Risk Management, during the transition.

Finance and Administration

(continued)

Activities of the Workers' Compensation/Medical Screening Unit are summarized as follows for February:

- Coordinated three medical medvan visits (DMV, respirator exams and hearing tests): one at Mills and two at Skinner
- Arranged 16 medical evaluations (Pre-employment, DMV, medical surveillance)
- Coordinated two random drug tests
- Addressed five accommodation issues

HR Metrics	June 2021	February 2022	Prior Month January 2022
Headcount			
Regular Employees	1,806	1,746	1,781
Temporary Employees	30	36	37
Interns	3	2	3
Recurrents	20	19	19
Annuitants	16	15	15

	February 2022	January 2022
Number of Recruitments in Progress (Includes Temps and Intern positions)	193	193
Number of New Staffing Requisitions	9	28
	February 2022	January 2022
Number of Job Audit Requests in Progress	9	11
Number of Completed/Closed Job Audits	2	0
Number of New Job Audit Requests	0	3

Transactions Current Month and Fiscal YTD (includes current month)			
<u>External Hires</u>	<u>FY 20/21 Totals</u>	<u>February 2022</u>	<u>FISCAL YTD</u>
Regular Employees	74	5	47
Temporary Employees	30	1	23
Interns	3	0	4
Internal Promotions	60	7	47
Management Requested Promotions	149	15	95
Retirements/Separations (regular employees)	78	39	106
Employee-Requested Transfers	20	2	6

Finance and Administration

(continued)

Retirees

ID	Last Name	First Name	Classification	Eff Date	Reason	Group
05188	Yu	Burt	Team Mgr-Program Management	12/28/2021	Retirement - Service	ENGINEERING SERVICES GROUP
06349	Schotborgh	Roy	Sr Resource Specialist	12/29/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
05220	Adolphus	Marilyn	Accounting Tech II	12/30/2021	Retirement - Service	CHIEF FINANCIAL OFFICER
06439	Hall	Dannie	Construction Inspector V	12/30/2021	Retirement - Service	ENGINEERING SERVICES GROUP
04261	Tracey	Michael	Prgrm Mgr-Info Technology	12/30/2021	Retirement - Service	INFORMATION TECHNOLOGY GROUP
05768	Young	Robert	Wtr Trtment Plant Operator II	12/30/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
06243	McLaughlin	Kevin	Pr Public Affairs Rep	12/31/2021	Retirement - Service	EXTERNAL AFFAIRS
10149	Thuer	Mark	Instrumnt&Cntrl Tech III	12/31/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
06077	Arita	Arleen	Prgrm Mgr-Dam Safety Initiats	12/31/2021	Retirement - Service	ENGINEERING SERVICES GROUP
05669	Bean	Eliot	Pr Info Tech Analyst	12/31/2021	Retirement - Service	INFORMATION TECHNOLOGY GROUP
06372	Bromby	Lori	Admin Assistant III	12/31/2021	Retirement - Service	ENGINEERING SERVICES GROUP
07422	Cherry	Timothy	Pr Resource Specialist	12/31/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
05454	Dee	Elson	Sr IT Enterprise App Analyst	12/31/2021	Retirement - Service	INFORMATION TECHNOLOGY GROUP
07784	Hernandez	Jesus	Chief of Party	12/31/2021	Retirement - Service	ENGINEERING SERVICES GROUP
07846	Jankovic	Irwin	Strategic Program Mgr, HR	12/31/2021	Retirement - Service	HUMAN RESOURCES GROUP
08360	Johansen	Kevin	Team Manager IV	12/31/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
07699	Kassa	Habte-Wold	Pr Legal Analyst	12/31/2021	Retirement - Service	
05232	Kazalbash	David	Instrumnt&Cntrl Tech Specialst	12/31/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
07518	Kim	Jay	Sr IT Infrastructure Adminstr	12/31/2021	Retirement - Service	INFORMATION TECHNOLOGY GROUP
05237	Kwan	Frances	Pr Admin Analyst	12/31/2021	Retirement - Service	WATER RESOURCE MANAGEMENT GRP
05805	Legoski	Frankie	Pr Designer	12/31/2021	Retirement - Service	ENGINEERING SERVICES GROUP
03925	Lieu	Nancy	Team Mgr-Microbiology	12/31/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP

