

25th Annual Report on Achievements In Conservation, Recycling & Groundwater Recharge

February 2025 Covering Fiscal Year 2023/24

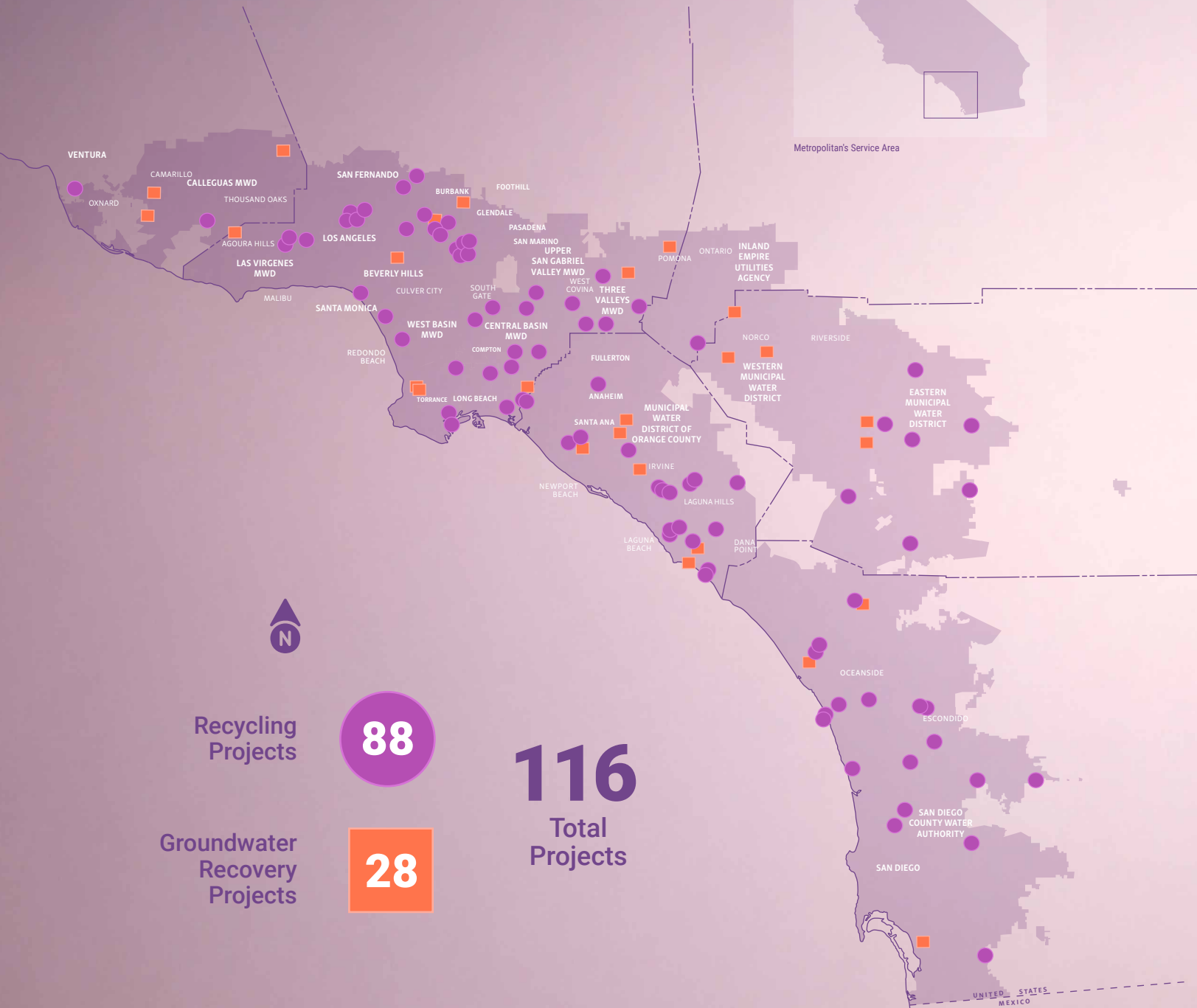


THE METROPOLITAN WATER DISTRICT
of SOUTHERN CALIFORNIA

Metropolitan's Local Resources Program Projects*



Metropolitan's Service Area



Recycling Projects

88

Groundwater Recovery Projects

28

116
Total Projects

*This map represents projects undertaken from 1981 through June 2024.

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About Metropolitan & This Report

Over the years, Metropolitan has adapted its water management approach based on public input and regional needs, using innovative strategies and partnerships to secure reliable water supply, even as climate change challenges intensify. This report details our region's progress in developing sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures. This is our 25th report to the state. Looking back, we follow a quarter century of progress and a shared history of something we can all be proud of – quantifiable savings year after year and a cumulative investment of more than \$1.7 billion for projects and programs that use water more efficiently and maximize the use of local water supplies.

Metropolitan is a public agency and regional water wholesaler. It is a voluntary cooperative of 26 member agencies that purchase some or all their water from Metropolitan. These member agencies directly or indirectly provide water for about 19 million people across six Southern California counties. Metropolitan is governed by a 38-member board of directors comprising representatives from each of Metropolitan's member agencies. **The mission of Metropolitan is to provide its 5,200-square-mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.**

Metropolitan was founded nearly a century ago to build and operate the Colorado River Aqueduct. Later, we contracted with the state of California for a share of the State Water Project to meet the supply needs of growing Southern California. Metropolitan expanded our infrastructure to include a vast network of distribution lines, treatment facilities, reservoir storage, and groundwater banking programs to meet and anticipate the needs of our service area.

Today's vision encourages sustainable local resource development, water-use efficiency, and innovative storage initiatives. This report details the significant steps Southern California continues to undertake to manage our water supplies and demands in the face of climate change. We are working in partnership with communities to make our system more flexible and resilient to climate extremes through conservation initiatives and local resource development programs. This strategy reduces demand and keeps water in storage for the next drought. We have successfully managed demands even in the face of significant population growth.

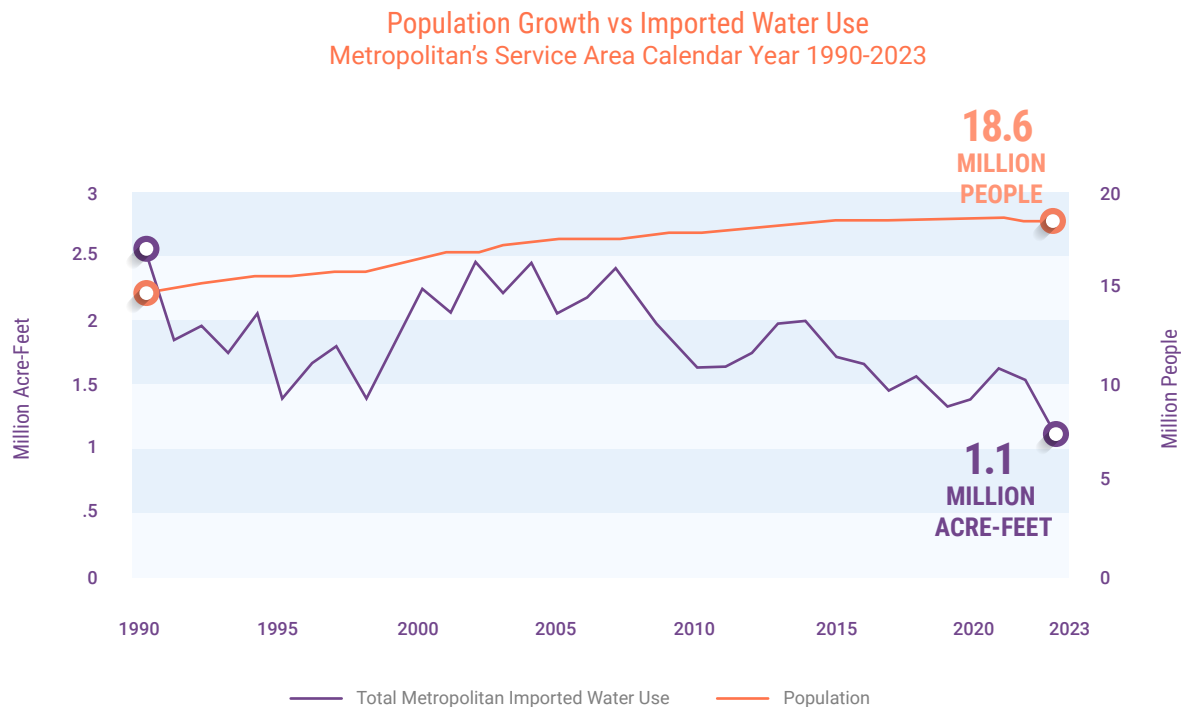
Metropolitan draws on supplies from the Colorado River through the Colorado River Aqueduct, which it owns and operates; from Northern California via its participation in the State Water Project; from storage agreements and through transfer and exchange arrangements with other agencies in California and other western states. Demands on Metropolitan are also managed through conservation and local resource programs. Since the 1990s, conservation, water recycling, and recovered groundwater have grown to become a significant percentage of Metropolitan's water supply portfolio.

Conservation and local resource development occur at the local and regional levels; regional approaches have proven cost-effective and beneficial for all Metropolitan member agencies. These programs are part of the implementation of Metropolitan's Urban Water Management Plan and increase water supply reliability by reducing the region's reliance on imported water supplies to meet future demands. The programs and initiatives decrease the burden on Metropolitan's infrastructure, reduce system costs, and free up conveyance capacity to benefit all system users.

Conservation and local resource development help the region adapt to the impacts of climate change and advance the legislative mandate that Metropolitan increase "sustainable, environmentally sound, and cost-effective water conservation, recycling, and groundwater storage and replenishment measures."

While Metropolitan is involved in many other beneficial programs and initiatives, this report describes our successes in conservation, local resource development, local storage efforts, and improving the watersheds that provide our imported and local supplies. Addressing the impacts of climate change is a key part of our resource management discussions and the central focus of our Climate Adaptation Master Plan for Water, which is being developed to guide future capital investments in response to our new climate reality.

The graphic on this page shows that over the past 30 years, our region has decreased imported water use despite population growth. This trend demonstrates the impacts of regional investments in conservation and local resource development.



Notes about the graph:

1. Calendar year data.
2. Population based on the Department of Finance.
3. Total Imported Water Use includes municipal, industrial, and agricultural consumptive uses, as well as groundwater replenishment and seawater barrier uses.

A 25-Year Retrospective

For 25 years, this annual report has detailed the progress made in increasing conservation and developing local water resources. Although it began as a requirement, the report is now welcomed as an opportunity to showcase the success of Metropolitan's investments, our member agencies' support and innovations, and the embrace of mindful resource management by the communities we collectively serve.

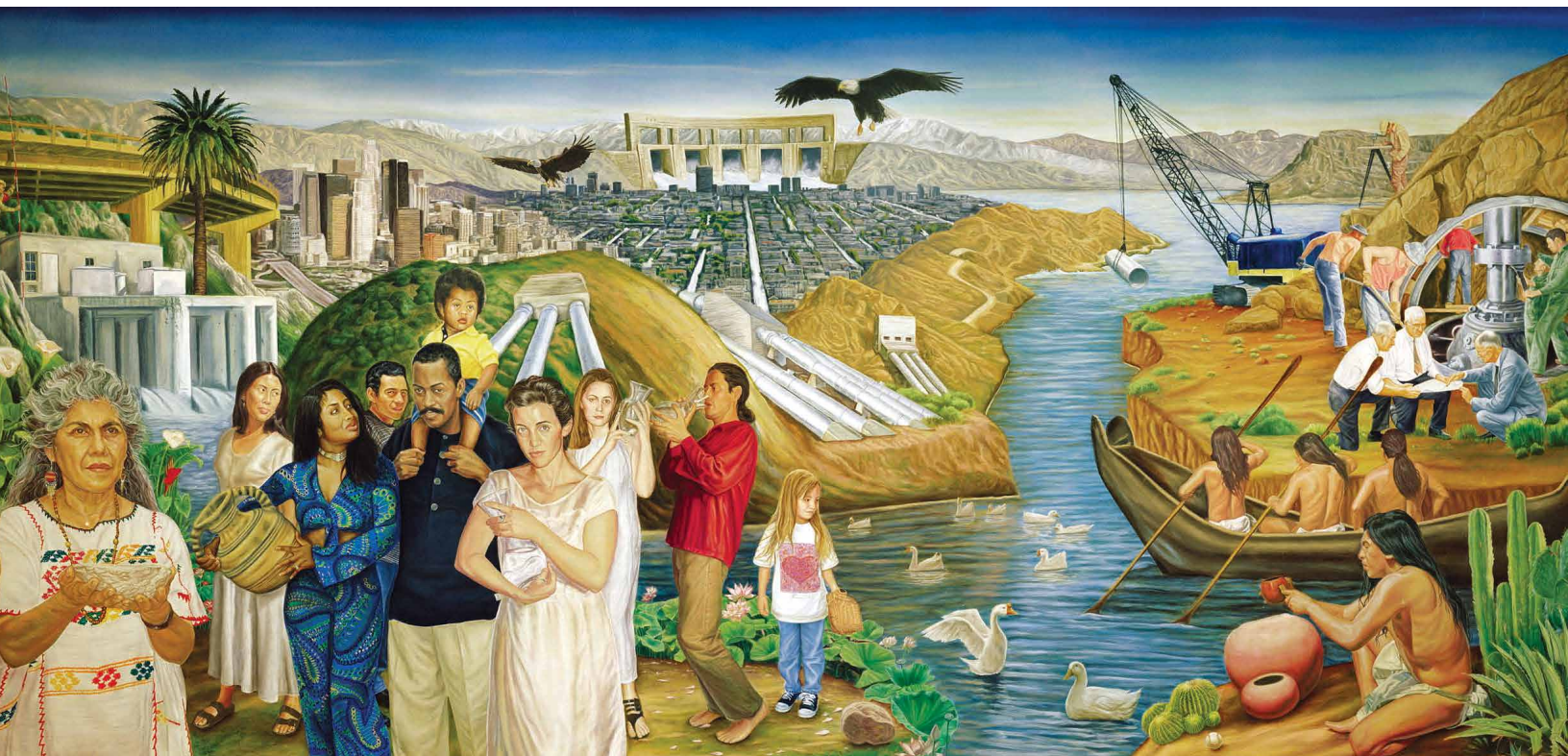


Over the past 25 years, Metropolitan's portfolio of resource management programs has expanded significantly as have our investments and water-savings. Initially, our efforts amounted to a \$226 million investment, yielding annual water savings of 151,000 acre-feet in conservation, recycling, and groundwater recharge. Fast forward to today, and Metropolitan's cumulative investment is \$1.7 billion with estimated water savings of more than 8.55 million acre-feet to date. Credit this progress to innovative programs for residential, commercial, institutional, and industrial customers that are expanding savings opportunities that originated in response to the extended drought of the late 1970s.

The introduction of new programs and initiatives has been guided by research and planning and include the Integrated Resources Plan, the Long-Term Conservation and Water Surplus and Drought Management plans, and periodic updates to the Urban Water Management Plan. A common thread for the new programs has been incentives for innovative approaches to water-saving research, products, and programs.

Support for creative resource management comes with the Innovative Supply Program, Innovative Conservation Program, and Future Supply Actions Program, which build on their successes to provide grants and fund new ideas to enhance regional water supplies. Recycling programs are supported by the On-Site Retrofit program, pilot programs for direct use and recharge of stormwater, and a new approach to regional recycled water development with Pure Water Southern California, which will conclude testing and environmental planning phases in 2026.

Outreach efforts now include advertising programs created in-house in multiple languages for multi-media platforms to promote a conservation ethic and turf replacement with California Friendly® and native landscapes. These efforts also introduced new-to-market devices like flow monitors that find leaks in real time and are heavily subsidized by rebates. These new programs and devices are showcased on bewaterwise.com, Metropolitan's conservation portal introduced in 2003. In the first fiscal year, the website attracted about 162,000 visitors. First time visitors in fiscal year 2023/24 totaled 626,000 with a combined 1.1. million views.



This mural by artist Eloy Torrez at Metropolitan's downtown Los Angeles headquarters building depicts the history of water in California.

Partnerships with other utilities and funding from both state and federal sources have allowed outreach and education efforts to expand. These efforts include community initiatives, school programs, landscape classes, water audits for businesses and a focus on reaching underserved communities with free installation of hardware devices like high-efficiency toilets and showerheads, as well as smart irrigation controllers.

This annual report now includes a section on climate and watershed initiatives, highlighting the interconnectedness between stormwater collection, salinity management, environmental health, habitat restoration and preservation with climate change. Metropolitan's focus on climate change impacts began with a workshop in 2000 and was strengthened in 2002 when the Board of Directors adopted guiding principles on climate change.

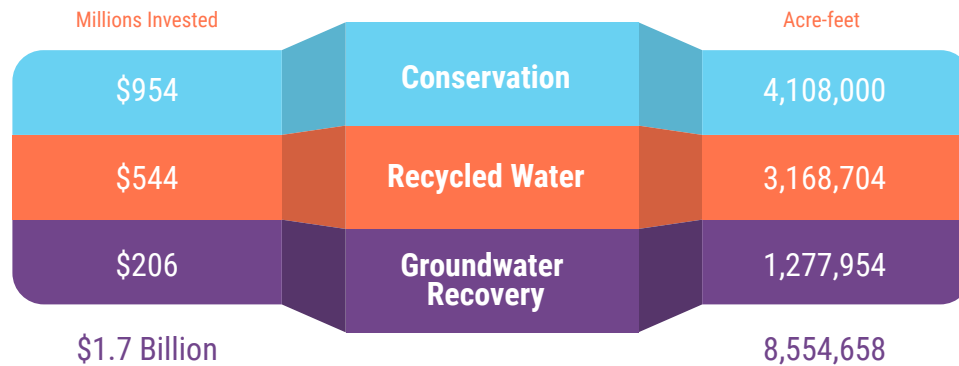
Public involvement is foundational to all of Metropolitan's initiatives and programs. Today, a strong conservation ethic is instilled in Southern California, reflected in a 40% reduction in per capita water use since 1990 - a significant achievement indeed, and a measure of the success when programs, people, and purpose come together.

As we look back on the last 25 years of progress, we see more than just numbers; we see a collective commitment to stewardship, resilience, and innovation. Each initiative, every partnership, and all those who embraced the conservation ethic have paved the way for a stronger, more sustainable future for Southern California. This journey, from a legislative requirement to a shared legacy of mindful resource management, serves as a powerful reminder of what we can accomplish together for the generations to come.

Achievement Scorecard

Conservation		
FY 2023/24 Total Water Saved ¹	1,101,000 acre-feet	
New Water Saved From Metropolitan Conservation Credits Program ²	6,600 acre-feet	
Water Saved From Existing Metropolitan Conservation Credits Program ³	210,000 acre-feet	
FY 2023/24 Investment		
Metropolitan Conservation Credits Program Investment ⁴	\$44 million	
Member Agency Conservation Investment ⁵	\$12 million	
Metropolitan Outreach & Education	\$3 million	
Cumulative Savings Since 1990		
Water Saved From Metropolitan Conservation Credits Program Only ⁶	4,108,000 acre-feet	
Metropolitan Conservation Investment (excluding funding by member agencies) ⁷	\$954 million	
Recycled Water		
FY 2023/24 Production ⁸	473,000 acre-feet	
Water Produced From Projects Receiving Metropolitan Funding	40,000 acre-feet	
Water Produced From Projects Without Metropolitan Funding (incl. Santa Ana River base flow) ⁹	433,000 acre-feet	
FY 2023/24 Investment		
Metropolitan Funding	\$5 million	
Cumulative Production & Investment Since Inception ¹⁰		
Production With Metropolitan Funding	3,168,704 acre-feet	
Metropolitan Investment	\$544 million	
Groundwater Recovery		
FY 2023/24 Production	129,000 acre-feet	
Water Produced From Projects Receiving Metropolitan Funding	63,000 acre-feet	
Water Produced From Projects Without Metropolitan Funding	66,000 acre-feet	
FY 2023/24 Investment		
Metropolitan Funding	\$10 million	
Cumulative Production & Investment Since Inception ¹¹		
Production With Metropolitan Funding	1,277,954 acre-feet	
Metropolitan Investment	\$206 million	
Conjunctive Use Program ¹²		
Metropolitan Cumulative Capital Investment	\$27 million	
Proposition 13 Grant Funds Administered by Metropolitan	\$45 million	
Water Stored Since Program Inception through June 2024	407,000 acre-feet	
Water Extracted Since Program Inception through June 2024	348,000 acre-feet	
Groundwater Replenishment ¹³		
FY 2023/24 Delivery	108,000 acre-feet	
Cumulative Replenishment Delivery since 1984 through 2024	4,364,000 acre-feet	
Regional Summary		
	FY 2023/24	Cumulative
Metropolitan's Investment in Water Conservation, Recycled Water, and Groundwater Recovery ¹⁴	\$59 million	\$1.7 billion
The numbers have been rounded to present a topline view of conservative achievement. More precise numbers are included in the report narrative. Cumulative investment is reported in nominal dollars.	313,000 AF	8,554,658 AF

Metropolitan's Cumulative Investment



Footnotes for the Achievement Scorecard

Numbers are based on the best available information during the production of this report and are subject to revision for accounting reconciliation. All cumulative investment figures are in nominal dollars.

- Annual total savings include Metropolitan's Conservation Credits Program, code-based conservation achieved through Metropolitan-sponsored legislation, building plumbing codes and ordinances, reduced consumption resulting from changes in water pricing, and pre-1990 device retrofits.
- The region achieved new water savings through Metropolitan's Conservation Credits Program and member-agency-funded programs initiated in fiscal year 2023/24.
- Includes water savings initially achieved through Metropolitan's Conservation Credits Program and maintained through plumbing codes.
- Active conservation investment includes administrative fees for contracted program vendors. The investment includes \$2.7 million of outreach budgeted through the Conservation Credits Program.
- In addition to Metropolitan's Conservation Credits Program, member agencies and retailers implemented local water conservation programs within their respective service areas. Member agency investment figures include rebate funding beyond rebates already provided by Metropolitan's Conservation Credits Program.
- Cumulative water savings since 1990 include water savings initially achieved through Metropolitan's Conservation Credits Program and maintained through plumbing codes.
- Metropolitan's cumulative conservation investment for fiscal year 2023/24 reflects a revision in total cumulative expenditures due to a reconciliation audit. The cumulative investment does not include outreach and education expenditures.
- Figures reflect actual and estimated deliveries for all Metropolitan-assisted projects and payments reported for fiscal year 2023/24; cumulative production and investment reflect accounting reconciliation as data become available; annual regional production for recycled water includes an estimated 76,323 acre-feet of treated wastewater discharged to the Santa Ana River base flow that percolates into downstream groundwater basins. The total may not be exact due to rounding.
- Some projects received funding at the outset through Metropolitan's Local Resources Program. Once the term of the funding agreement expires and the projects continue, further production is not factored into program totals.
- Metropolitan initiated its Local Resources Program in 1982 to encourage recycled water production for municipal purposes. Cumulative production and investment figures are subject to annual accounting reconciliation.
- Metropolitan initiated its Groundwater Recovery Program in 1991 to encourage the treatment and use of degraded groundwater for municipal purposes. Cumulative production and investment figures are subject to annual accounting reconciliation.
- Metropolitan completed the construction of the conjunctive use storage programs in 2008. Proposition 13 refers to Chapter 9 of the Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act of 2000. Water extracted since the program's inception includes losses.
- The figure is cumulative since 1984. Before 2013, Metropolitan provided replenishment water at a discounted rate to encourage long-term recharge and maintenance of groundwater basins and local reservoirs. Although Metropolitan discounted the replenishment rate on January 1, 2013, Metropolitan continues to provide water for replenishment purposes at full-service rates.
- Metropolitan's cumulative conservation investment for fiscal year 2023/24 reflects a revision in total cumulative expenditures due to a reconciliation audit. Cumulative conservation investment does not include outreach and education expenditures.