Finance and Administration

(continued)

08160	Mabry	Mark	Construction Inspector IV	12/31/2021	Retirement - Service	ENGINEERING SERVICES GROUP
08341	Montejano	Jose	O&M Tech IV	12/31/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
06538	Orozco	Leo	Production Planner	12/31/2021	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
07123	Perez	Victoria	Admin Analyst III (C)	12/31/2021	Retirement - Service	CHIEF FINANCIAL OFFICER
07668	Peterson	Thair	Pr Public Affairs Rep	12/31/2021	Retirement - Service	EXTERNAL AFFAIRS
05929	Smith	Tina	Team Mgr-Admin Svcs Bus Mgmt	12/31/2021	Retirement - Service	CHIEF ADMINISTRATIVE OFFICER
05541	Soo	Harry	Prgrm Mgr-Info Technology	12/31/2021	Retirement - Service	INFORMATION TECHNOLOGY GROUP
08575	Vitasovic	Zdenko	Unit Mgr-Application Services	12/31/2021	Retirement - Service	INFORMATION TECHNOLOGY GROUP
05097	Wang	Chuching	Sr Engineer	12/31/2021	Retirement - Service	BAY DELTA INITIATIVES
07009	Whitaker	Fanny	Pr Accountant	12/31/2021	Retirement - Service	CHIEF FINANCIAL OFFICER
08094	de Lamare	R	Prgrm Mgr-Engineering	12/31/2021	Retirement - Service	ENGINEERING SERVICES GROUP
07843	Wray	Michael	Pr Info Tech Analyst	1/1/2022	Retirement - Service	INFORMATION TECHNOLOGY GROUP
10824	Ruballos	Jorge	Asst Engineer I	1/1/2022	Resign - Returned to School	WATER SYSTEM OPERATIONS GROUP
08020	Fuetterer	Dorene	Pr Designer	1/7/2022	Retirement - Service	ENGINEERING SERVICES GROUP
12079	Atwater	Drew	Unit Mgr-Rates,Charges&FinPlan	1/8/2022	Resign-Accepted Other Employ	CHIEF FINANCIAL OFFICER
06274	Salgado	Jerry	Wtr Trtment Plant Operator III	1/21/2022	Retirement - Service	WATER SYSTEM OPERATIONS GROUP
10575	Chandi	Manjit	Admin Assistant II	1/22/2022	Resign-Accepted Other Employ	REAL PROPERTY

External Affairs



GM Hagekhalil spoke to the Beverly Hills Chamber of Commerce, where he shared his One Water vision and thanked city leaders for their work to develop local water supplies and expand conservation. (February 9)

Chairwoman Gray spoke at the BizFed Water Committee and board meetings about current water supply issues and secured the organization's support for Metropolitan's request for state funding to advance work on the Regional Recycled Water Program and drought actions. BizFed also voted to support AB 1845 (D-Calderon) on alternative project delivery methods. (February 15-16)



Beverly Hill Chamber of Commerce Event

GM Hagekhalil and LA Department of Water and Power GM Adams provided welcoming remarks at Metropolitan's virtual "Canadian Water Innovation Roadshow to Southern California" event attended by the Counsel General of Canada and dozens of business leaders and entrepreneurs. (February 16-17)



Rancho Los Cerritos Groundbreaking Event

GM Hagekhalil attended the groundbreaking event for the Rancho Los Cerritos stormwater reclamation project. The project, which received funding from Metropolitan, will capture, store, and reuse 95 percent of on-site rainfall. Also in attendance were representatives from Long Beach Water, the Port of Long Beach, and the San Gabriel and Lower LA Rivers and Mountains Conservancies. (February 16)