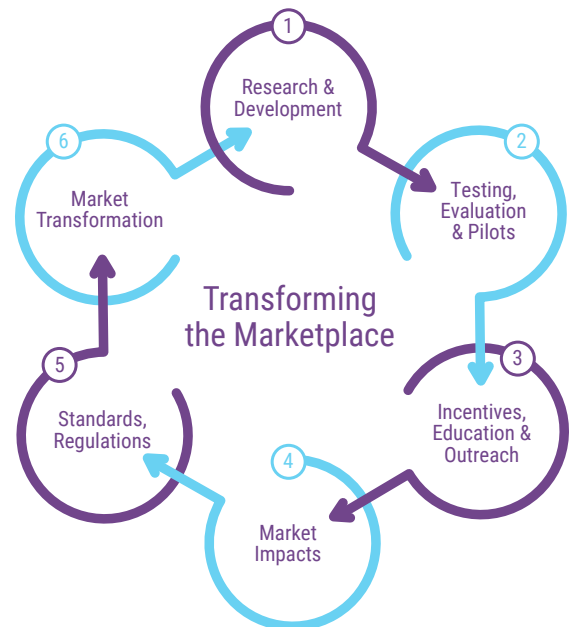
Conservation

The standout lesson from nature in the past few years is that we can only expect more unpredictability. Weather extremes are occurring more frequently, suggesting they may become more of a norm than an anomaly. This supports the need to maintain conservation efforts, capture as much water or storage reserves as possible in wet years, and continue to develop local resources in collaboration with the communities we serve. Our achievements are directly tied to the work of our member agencies, local and diverse communities, schools, businesses, and elected officials. State and federal grant funding allows a more concerted effort to reach underserved communities with targeted and accessible conservation programs.

Metropolitan encourages water-use efficiency with a variety of resources that include rebates and grant programs, educational, advertising, and outreach initiatives. Metropolitan also supports legislation, smart building codes, and device and appliance standards that ensure continued water savings over time. Metropolitan programs focus on market transformation, with specific activities illustrated in the figure to the right.

We promote innovation, support the development of new products, and influence consumer decision-making with catalysts like rebates, outreach and education, advocacy for new codes and standards, and fostering of new alliances. These efforts have brought positive and lasting change.

The first step towards transforming markets is being informed on the performance of new devices and technologies through research and development (1). We test new technologies with promising potential to see if they work and how well they might perform in the marketplace and real-world applications. Ongoing testing, evaluation, and pilot programs are conducted through public-private collaborations that are cost-effective (2). Once these technologies are in the hands of consumers, we continue to track water savings and gauge consumer satisfaction.





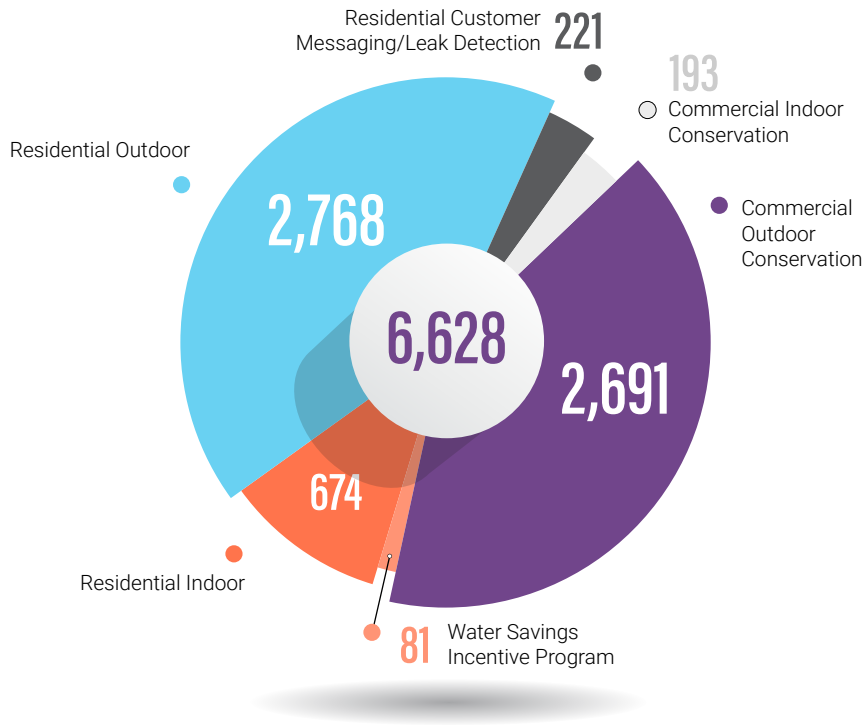
A California Friendly® garden featured in the Theodore Payne Garden Tour 2024 is a living showcase of waterwise plants and flowers.

Catalysts like incentive programs, education, and outreach bring new technologies to the attention of consumers **(3)**. Metropolitan offers rebates to incentivize the use of water-efficient technologies and processes. Education and outreach call attention to their availability. Targeted advertising in multiple languages and across diverse platforms brings the conservation message to a broader community. These catalysts accelerate impacts on the market **(4)**. Incentives also have the effect of increasing demand for new products and driving down production costs.

Advocacy for new standards and regulations happens when products become more available in the marketplace to support sustained water savings **(5)**. New device standards and building and municipal codes also encourage research and development of next-generation water-saving technologies, processes, services, and designs. And finally, once catalysts like financial incentives have their intended effects to influence markets and consumer behaviors, they can be phased out to allow natural market dynamics to sustain changes **(6)**.

Since 1990, Metropolitan has invested \$954 million in conservation rebates and programs, of which approximately \$44 million was spent in fiscal year 2023/24. Metropolitan typically calculates rebates based on \$195 per acre-foot of water savings over the life of a device or program. Exceptions include the Turf Replacement Program, rain barrels, cisterns, and multi-family housing toilet replacements. These measures are calculated differently to provide a greater incentive and therefore more participation, ultimately spurring market transformation. Metropolitan supplements its conservation programs using state and federal grant funds when available to help with market transformation efforts.

New Water Savings in Acre-feet Fiscal Year 2023/24



Fiscal Year 2023/24 Conservation Program Highlights

- Metropolitan provided about \$44 million in rebates, landscape and irrigation classes, research and outreach to help consumers reduce water use in their homes and businesses.
- Metropolitan processed about 104,000 residential rebate device and program applications, which will save 3,700 acre-feet annually.
- About 11.8 million square feet of lawn was removed as part of the Turf Replacement Program, projected to save about 1,400 acre-feet annually, an increase of about 200 acre-feet from last year's number.
- With a grant award from the United States Bureau of Reclamation, Metropolitan was able to increase the turf replacement incentive by \$1 per square foot to \$3 for residential locations.



Metropolitan's Residential Conservation Programs

SoCal Water\$mart Residential & Member Agency Administered Residential Programs

Metropolitan's regional rebate program is administered through SoCal Water\$mart to encourage and support the use of water-efficient products across the Southland. Residential rebates offered in fiscal year 2023/24 included high-efficiency clothes washers and sprinkler nozzles, premium high-efficiency toilets, smart irrigation controllers, rain barrels, and cisterns. Metropolitan estimates an annual water savings of about 1,280 acre-feet for fiscal year 2023/24 from more than 104,000 residential conservation device rebates funded by Metropolitan. This includes 12,800 water-saving high-efficiency sprinkler nozzle rebates.

Funding from Metropolitan is provided to member agencies for locally-administered conservation programs. Qualifying residential projects include rain barrel distributions, turf replacement programs, sustainable landscape irrigation programs, residential leak detection, customer water-use messaging, and residential water surveys.

Metropolitan estimates water savings of about 3,700 acre-feet annually from all residential programs administered in fiscal year 2023/24.

Direct Installation Program with Southern California Gas Company

Metropolitan also provided water-saving measures to underserved communities through a direct install program in partnership with Southern California Gas Company. Metropolitan has collaborated with SoCalGas since 2014, when the agencies began to work together on joint water and energy efficiency incentive programs. In 2021, Metropolitan expanded the direct install program that initially provided new high-efficiency clothes washers to income-qualified residents in Metropolitan and SoCalGas service areas at no cost. The program expansion includes income-qualified homeowners and residents of disadvantaged communities, and offers new premium high-efficiency toilets, smart irrigation controllers, and high-efficiency showerheads and aerators installed by SoCalGas contractors free of charge. Approximately 7,200 homes have benefitted from this program since the expansion in December 2021. In fiscal year 2023/24, nearly 2,250 high-efficiency toilets, 360 "smart" or weather-based irrigation controllers, and 52,000 low-flow showerheads and faucet aerators were installed in almost 1,600 homes. The program received \$5 million in funding from the California Department of Water Resources, which allowed the partners to expand the program even further and target more homes for retrofitting.

A varied color palette of a California Friendly® garden.



Regional Turf Replacement Program

Metropolitan's Turf Replacement Program provided rebates for residential, commercial, industrial, and institutional sites to remove about 11.8 million square feet of lawn in fiscal year 2023/24, resulting in an estimated annual water savings of about 1,400 acre-feet. These savings represent an increase of 200 acre-feet more than the previous fiscal year.

Other Regional Incentives

Premium High-Efficiency Toilets

Metropolitan continued its premium high-efficiency toilet rebates for underserved communities. The replacement of toilets in multi-family housing units built before 1994 received a boost with incentives that increased from \$40 to \$250 for each premium high-efficiency toilet that replaced an older model. Metropolitan estimates that the total toilet rebates issued for residential and commercial customers in fiscal year 2023/24 will save about 260 acre-feet of water annually. Premium high-efficiency toilets use no more than 1.1 gallons per flush and about 30% less water when compared to older ultra-low-flush toilets.

Delivery of a high-efficiency clothes washer is part of a Long Beach Utilities direct installation programs to promote water and natural gas conservation at no cost to area residents and businesses.

High-Efficiency Clothes Washers

Metropolitan estimates water savings of about 320 acre-feet annually from clothes washer rebates in fiscal year 2023/24. High-efficiency clothes washers with an integrated water factor of 3.2 or less are eligible for rebates. The integrated water factor measures the amount of water used to wash a standard load of laundry. These washers can save over 10,000 gallons per year compared to a conventional top-loading clothes washer.

Smart Irrigation Controllers

Smart irrigation controllers save water by adjusting watering schedules based on weather, soil conditions, plant material, sun exposure, soil moisture, and slope. Metropolitan estimates water savings from regional and member agency incentive programs of about 720 acre-feet annually from smart controller rebates in fiscal year 2023/24.

Metropolitan's Commercial Conservation Programs

Metropolitan's commercial conservation programs provide financial incentives for water-saving devices and projects, including landscape transformation. Rebates are available for certain commercial kitchen devices, cooling towers, and medical and dental equipment. Qualifying commercial projects include turf removal, multi-family high-efficiency toilets, and high-efficiency sprinkler nozzles. Metropolitan estimates about 1,700 acre-feet of annual commercial water savings from more than 51,600 conservation device incentives and 6.6 million square feet of turf replacement in fiscal year 2023/24.





Metropolitan's second annual One Water Awards ceremony honored four innovative water-saving projects that will collectively save 200 million gallons of water annually.

Water Savings Incentive Program

The Water Savings Incentive Program is a regional pay-for-performance initiative. It is open to all commercial, industrial, institutional, agricultural, and large landscape consumers with qualifying projects within Metropolitan's service area. Financial incentives are available for customized water-efficiency projects, including installing commercial or industrial high-efficiency equipment, industrial process improvements, agricultural and landscape water efficiency improvements, and water management services. Incentives are based on the water saved and capped at 50% of eligible project costs. In fiscal year 2023/24, Metropolitan estimates savings of about 67 acre-feet of water from new projects. The annual water savings for fiscal year 2023/24 from all WSIP projects since program inception is estimated at 4,547 acre-feet. In May 2023, Metropolitan established the One Water Awards Program, an annual event to showcase innovative and forward-thinking sustainability projects implemented by local businesses and municipalities, which credit their water and financial savings to their participation in Metropolitan incentive programs like the WSIP and Turf Replacement.

Research & Development

Innovative Conservation Program

Metropolitan's Innovative Conservation Program provides funding for research that will document the water savings and reliability of innovative devices, technologies, and strategies. A joint program with SoCalGas provided about \$275,000.

A selection committee made up of internal staff and outside representatives received and evaluated 32 project proposals from diverse applicants that included universities, entrepreneurs, municipalities, nonprofit organizations, and individuals. The committee selected six projects and awarded them up to \$50,000 each in funding. Project topics include municipal and commercial leak detection, cooling tower efficiency, commercial turf replacement savings analysis, and showerheads that provide water and energy savings by eliminating waste during the shower-water warming process. The projects have been completed, and the final reports are posted on bewaterwise.com.

Long-Term Studies

In addition to the Innovative Conservation Program, Metropolitan pursued other research projects, many of them long-term studies. They include:

- Completion of a pilot study to provide individual GIS dashboards to Metropolitan's member and retail agencies to help identify areas of turf that may not provide any functional benefits to the community.
- Continued evaluation of the water-saving potential of leak detection for distribution system processes in collaboration with multiple member agencies.
- A partnership with the Alliance for Water Efficiency to study water affordability, including directly installing devices donated by Kohler® and Whirlpool®.
- Expanded collaboration with SoCalGas on a direct install program for underserved communities.

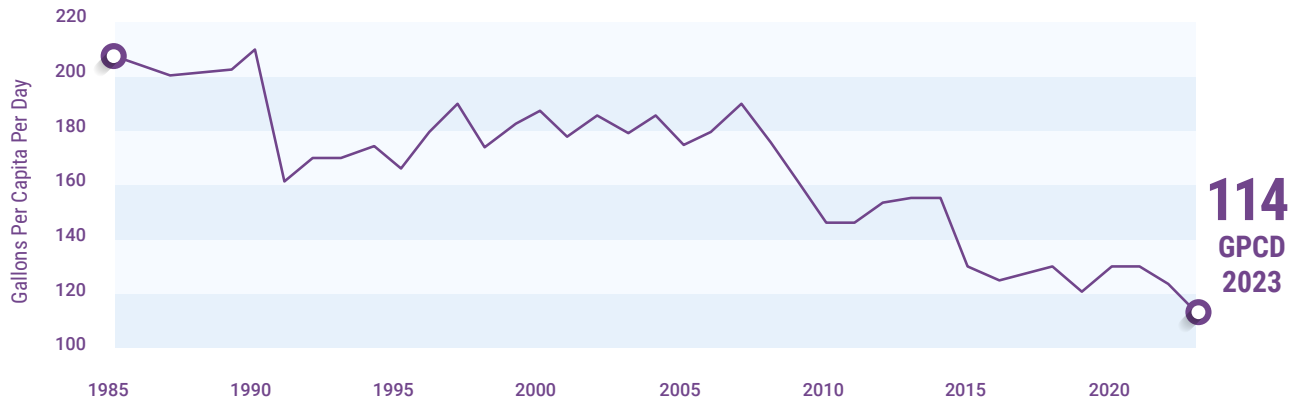
California State University, Dominguez Hills, served by West Basin Municipal Water District, installed a water recovery project that captures and reuses HVAC condensation for campus cooling towers.



Regional Water-Use Efficiency

Increasing regional water-use efficiency is a key component of Metropolitan’s water reliability strategy. Since 1990, Metropolitan’s estimated regional potable water use declined from 209 gallons per capita per day, or GPCD, to 114 GPCD in calendar year 2023. Extraordinarily cool and wet hydrologic conditions, along with drought conservation measures that carried over from 2022, led to the sharp decline in GPCD observed in 2023. The long-term continued decline in potable GPCD is attributed to Metropolitan’s regional investments in conservation programs, legislation, and long-term conservation program investments. Further advances in water-use efficiency will be driven by regional investments in conservation programs, new state and local laws, and education and outreach campaigns that promote a strong water-use efficiency ethic.

Potable Per Capita Water Use
Metropolitan’s Service Area Calendar Year



Notes about the graph:

1. Calendar year data.
2. 2023 GPCD based on best available data (as of August 2024) and is subject to reconciliation. Data is received in 2024 for the previous calendar year.



Communications & Outreach

On the heels of record drought and record rainfall, what remains certain is the need to conserve, reuse, and recycle as much water as we can. It is apparent that conservation as a way of life is the only way to manage the extremes brought by climate change. Engaging Southern California's many diverse communities is not a one-size-fits-all approach, which is why Metropolitan fostered a strong presence on multi-media platforms, as well as community-based outreach to nonprofit organizations, educators, elected officials, and the news media.

Advertising & Outreach Campaign

Extreme shifts in water supply conditions and challenges to water reliability in fiscal year 2022/23 informed the district's communications strategies. Communicating with the public about rapidly changing conditions -- historical for both drought and rainfall -- made for an ever-changing storyline. The one constant in the narrative was an unwavering commitment to a conservation ethic, which required informed, creative, and timely messaging.

By fall 2023, the Colorado River remained in a long-term drought. Southern California's supply conditions significantly improved due to early winter storms that boosted deliveries from the State Water Project, the conveyance system that captures rain and snow that falls in the high Sierra Nevada mountains. Even as Metropolitan abruptly found itself with surplus supplies and record storage, the messaging strategy was to maintain a focus on conservation as a way to address inevitable extreme and variable weather intensified by climate change.

Metropolitan's water conservation advertising campaign took to television, outdoor, digital, radio, and social media platforms through the end of November 2023. Advertisements recognized the need to conserve while highlighting the actions being taken by local and regional water agencies and the state to manage a reliable water supply. Media placements were available in six languages, reaching demographically diverse audiences across Southern California with 577 million impressions on a \$2.6 million budget.

Metropolitan continued to engage with new online audiences through social media influencer partnerships. These included actor Kyle MacLachlan of cult classics *Twin Peaks* and *Dune* fame chatting with Metropolitan about sustainable water-saving landscapes at his home and designers Katie Zamprioli and Dabito discussing the intersection between vibrant California Friendly® plants, color, and design. The fiscal year ended with a collaboration with the iconic Bob Baker Marionette Theatre where we produced "An Enchanted Transformation" puppet show to highlight the beauty of California Friendly® gardens. The collaborations reached hundreds of thousands of Instagram followers and drove people to Metropolitan's online conservation portal, [bewaterwise.com](https://www.bewaterwise.com).

In the spirit of French artist Henri Matisse and the Paris 2024 Olympics, the summer outreach campaign focused on lawn to garden transformations.



Behind the scenes at the iconic Bob Baker Marionette Theatre and the production of a garden transformation video.

LET'S REPLACE LAWNS WITH CALIFORNIA FRIENDLY[®] LANDSCAPES. WE HAVE REBATES.

bewaterwise.com[®] + You

WATER CONSERVATION IS A TEAM SPORT

bewaterwise.com® + You



Press conference announces additional incentives to plant trees as part of the Turf Replacement Program.

In March 2023, Metropolitan launched a new tree rebate incentive as part of the district's Turf Replacement Program, offering Southern California residents a \$100 rebate per tree planted while they replace their lawns with sustainable and water-efficient landscaping. Metropolitan partnered with local environmental nonprofit organization TreePeople on a co-branded, illustrated tree care guide. Nearly 200 residents have planted trees in their yards to date.

Communicating with commercial, industrial, and institutional sectors was also integral to Metropolitan's outreach strategies, particularly with the October 2023 passage of Assembly Bill 1572. The legislation was co-sponsored by Metropolitan to prohibit the use of potable water to irrigate grass that is not used for recreation or other purposes – also known as non-functional turf – on commercial, industrial, municipal, and institutional properties. In May 2024, Metropolitan hosted the second annual One Water Awards ceremony recognizing four businesses and institutions throughout Southern California for their investments in large-scale water efficiency projects. The event aims to celebrate sustainable water resource management while fostering a culture of innovation and efficiency.

In June 2024, the Metropolitan board approved entering into a three-year agreement with media agency We Are RALLY for a total not to exceed \$10.5 million for multi-media placement services. Rally is now the district's advertising agency of record and will purchase media across diverse platforms by leveraging media partnerships to extend district dollars, mindful of budget concerns. Expenditures are closely monitored and subject to availability or board discretion.

Continuing the Olympics theme, Metropolitan launched a team-sport campaign to emphasize the partnerships we depend on to support conservation.



An essay contest for students to name the tunnel boring machine for the Perris Valley Pipeline Project resulted in the winning selection of the Rachel Carson Tunnel Boring Machine named for the fresh water scientist.

Media

Metropolitan continued to maximize opportunities to get our message out by tapping into continued media interest in water resources in fiscal year 2023/24. The Press Office maintained its efforts to increase public awareness of Southern California’s supply challenges and the need for increased water efficiency and investments in local water supplies to strengthen the region’s water resiliency.

Metropolitan’s leadership and subject matter experts provided nearly 200 interviews to television, print, radio, and digital reporters and producers from local, state, and national news outlets about the district’s work helping the region conserve and build local water resources. These stories reached local and national audiences nearly 260 million times, earning a publicity value of \$3.3 million.

The Press Office helped generate this media interest and ensured that Metropolitan was part of the water supply conversation by holding press conferences and issuing press releases on various water supply issues. These efforts included spotlighting the district’s conservation investments to the media, particularly its Turf Replacement Program, which included a news release on the district increasing the incentive amount for businesses and public agencies. Staff held an event publicizing a new rebate for program participants who plant trees as part of their sustainable landscaping. One of Metropolitan’s conservation experts was also featured on KABC7 News in a segment exploring how people can save water indoors and outdoors.

Staff also garnered significant media coverage on the passage of AB1572, legislation co-sponsored by Metropolitan that will phase out the use of potable water to irrigate non-functional grass on commercial, industrial, municipal and industrial properties.

This issue drew coverage from outlets including KFI-AM 640 and KNX-AM 1070 radio stations, as well as Spectrum News. Local outlets, including the Pasadena City College online newspaper, also covered the issue to demonstrate local impacts.

The Press Office also earned media coverage for Metropolitan’s Future Supply Actions Funding Program, through which the agency awarded \$3 million to eight planning studies and pilot tests aimed at reducing the technical and regulatory barriers to advance future recycled water, stormwater, seawater desalination, and groundwater capture projects.

In addition, Metropolitan issued a news release about its awards program honoring innovative water-saving projects in Metropolitan’s service area to inspire similar water-saving efforts.

The Pure Water Southern California Program outreach last year – including events celebrating grant funding from the USBR and renaming the facility’s innovation center after Congresswoman Grace F. Napolitano – highlighted the project as a solution to help Southern California diversify its water supplies.



Water Journeys field trips bring students on a nature walk and the chance to explore hands-on water quality experiments at the Bixby Marshland maintained by the Los Angeles County Sanitation Districts.

Community Outreach

Metropolitan also leveraged community-based approaches to spread the conservation message to tens of thousands of Southern Californians by partnering with Los Angeles-based national women's soccer team, Angel City Football Club. From in-stadium advertising signage at every televised home game to hosting pre-game fan festival exhibit booths, water-saving resources meet residents where they live, work, and play. The ACFC partnership includes participation in the team's Equality, Essentials, and Education Commitment, which funnels 10% of partnership funds to support community-based programming for youth in underserved areas in Los Angeles.

On May 17, 2024, Metropolitan staff and leadership, including Board Chair Adán Ortega, Jr. and Directors Gloria Cordero and Linda Ackerman, toured the Colorado River Indian Tribes reservation and lands straddling the California-Arizona border south of Parker Dam. The group learned about CRIT's conservation projects, including the installation of new drip irrigation systems, efforts to restore and protect native plants and wildlife, and the history of the Headgate Rock Dam, which was constructed to provide water for the CRIT irrigation system.

Our Community Partnering Program sponsored 48 water education and conservation events and programs throughout Southern California, including the Multigenerational Waterwise Community Project at Salesian Youth Family Center, a nonprofit organization serving the East Los Angeles community. The program provided youth from historically underserved communities with water conservation resources through shared experiences, perspectives, and storytelling. Metropolitan also supported Camp Pando, a collaborative effort between Pando Populus Inc., Homeboy Industries, and MTA that engaged with underserved youth to create water conservation-themed advertisements at local transit shelters.



Another stop on the Water Journeys field trip is the Pure Water Southern California Program, where students have a chance to learn about forward-thinking projects that could bring more reliable water supplies for generations to come.

Education Programs

Metropolitan worked with more than 100 partner agencies, school districts, county offices of education, nonprofits, parents, and formal and informal educators to provide water-focused Science, Technology, Engineering, Art, and Math curriculum. They also provided grants and other outreach program opportunities. Partners included the California Department of Water Resources, California Environmental Education Foundation, California Association of Science Educators, California Association of Black Science Educators, Pando Populus, Strategic Energy Innovations, Agriculture in the Classroom, Edison International, Southern California Gas, Air Quality Management District, Water Education Foundation, Project WET, Los Angeles County Sanitation Districts, Water Replenishment District of Southern California, Los Angeles County Office of Education, Orange County Department of Education, Chapman University, California State University – Dominguez Hills, University of La Verne, Los Angeles Trade Technology, Santiago Canyon College, El Camino College, and Los Angeles Harbor College. Staff met with Metropolitan member agencies for about 100 events and engaged with more than 21,000 students, teachers, parents, and participants through virtual activities, social media, and curriculum materials.

Metropolitan, in partnership with Edison International and Strategic Energy Innovations, launched Earth Day Challenge 2024, a virtual competition for secondary schools. During the competition, students learned about conservation, stewardship, climate change, air quality, and sustainability. All students received a Sustainability Specialist Certificate, and the top campaign received \$1,000 in funding for their school, class, or club to continue their sustainability efforts. Metropolitan staff also launched an essay competition for elementary through high school students to name a tunnel boring machine used as part of the Perris Valley Pipeline Project.