Chairwoman Gray, Directors Ackerman, Dick, Erdman, Luna, and Tamaribuchi, and GM Hagekhalil attended and Metropolitan sponsored the MWDOC Water Policy Dinner. State Water Board Chair Esquivel spoke on the board's priority actions and watershed management. (February 23)

Chairwoman Gray, GM Hagekhalil, AGM Zinke and staff attended, and Metropolitan sponsored the San Diego Regional Chamber of Commerce Anniversary Event, which was attended by 600 community leaders and elected officials. (February 24)

Legislative Services

Local

Metropolitan and Los Angeles County Sanitation District staff, with member agency GMs Litchfield (Three Valleys MWD) and Love (Upper San Gabriel MWD) briefed Luis Portillo, the newly-appointed San Gabriel Valley Economic Partnership CEO/President, on the Regional Recycled Water Program. (February 15)

Metropolitan staff participated in the following webinars, virtual meetings, and events on water-specific topics:

- Beverly Hills Chamber of Commerce Government Affairs Committee (February 9)
- Los Angeles County Business Federation virtual Sacramento Day (February 23)

State

Governor Newsom released his \$286.4 billion budget proposal for FY 2022-23, which includes \$750 million for drought response actions. Metropolitan is actively advocating and securing business, labor, water agency, and community support for \$552 million in state funding for the Regional Recycled Water Program and drought mitigation projects.

Staff developed a master list of shovel-ready water infrastructure projects totaling \$14.5 billion, based on information provided by the member agencies and their purveyors. A summary has been sent to the member agencies, ACWA, CMUA and WaterReuse California to support their outreach and advocacy efforts for state funding and investments in water infrastructure.

Metropolitan's sponsored bill, SB 230 by Senator Portantino (D-La Canada-Flintridge) passed out of the Senate unanimously and is in the Assembly. Staff are working with the state, environmental non-governmental organizations (NGOs), and water agencies on amendments. Assembly Member Calderon (D-Whittier) introduced Metropolitan's other sponsored bill, AB 1845, that would authorize Metropolitan to use alternative delivery methods for design and construction of the Regional Recycled Water Program and other drought mitigation projects.

Federal

Lawmakers are closer to reaching a deal on FY 2022 appropriations. A continuing resolution keeping government at FY 2021 levels until March 11 was signed into law to allow more time to finalize the appropriations package. Metropolitan staff continues to advocate for increased funding for water programs.

Congress continues to work on the Water Resources and Development Act of 2022. The House Transportation and Infrastructure Subcommittee on Water Resources and the Environment chaired by Representative Napolitano (D-El Monte) held a hearing to gather stakeholder input. Secretary for Natural Resources Crowfoot testified at the hearing along with other witnesses. Metropolitan staff will be closely tracking the bill as it moves through Congress.

Media and Communications

Media Activities and Interviews

- Coordinated an interview between Reuters reporter Sharon Bernstein, GM Hagekhalil and Water Resource Group Manager Coffey on groundwater storage projects and opportunities across the state.
- Arranged an interview with Sacramento Bee reporter Dale Kasler and Water Resource Program Manager Bodnar regarding Sacramento Valley water transfers this year.
- Set up an interview with Los Angeles Times reporter Ralph Vartabedian and GM Hagekhalil about Measure W and the potential of increased stormwater capture as a local water supply.
- Coordinated an interview with NBC Las Vegas reporter Jeff Gillan and EO/AGM Upadhyay on the Regional Recycled Water Program and partnership with Southern Nevada Water Authority.
- Arranged an interview between Los Angeles Times reporter Ian James and Chairwoman Gray regarding the board vote on Chairwoman's leadership slate.
- Coordinated an interview between Los Angeles Sentinel's Danny Bakewell Jr. and Chairwoman Gray on the Chairwoman's leadership slate as well as efforts to promote greater diversity at Metropolitan and in the water sector.