Discover Diamond Valley Lake and Water Journeys field trips continued. The Discover DVL activities include a classroom visit, a tour of two DVL sites, hands-on water quality experiments, and two virtual games with augmented reality questions. Water Journeys consists of a tour of the Grace F. Napolitano Pure Water Southern California Innovation Center, a nature walk, and hands-on water quality experiments at the Bixby Marshland, a restored marshland maintained by the Los Angeles County Sanitation Districts. Staff conducted presentations for Scouts seeking to earn their Soil and Water Conservation Merit Badge. Scouts learned about soil, erosion, watersheds, aquifers, pollution, water treatment, and the role of plants and trees. In addition, in-person field school career days, community events, online classroom visits, webinars, and virtual reality tours of the Colorado River Aqueduct all continued. The distribution of 8,000 "Being Waterwise Is" Student Art Calendars showcased art created by K-12 students to help promote the value of using water wisely.

Water Engineering 4 Good, an online STEAM competition for middle through high school students, continued into its second year. The goal of WE4G is to use basic engineering problem-solving skills to design and build a water conservation device that will help Southern California adapt to a changing climate. The competition called for student teams to design and build a device to be used:

1. Inside a home, in the kitchen, laundry room, or bathroom
2. Outdoors, in the garden or garage
3. For agriculture
4. In a process to treat water or a system to deliver it to homes and businesses
5. In any other place that will encourage others to conserve water

During the WE4G competition, students had the opportunity to learn valuable STEAM skills that they could draw on long after the end of the competition. They learned how engineers investigate and solve problems, create a plan with actionable steps, create a CAD drawing and a Bill of Materials for any project, work together as a team to solve problems, and present projects professionally. Each team was required to submit certain work products, including an engineering proposal to describe their concept, a scale working model, a social media campaign, and a final presentation to a panel of Metropolitan engineers.

In partnership with the California Department of Water Resources, West Basin Municipal Water District, and the Water-Energy Education Alliance, Metropolitan co-hosted a Water Education Committee meeting for agency water educators from throughout California. During the two-day event, water educators toured the Grace F. Napolitano Pure Water Southern California Innovation Center and West Basin Municipal Water District's Edward C. Little Recycling Facility and Visitors Center. There were also presentations and discussions on:

- Metropolitan's Climate Adaptation Master Plan for Water Education Priorities
- The augmented reality missions used as part of Discover DVL
- Diversity, Equity, Inclusion and Access in Education
- Native American Tribal Water Issues
- Career and Technical Education
- Water Industry Workforce Development

Metropolitan continued to help grow the Water Energy Education Alliance, an initiative to advance Career Technical Education as part of the California Department of Education's Energy, Environment, and Utilities Industry Sector. Metropolitan partnered with Coro Southern California and participated in the Coro Youth Fellows Program, a transformative summer program that trains Los Angeles area high school students to become active citizens and leaders in their communities and schools. Working collaboratively with other departments over two weeks, staff provided three Coro Youth Fellows with an overview of Metropolitan's vital role in procuring and delivering clean, safe, and reliable water throughout Southern California. In addition, the Coro Youth Fellows toured Diamond Valley Lake and the Grace F. Napolitano Pure Water Southern California Innovation Center.

The Water Engineering 4 Good program held an online competition to build a water conservation device to help our region adapt to climate change.



Local Resources

Local water sources play a vital role in ensuring regional water supply reliability, meeting about half of the region's annual water demand. However, changes in precipitation patterns and decades of over-drafting have significantly reduced local groundwater production. To address this challenge, local water agencies have invested heavily in sustaining and expanding local water supplies through recycled water and groundwater recovery projects. Since 1980, Metropolitan has supported these local initiatives through its Local Resources Program.

Metropolitan's Local Resources Program provides financial incentives to encourage member agency development of recycled water, treatment of degraded groundwater for municipal use, and seawater desalination. As of fiscal year 2023/24, Metropolitan invested \$750 million to fund 88 recycled water projects and 28 groundwater recovery projects that have produced about 4.5 million acre-feet of water.

Metropolitan is moving through the environmental review phase for the Pure Water Southern California facility that may expand to be the largest water recycling program in the country.

Local Resources Program

In fiscal year 2023/24, Metropolitan provided \$5 million in incentives to produce 40,000 acre-feet of recycled water for non-potable and indirect potable uses. Metropolitan provided another \$10 million of incentives to support projects that produced about 63,000 acre-feet of recovered groundwater for municipal use. In April 2024, Metropolitan's board approved four new projects for participation in the LRP, which consisted of two recycled water projects, one groundwater recovery project, and the LRP's first seawater desalination project.

Without direct financial support from Metropolitan, local agencies produced 433,000 acre-feet of recycled water, including wastewater discharged to the Santa Ana River that percolates into downstream groundwater basins and 66,000 acre-feet of recovered groundwater. Figures 1 and 2 (on page 27) show total recycled water and groundwater recovery production in Metropolitan's service area, including local agency-funded projects.

On-site Retrofit Program

With an annual budget of \$3 million, Metropolitan's On-site Retrofit Program provides financial incentives for converting potable irrigation and industrial systems to recycled water. As of fiscal year 2023/24, the On-site Retrofit Program has funded 535 sites, replacing 14,911 acre-feet of potable water with recycled water per year. Metropolitan works continuously with member and retail agencies, as well as organizations like WateReuse, to promote and gather feedback that ultimately reshapes the program. Metropolitan maintains a program website (bewaterwise.com/onsite-retrofit) where up-to-date information can be accessed, including a link to the application, terms and conditions, frequently asked questions, and program publications.

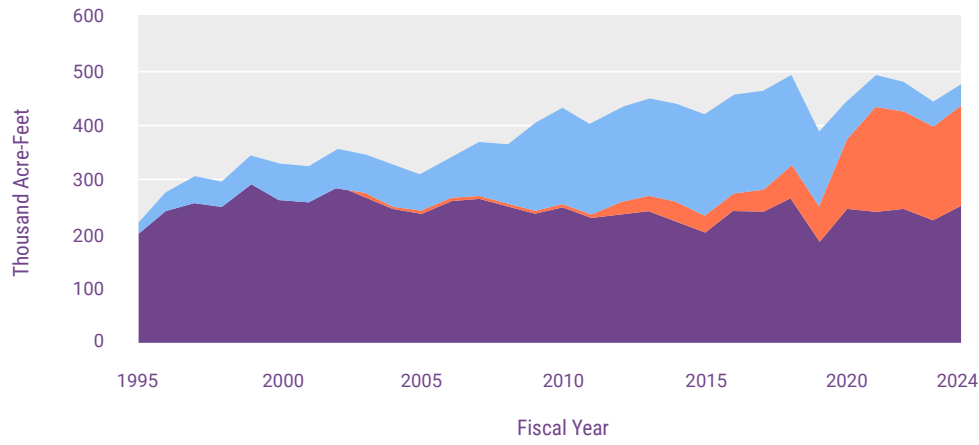


Figure 1
Recycled Water Production

- Non-LRP
- Former LRP
- Active LRP

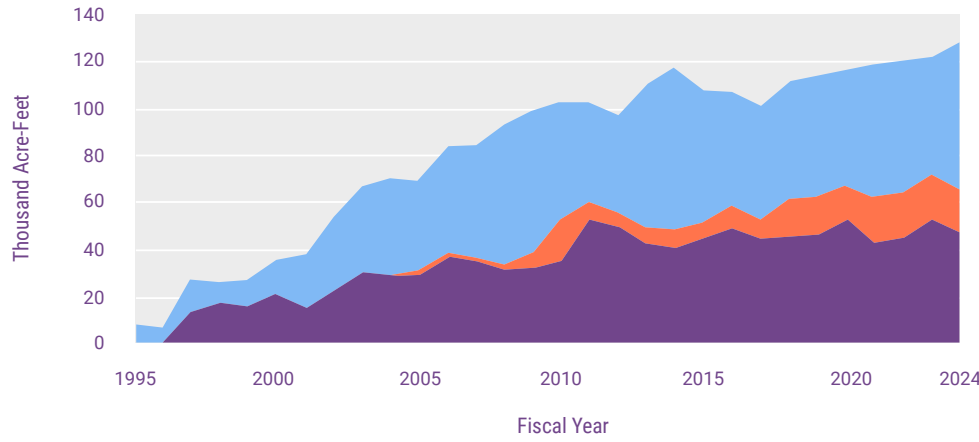


Figure 2
Groundwater Recovery

- Non-LRP
- Former LRP
- Active LRP

North Pleasant Valley Desalter located in the City of Camarillo has treated unusable groundwater to drinking water quality since 2023.



Groundwater Management

Metropolitan partners with local agencies to store imported surface water in groundwater basins for use in times of shortage under conjunctive-use agreements. There are currently nine storage projects with nearly 212,000 acre-feet of storage capacity. They allow Metropolitan annually to store up to 53,000 acre-feet and withdraw up to 71,000 acre-feet during periods of shortage. Because of improved hydrologic conditions in early calendar year 2023, Metropolitan maintained its request for supply storage and requested that participating agencies store about 56,000 acre-feet of water by the end of the calendar year. In fiscal year 2023/24, 141,225 acre-feet of groundwater was stored through June 30 to supplement the region's water supplies during future droughts.

Under the Cyclic Program, Metropolitan can capture surplus imported water supplies that cannot be stored in existing facilities or through participation in other storage programs. Metropolitan and participating member agencies enter a 10-year agreement to establish regional cyclic accounts. In coordination with the agencies, Metropolitan delivers water to the cyclic accounts and allows the agencies to pay for these deliveries over an established schedule.

Metropolitan can capture up to 601,500 acre-feet into existing cyclic accounts. In April 2023, when surplus water supplies were available, the General Manager re-initiated the Cyclic Cost-Offset Program (established by the board in 2019) to provide agencies with cyclic accounts. This provides a mechanism for offsetting costs incurred by taking extraordinary actions to capture surplus supplies at Metropolitan's request.

Metropolitan's board amended the program in August 2023 to provide a credit of up to \$354 per acre-foot through the end of the calendar year, escalated annually by the Consumer Price Index. In fiscal year 2023/24, Metropolitan delivered an estimated 47,100 acre-feet into cyclic accounts with Burbank, Long Beach, Pasadena, Calleguas Municipal Water District, Eastern Municipal Water District, Foothill Municipal Water District, Las Virgenes Municipal Water District, Upper San Gabriel Valley Municipal Water District, and Western Municipal Water District. Of the 47,100 acre-feet delivered into cyclic accounts, Metropolitan provided agencies with Cyclic Cost-Offset Program credits for about 12,300 acre-feet.

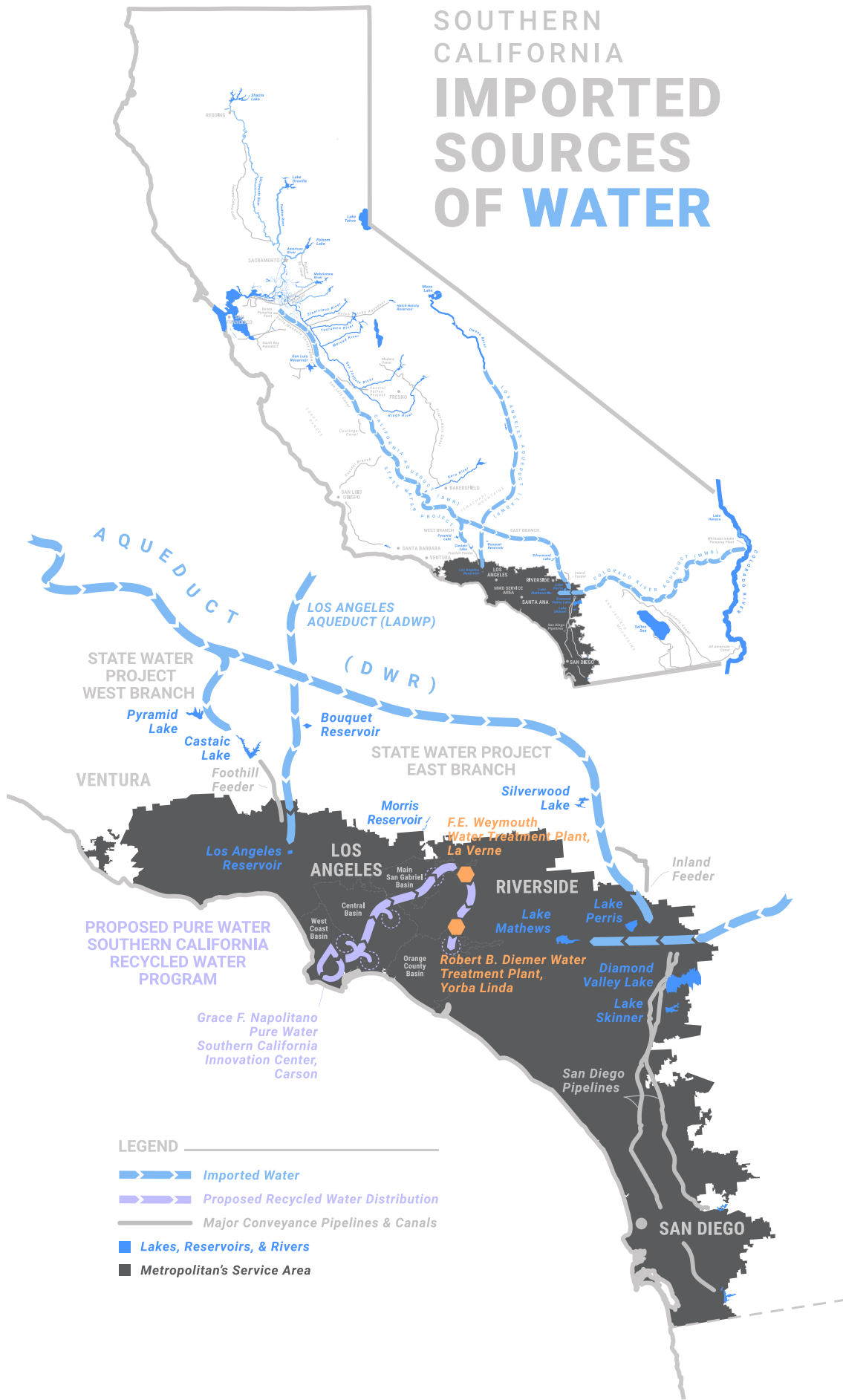
Pure Water Southern California Program at the Grace F. Napolitano Innovation Center

Pure Water Southern California is a new approach to resource development with Metropolitan directly funding the development of a local water supply with regional benefits. The program is a partnership between Metropolitan and the Los Angeles County Sanitation Districts. The two agencies have been working together on this effort since 2009.

Metropolitan and the Sanitation Districts used the Advanced Purification Center, a 500,000-gallon-per-day demonstration facility in Carson, to test purification processes for potable reuse. It features an innovative process with membrane bioreactors followed by reverse osmosis and ultraviolet light/advanced oxidation. If approved by regulators, the process could be used throughout California to advance water reuse in the state. The demonstration facility also provides information to optimize operations and identify costs and other data needed for a future full-scale facility and program.

An on-site learning center showcases the program to the public through tours, community events, and workshops. Metropolitan and the Sanitation Districts are in the process of drafting the project's Environmental Impact Report, which they expect to make available for public review in 2025 and finalize in early 2026. If the project is approved, the first water could be delivered as early as 2032. Metropolitan's board supported legislation to accelerate the project, signed by Governor Newsom in September 2022, allowing Metropolitan to utilize alternative project delivery methods. This legislation reduces some time from the overall construction schedule. In July 2023, Metropolitan announced it had received \$80 million in funding from the state of California to advance the Pure Water Southern California Program. Pure Water Southern California would be a critical piece of new infrastructure to prepare the region for hotter and drier conditions driven by climate change.

SOUTHERN CALIFORNIA IMPORTED SOURCES OF WATER



Metropolitan's board continues to consider funding, partnerships, and institutional and policy considerations related to the Pure Water Southern California Program. In May 2024, Metropolitan received \$99.2 million from the USBR's Large Scale Water Recycling Grant program.

If approved to move forward, Pure Water Southern California will produce and deliver up to 150 million gallons per day of purified water for 500,000 homes. The program would include a new advanced water treatment facility to be constructed at the Sanitation Districts' A.K. Warren Water Resource Facility in Carson.

A new conveyance system, over 60 miles long, would deliver water to groundwater basins within Metropolitan's service area. The purified water would replace imported water to replenish the basins, saving imported water for other purposes. Initially, purified water would be used for indirect potable reuse. Ultimately, it could be delivered for direct potable reuse at two Metropolitan water treatment plants.

In 2022, Metropolitan and the San Gabriel Valley Municipal Water District, a State Water Project contractor, entered into a letter of intent. Metropolitan is collaborating with San Gabriel Valley Municipal Water District to discuss mutual use of facilities, potential transfers or exchanges, and improved reliability for both agencies. Through these unique partnerships, the program is enabling diverse groups of agencies to work together to solve the Southwest's water challenges. In February 2024, Metropolitan and its member agencies began a collaborative process to reach a consensus on the term sheet development that would ultimately lead to an agreement to purchase water from Pure Water Southern California.

This collaboration follows the pattern of support that includes executed letters of intent with the Los Angeles Department of Water and Power, the city of Torrance, the city of Long Beach, Central Basin Municipal Water District, West Basin Municipal Water District, Upper San Gabriel Valley Municipal Water District, and Three Valleys Municipal Water District, as well as the Water Replenishment District and the Main San Gabriel Basin Watermaster. In addition, agencies such as Southern Nevada Water Authority and the Central Arizona Water Conservation District have expressed interest and executed letters of intent. Metropolitan is collaborating to discuss potential transfers or exchanges of Colorado River supplies in return for investment in the program.

Previous funding agreements for the environmental planning phase of the program were made with Southern Nevada Water Authority, the Central Arizona Project, and the Arizona Department of Water Resources.

Future Supply Actions

Metropolitan supports the development of local supplies through its Future Supply Actions Funding Program, a funding source for member agency studies to address challenges for groundwater, recycled water, stormwater, and seawater desalination supplies. The program is one avenue for Metropolitan to promote sustainable approaches to local supply development. Metropolitan established the FSA in 2010 as part of the Integrated Water Resources Plan to promote low-cost, low-risk investments to address technological, regulatory, and institutional barriers to new supplies. The vision of the FSA is for Southern California agencies to be able to accelerate new local supplies in the future when needed.

Program goals include:

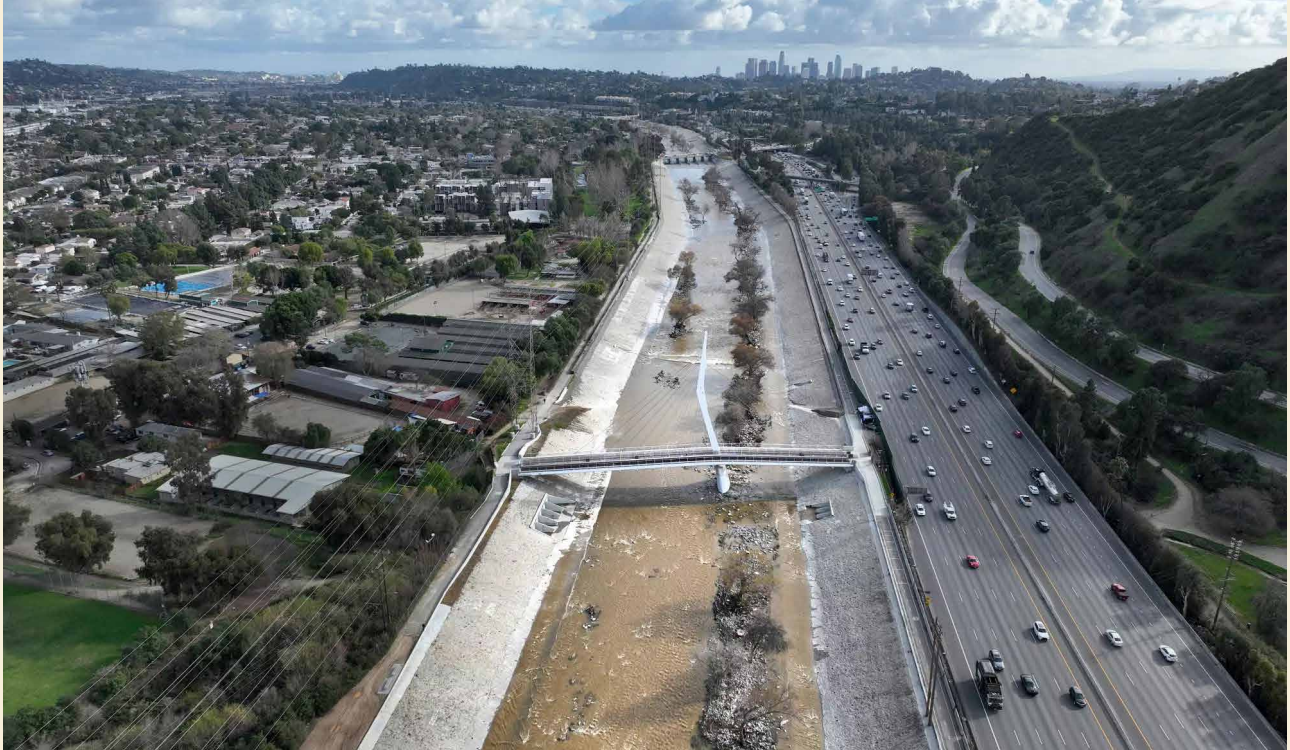
- Reducing barriers to future resource production
- Providing results that are unique yet transferable to other areas in the region
- Advancing the field of knowledge for stormwater, recycled water, groundwater, and desalination
- Targeting critical paths to water resource implementation

The program is currently entering its third round of funding. Metropolitan's board authorized funding for eight selected studies to be conducted between 2024 and 2027. The first round was funded in 2013 and the second in 2018. Metropolitan has co-funded 33 pilot tests, demonstration studies, and white papers since 2013. To highlight the success of the studies, Metropolitan conducted webinars covering topics ranging from percolation optimization for stormwater basins to virus log removal in potable reuse. All completed FSA study reports, presentations, and webinars are available at mwdh2o.com/fsa.

Los Angeles Times

L.A. County captures 96 billion gallons of water during "super year" of storms

Ian James, May 11 2024.



After heavy rains, water flows down the concrete-lined Los Angeles River past La Kretz Bridge, linking Atwater Village with Griffith Park. (Allen J. Schaben / Los Angeles Times)

Stormwater

Metropolitan authorized \$12.5 million for direct use and recharge stormwater pilot programs in 2019. These pilot programs encourage developing, monitoring, and studying new and existing stormwater projects by providing financial incentives for construction, retrofit, monitoring, and reporting costs. The pilots help evaluate stormwater capture projects' potential water supply benefits and provide a basis for future funding approaches. There are currently six projects receiving program funding.

In addition to the pilot programs, Metropolitan has been involved in other technical studies to advance the understanding of stormwater in the service area. Metropolitan is partnering with Las Virgenes Municipal Water District to explore how stormwater runoff and dry weather flow can help wastewater agencies increase water available for recycling. In addition, Metropolitan has partnered with Accelerate Resilience Los Angeles in a study to evaluate the multiple benefits of stormwater projects. Preliminary discussions were started on a potential partnership with the California Department of Transportation to develop mutually beneficial stormwater projects.

Climate & Watershed Initiatives

An essential focus of Metropolitan’s mission is to ensure water supply reliability and quality in an environmentally responsible way. This involves watershed health, stormwater collection, salinity management, and habitat restoration and preservation. All of these areas are impacted by climate change.



Climate Adaptation Master Plan for Water

Extreme weather conditions in recent years have presented Southern Californians with an unsettling preview of the challenges ahead – including abrupt swings from periods of severe and extended drought to record-setting wet seasons. To ensure the continued reliability of water supplies for our communities, Metropolitan is developing a Climate Adaptation Master Plan for Water. This roadmap will guide our future capital investments and business model as we confront our new climate reality in the years and decades ahead.

Through the CAMP4W process, Metropolitan is working with its 26 member agencies and their customers to ensure that our portfolio of water investments increases supply reliability, develops a more resilient and regionally interconnected water delivery system, and maintains affordable water rates for our service area. Metropolitan also involves government officials, environmental and community-based organizations, tribal entities, and the public in our planning process. CAMP4W complements Metropolitan’s existing long-range planning efforts, including the Integrated Water Resources Plan, Energy Sustainability Plan, Climate Action Plan, Capital Investment Plan, Urban Water Management Plan, and Long-Range Finance Plan Needs Assessment.