Press releases

- Opening of Wildflower Trail at Diamond Valley Lake.
- Board actions to address reliability in State Water Project-dependent areas, including infrastructure investments, water transfers and alternate delivery programs.
- Statement from GM Hagekhalil urging conservation following the state's second snowpack survey.



Diamond Valley Lake Wildflower Trail

Creative Design

- Launched the next phase of the district's water conservation advertising campaign on radio, billboards, bus shelters, digital platforms and social media, including co-branded assets with the San Diego County Water Authority, Calleguas MWD, and Las Virgenes MWD.
- Collaborated with Water System Operations to complete the Annual Operating Plan for distribution to member agencies and management.
- Prepared and shared a "sizzle reel" of video footage taken during ongoing facilities shutdown activities during Coffee with the GM town hall and for posting on the IntraMet.

Website

- Logged nearly 94,000 visits to the mwdh2o.com website, with the careers site the most popular page.
- Generated more than 25,000 views on bewaterwise.com, with the turf replacement and rebates pages the most visited.

Social Media

- Celebrated Black History Month with posts that included a quote from Chairwoman Gray, an excerpt from the February board meeting invocation, and a partnership with the Black Employees Association that highlighted Metropolitan-owned art by African American artists.
- Supported Los Angeles Rams heading into the Super Bowl and highlighted SoFi stadium's use of recycled water in social media postings.
- Posted GM Hagekhalil's statements on DWR's second snow survey and SWP allocation, which resulted in some of the highest organic engagement on Twitter.
- Generated more than 41,000 clicks to bewaterwise.com, reaching 2.5 million users with more than 7.6 million impressions as the district continued a strong advertising campaign to support conservation activities.



Black History Month and Super Bowl-themed Social Media Posts

Public Outreach and Member Services

Presentations on the Regional Recycled Water Program were provided to the following organizations:

- South Bay Association Chambers of Commerce (February 1)
- Long Beach Chamber of Commerce (February 10)
- California Water Service (February 11)
- IEUA staff, including a virtual tour of the Advanced Purification Center (February 15)
- San Gabriel Valley Economic Partnership (February 15)
- Green LA (February 24)

Construction Outreach

Distributed 800 flyers to residents and businesses on the Sepulveda Feeder Shutdown. (February 14)

Education and Community Relations

Virtually interacted with 3,325 teachers, students, and parents through online virtual tours, scouting programs, customized Zoom class presentations, and digital outreach through the latest edition of the H2Know newsletter.

Staff presented as part of a webinar for the California Association of Public Information Officials on the importance of diversity, equity, and inclusion as it relates to community outreach and engagement. (February 24)

Launched activities for the online Solar Cup program. Ten member agencies and 18 schools are participating.

Turf Replacement & Assistance for Public Agencies

Staff developed and presented outreach materials for a new Public Agency Turf Replacement Program which provides agencies with incentives and assistance to replace turf on public properties with sustainable landscapes. The program launched February 21.

Metropolitan sponsored the Urban Water Institute 2022 Spring Water Conference. Speakers included Colorado River Resource Manager Hasencamp and CFO Kasaine (February 16-17).



Business Outreach and Innovation

Chief Engineer Bednarski presented at the Construction Network seminar on water districts and Capital programs. (February 3)

Staff attend the Technology Approval Group (TAG) virtual workshop and presented five emerging technologies. (February 9)

Staff attended a webinar for Los Angeles Mayor Garcetti's launch of the Regional Alliance Marketplace for Procurement (RAMP), a one-stop hub for small business to find and pursue business opportunities. (February 11)

Hosted "A New Year and New Ways to Work with Metropolitan" virtual construction event with consultants and contractors. (February 25)



Metropolitan's Mission is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

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