The Wadsworth Pumping Plant Eastside Pipeline Intertie project brings greater flexibility to Metropolitan's delivery system.

Climate Action Plan

While CAMP4W will help us prepare for the impacts of climate change over the decades ahead, Metropolitan is also taking important steps to address greenhouse gas emissions from our operations. Metropolitan's Climate Action Plan, adopted in 2022, establishes a feasible pathway to achieve Metropolitan's goal of carbon neutrality by 2045 through the implementation of 42 measures to help reduce GHG emissions.

Metropolitan's annual CAP progress report, published close to Earth Day, documents the actions outlined in the CAP, an updated GHG inventory, and the status of Metropolitan's carbon budget. [The May 2024 Progress Report](#) highlights turf replacement achievements, telecommuting, use of renewable diesel, and commuter fleet electrification, with many other actions showing building momentum.

Renewable Energy & Energy Efficiency

Metropolitan invests in renewable energy resources, including buying and generating hydroelectric power to meet most of its energy needs. In addition to using power generated at Parker and Hoover Dams, Metropolitan has built 15 in-stream hydroelectric plants with a total capacity of about 130 megawatts. Installation of photovoltaic solar panels at Metropolitan facilities can generate 5 ½ megawatts. Metropolitan is working to add battery energy storage to capture green energy generated when power rates are low for use at times when rates are higher. Nearly all interior and exterior lighting has been retrofitted to LEDs at half of Metropolitan's facilities, ahead of schedule.

Zero Emission Vehicle Task Force

Metropolitan's ZEV Task Force meets regularly to assess, develop, and work towards the transition of Metropolitan's vehicle fleet from fossil fuel combustion to ZEV. The Task Force is working to find solutions for charging infrastructure, vehicle replacement schedules, operational protocols, and the significant financial impacts of converting to ZEVs.

GHG Tracking Protocol

Metropolitan uses CAPDash™, a web-based tool that allows the public to view progress toward our GHG emission reduction targets and demonstrate our commitment to transparency. Data is grouped into strategy-defined categories and presented in interactive charts and graphics. The Dashboard is available to view at https://cap.rinconconsultants.com/Metropolitan_Water_District.

Metropolitan's GHG emissions vary due to the amount of water pumped from the Colorado River to meet the demands of Southern California. Higher Colorado River pumping correlates to dry years with low State Water Project allocations. Metropolitan had a carbon budget of 9.89 million carbon dioxide equivalents or CO₂e, which are the measurement for the effect of GHGs on the climate. Staying within its carbon budget will help Metropolitan achieve carbon neutrality by 2045.

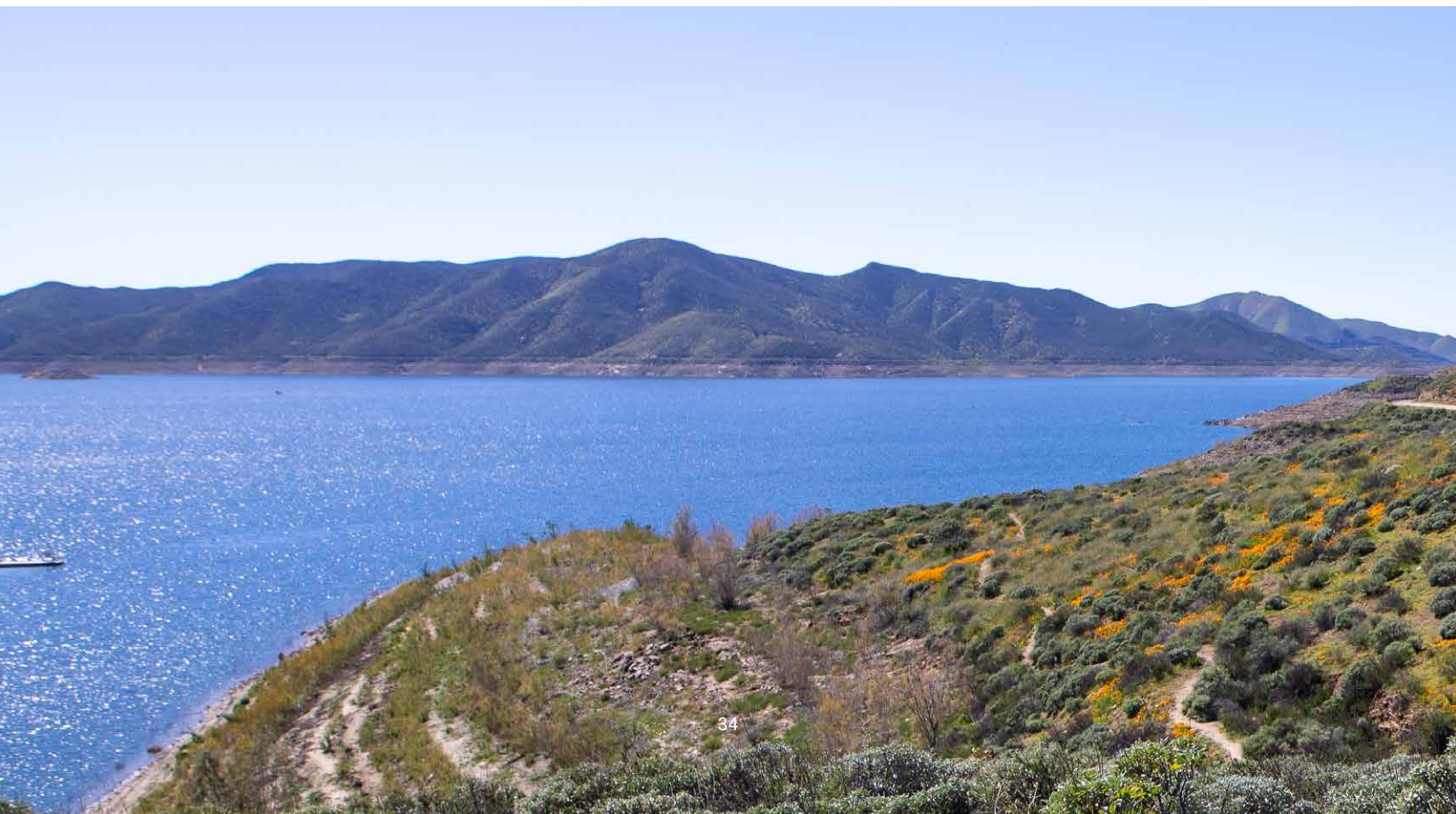
Local Watersheds

The programs in this section reflect Metropolitan's commitment to environmental stewardship. We actively participate on planning boards and organizations focused on source water quality protection.

Southern California Water Coalition

Metropolitan remains actively involved in the Southern California Water Coalition Stormwater Task Force, created in 2020 to provide a forum to discuss recycled water issues in the region. In addition to monthly meetings, Metropolitan staff provides updates on the Pure Water Southern California Program.

Diamond Valley Lake vista with recreational trails and fields of wildflowers.



Southern California Salinity Coalition

The Southern California Salinity Coalition promotes research and outreach activities to address the need to control or reduce salinity in drinking water, wastewater, groundwater, and recycled water. In addition to water agencies, local wastewater, groundwater, and watershed management agencies also participate in the SCSC. Metropolitan is a founding member and holds a position on SCSC's board. SCSC accomplishments in fiscal year 2023/24 include:

- Continuing efforts to characterize and report how Carlsbad's Bud Lewis Desalination Plant benefits potable water distribution system infrastructure in San Diego County
- Contributing to Orange County Water District's now completed Pilot Evaluation of Flow-Reversal Reverse Osmosis for Municipal Potable Reuse
- Supporting a Los Angeles County Sanitation District's investigation of its ocean outfall's capability to meet ocean discharge requirements for potable reuse brines
- Awarding a two-year fellowship to a UC Riverside graduate student studying advanced methods for treating desalination brines with elevated levels of PFAS and related chemicals

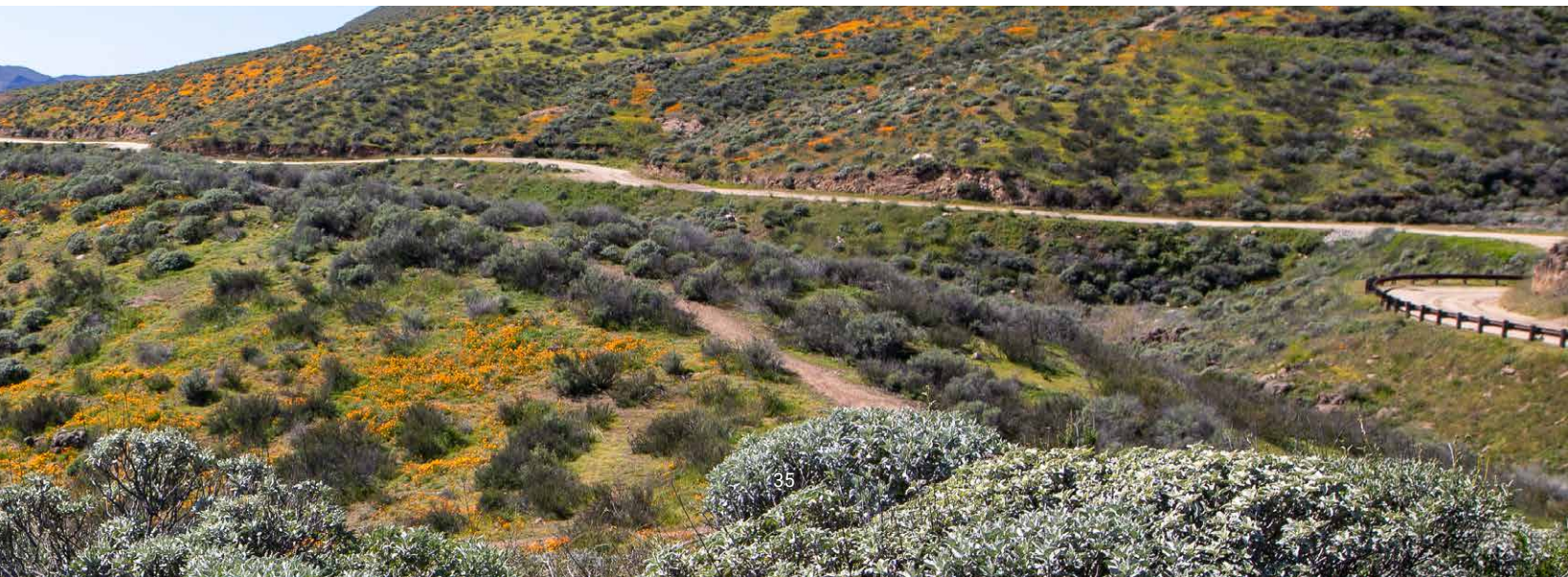
Multi-Species Habitat Protection and Preservation

Four multi-species reserves encompassing about 30,000 acres are the cornerstone of Metropolitan's environmental conservation and stewardship investments. These reserves mitigate the impacts of Metropolitan's infrastructure project construction, and provide watershed protection around reservoirs, and habitat protection for native species. The reserves also offer opportunities for education and research, as well as trails for bicycling, hiking, and horseback riding.

Southwestern Riverside County Multi-Species Reserve

This reserve comprises nearly 13,500 acres surrounding Diamond Valley Lake and Lake Skinner and includes the Dr. Roy E. Shipley Reserve located between the reservoirs. The reserve is home to at least eight types of natural habitat and many sensitive bird, animal, and plant species.

Metropolitan partners with the California Department of Fish and Wildlife, Riverside County Habitat Conservation Agency, Riverside County Regional Park and Open-Space District, and United States Fish and Wildlife Service to cooperatively manage the reserve. The reserve's management incorporates provisions to protect the Diamond Valley Lake and Lake Skinner watersheds, including the appropriate siting of public access points and vegetation management tools. Management accomplishments during fiscal year 2023/24 include conducting approximately 200 acres of prescribed burns, native species planting on 1.5 acres, and approximately 200 acres of grassland mowing to enhance habitat for the reserve's covered species and to reduce wildfire risk.



Upper Salt Creek Wetland Preserve

The Upper Salt Creek Wetland Preserve is a 40-acre parcel of land purchased as mitigation for the Eastside Pipeline. The preserve protects unique vernal pool habitats and rare plants in perpetuity from future development and prevents public access.

Santa Rosa Plateau Ecological Reserve

The nearly 10,000-acre Santa Rosa Plateau Ecological Reserve is home to several endangered, threatened, or rare animals and plants, including a species of fairy shrimp that exists nowhere else on Earth. The reserve, established as partial mitigation for the construction of Diamond Valley Lake, protects some of California's most unique chaparral, grassland, oak, and vernal pool habitats.

Lake Mathews Multiple Species Reserve

Metropolitan partners with the California Department of Fish and Wildlife, Riverside County Habitat Conservation Agency, and United States Fish and Wildlife Service to cooperatively manage the 5,100-acre reserve surrounding Lake Mathews. The reserve protects native habitat and sensitive plant and animal species, including the endangered Stephens' kangaroo rat and coastal California gnatcatcher. Habitat management tools and strategies on the reserve, such as grazing and prescribed burns, are critically evaluated for their potential effects on water quality in Lake Mathews. The lake is an important bird resting and feeding site, especially in winter, when ducks, double-crested cormorants, grebes, and eagles visit. Management accomplishments during fiscal year 2023/24 include the removal of approximately 23 acres of non-native plant species, sowing native plant seeds on approximately 14 acres, and goat grazing to enhance habitat for the reserve's covered species and to reduce wildfire risk.

Colorado River

The Lower Colorado River Multi-Species Conservation Program

This program is a comprehensive restoration effort along the Colorado River, including Arizona, Nevada, and California. It targets restoring natural habitat communities once prevalent along the river corridor—riparian forests, marshes, and backwaters. The benefits of restoring natural communities go beyond providing habitat for native aquatic and terrestrial species. With Metropolitan's support as the largest non-federal contributor and its federal and state partners, the program continued to greatly advance the restoration of native habitats and natural processes along the lower Colorado River from the full pool of Lake Mead to the southern international boundary with Mexico. A total of 7,195 acres of land cover habitat has been established, and approximately 573,577 native fish have been stocked and reintroduced into the lower Colorado River through fiscal year 2023/24.





Colorado River Basin Salinity Control Forum

The Colorado River Basin Salinity Control Forum is an organization of the seven Colorado River Basin states of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming. The Forum coordinates salinity control efforts among the states, collaborates with federal agencies on implementing the Colorado River Basin Salinity Control Program, and works with Congress on the CRB SCP authorization and funding. The Forum funds efforts to reduce salt loading to the Colorado River and provides information on salinity control.

Metropolitan holds the chair positions for both the Forum and the Forum's technical workgroup. The Forum's salinity control measures remove more than 1.33 million tons of salt from the Colorado River annually. This salt removal translates to a salinity reduction of over 100 milligrams per liter from the Colorado River's Lower Basin and Metropolitan's Colorado River Aqueduct supplies.

USBR operates the Paradox Valley Unit, the largest salinity control project in the CRB. In fiscal year 2023/24, the USBR received responses to a Request for Information and a Statement of Objectives soliciting solutions from potential contractors to dispose of concentrated brine extracted from the Dolores River by the PVU. The RFI/SOO was the latest step in USBR's ongoing effort to find a long-term alternative to the PVU deep-injection well, which may be nearing the end of useful service. Responses to the RFI/SOO did not include solutions beyond those already considered and deemed not to be preferred in USBR's 2020 Environmental Impact Statement. A long-term alternative to the PVU remains undefined.

In December 2022, USBR completed a six-month test of the existing PVU deep-injection well, which had been mostly non-operational since March 2019 due to ongoing concern over a magnitude 4.5 seismic event in the Paradox Valley linked with the operation of the well. After the test, USBR spent two months analyzing seismic and well-head pressure data and determined it would be appropriate to continue operating the well at two-thirds capacity in an ongoing series of six-month tests until completion of seismic hazard and risk studies, which are still outstanding. Those studies will determine whether the injection well can safely operate more permanently until a long-term alternative is implemented. In fiscal year 2023/24, well-head pressure and seismic activity remained at levels that allowed the ongoing six-month tests to continue, though seismic activity related to the PVU did increase.

The endangered Stephens' kangaroo rat is found at the Lake Mathews Multiple Species Reserve.

In fiscal year 2023/24, the Forum advanced a partial solution to the recent financial challenges of the program. Funding for the program includes federal money and state cost-share dollars as a percentage of federal funding. Over the past two decades, federal Environmental Quality Incentives Program funding for on-farm salinity control projects has increased substantially, increasing the required state cost share in absolute terms. Lower Basin state cost share revenues have declined since they derive from Hoover Dam power revenue, which has dropped due to declining reservoir levels. Together, these two factors have led to financial instability in the program. The Forum's partial solution to this funding challenge is to reduce the required state cost-share percentage on EQIP funding and the operation and maintenance costs associated with several of the earliest salinity control projects in the Basin. Members of Congress from the seven Basin States introduced federal legislation to this effect, the Salinity Control Fix Act, presented at a House Natural Resources Subcommittee on Water, Wildlife and Fisheries hearing in May 2024. The Salinity Control Fix Act was signed into law by President Biden on December 23 2024.

Finally, in fiscal year 2023/24, the Forum's technical workgroup began preliminary work on the 2026 Review of Water Quality Standards for Salinity in the Colorado River System. The document is required by the U.S. Environmental Protection Agency every three years to ensure that salinity standards continue to protect beneficial uses of the Colorado River.

Multi-State Salinity Coalition

The Multi-State Salinity Coalition is a consortium of water agencies nationwide promoting information exchange on salinity management and desalination issues. Metropolitan serves on the MSSC's Board of Directors as a founding member. MSSC promotes stakeholder collaboration through an annual summit covering various topics, including salinity and concentrate and management, watershed sustainability, international projects, revenue stability, potable reuse, and innovative technologies. MSSC also awards scholarships for students working on topics related to salinity management issues. Meetings are hosted throughout the year for members to highlight salinity management case studies. Metropolitan sponsored MSSC's 2024 Conference, participated in discussion panels, and helped plan the event.

Sacramento-San Joaquin Delta

Municipal Water Quality Investigations Program

Metropolitan continues to support and participate in DWR's Municipal Water Quality Investigations Program, responsible for water quality monitoring and modeling studies in the Delta and the State Water Project facilities. In fiscal year 2023/24, this program conducted routine water quality monitoring for drinking water quality constituents throughout the Delta, operated five real-time water quality monitoring stations, completed 3-week water quality forecasts, and continued a monitoring study to evaluate the degradation of an herbicide used to treat aquatic weeds in Clifton Court Forebay and O'Neill Forebay. Due to concerns with treated wastewater input flows, the program also continued sampling for constituents of emerging concern along the Delta Mendota Canal. In response to the CEC data collected by MWQIP and submitted to the regulatory agencies, the wastewater agencies are now required to conduct CEC monitoring in 2025.

In 2024, a new project was initiated to evaluate historical trends in taste and odor compounds at Clifton Court, Banks, and O'Neill Forebay. Samples are also being collected and evaluated using a molecular tool called shotgun sequencing to identify the specific organism causing high taste and odor compounds. With this information, it may be possible to develop a new quantitative polymerase chain reaction assay specific to the nuisance taxa in the impacted system.

Nuisance taxa are organisms that are not inherently harmful, but cause problems in specific contexts like water treatment, ecological management or research. The organism disrupts systems, out compete other species or complicate processes and include algae, aquatic invertebrates like zebra mussels, cyanobacteria, weedy plants, and other invasive species. Work also continued on developing a water quality database for turn-ins to the California Aqueduct.

Snow geese in the Delta.



Delta Water Quality Studies

Metropolitan continues to work with the State Water Contractors and other stakeholders to support studies and management actions that address the impact of nutrients, contaminants, and other water quality stressors impacting native species in the Delta watershed. Metropolitan funded studies investigating toxic contaminant effects on Delta smelt and juvenile salmon. Since 2021, Metropolitan has conducted studies with UC Davis to evaluate contaminant toxicity in the spring on larval Delta Smelt.

California EcoRestore

In fiscal year 2023/24, DWR continued construction of the Yolo Bypass Salmonid Habitat Restoration and Fish Passage (Big Notch) Project located in the Fremont Weir State Wildlife Area in Yolo County. Project construction is nearing completion and is slated to begin operating in early 2025. When completed, the gated passage or notch will be opened when the Sacramento River is high enough to flow into the Yolo Bypass floodplain, creating a new path for salmon and sturgeon to access the Yolo Bypass floodplain. The water will create a shallow-water habitat for fish to migrate through the area easily. Juvenile salmon will be able to feed in a food-rich area for longer, allowing them to grow more rapidly in size and improving their chances of survival as they travel to the Pacific Ocean. Adult salmon and sturgeon will benefit from improvements that reduce stranding and migratory delays due to passage barriers.

Metropolitan continues to work with the Yolo Bypass Fisheries and Engineering Technical Team to identify adaptive management strategies that will enhance the project's success and ensure the project is meeting the goals of the Biological Opinion.

In October 2023, Yolo County and the Yolo Basin Wildlife Foundation celebrated the completion of improvements to the Yolo Basin Wildlife Area, which included improving pumping capacity, excavating the heavily silted-in Greens Lake Unit, and improving roads and crossings that will make it easier to flood up the Yolo Bypass Wildlife Area for waterfowl and shorebird habitat during the fall and winter and drawdown in the Spring.

Drone view of Yolo Bypass Salmonid Habitat Restoration and Fish Passage (Big Notch) Project, courtesy CA Department of Water Resources.



Reorienting to Recovery Salmon Project

The Reorienting to Recovery California Central Valley Salmon Recovery Project seeks to engage entities involved with or interested in salmonid recovery in the Central Valley in an inclusive, collaborative, and structured process to: 1) identify a suite of implementable and impactful actions that will advance the recovery of the four distinct runs of California Central Valley salmon (spring-run, fall-run, late fall-run, and winter-run) throughout their life cycle, and 2) establish broad support and buy-in for these preferred actions by making trade-offs transparent and balancing participants' diverse values, perspectives, and priorities. The project is structured in three phases and has engaged more than 110 agencies across the landscape in a discussion around salmon recovery over the last four years.

Phase 1 (2021) engaged fisheries scientists to develop a salmon recovery framework consisting of 12 measurable objectives based on the viable salmon population parameters: abundance, productivity, spatial structure, and diversity. The group also identified performance measures, which are quantitative metrics that can be used to track the degree to which each of these objectives is being met, and they set targets that define the numerical values of desired conditions. This framework is documented in the Phase 1 report. Phase 2 (2022) solicited input from state and federal agencies, non-governmental organizations, Tribal Governments, public water and agricultural agencies, and commercial and recreation fishing interests related to how and why they value salmonids and developed 24 socio-economic objectives that are being tracked in the process. Phase 3 (2023/24) implements a structured decision-making process to identify, model, and evaluate portfolios of management and restoration actions related to hydrology, hatchery, habitat, and harvest. The goal is to support salmon recovery while balancing potential associated socio-economic costs. A final report documenting recovery actions that received broad support from decision-makers working in this effort was released in December 2024. This project is funded by the Delta Stewardship Council's Delta Science Program with additional support from the State Water Contractors, Metropolitan, Essex Partnership, National Oceanic Atmospheric Administration, Valley Water, Kearns & West, and the Water Foundation.

Delta Islands

Metropolitan's 2016 acquisition of four islands in the Sacramento-San Joaquin Delta allows us to help secure and guard the Delta's future State Water Project supplies. We use the strategically located islands – Webb Tract, a large portion of Holland Tract, Bouldin Island, and Bacon Island – to research and identify potential projects that support water system reliability, recovery of listed species, habitat restoration, science-related hypotheses, and promote sustainable agricultural practices. In fiscal year 2023/24, Metropolitan collaborated with state and federal agencies and researchers from UC Davis and the United States Geological Survey to conduct studies supporting Delta smelt supplementation efforts. Preliminary results suggest pond culture could be a viable method for Delta smelt and potentially other fish species of concern. Further studies will be conducted to improve this understanding and evaluate how to improve certain limitations in pond culture, such as predator densities, temperature stress, and post-release survival monitoring.

Metropolitan also completed Phases 1 and 2 of the Delta Islands Adaptation Project, funded by a CDFW Proposition 1 planning grant. The planning project includes evaluating opportunities for island-wide improvements, including subsidence reversal, sustainable agricultural practices, carbon sequestration, water quality improvements, and habitat restoration. Under Phase 2, Bouldin Island was selected as the focus of science-based planning for potential land uses (including conceptual landscape designs and identification of pilot projects and further scientific studies) on an entire island owned by Metropolitan that meets the Delta Plan co-equal goals using creative and innovative solutions for subsidized Delta islands.

In 2023, Metropolitan was awarded a \$20.9 million grant from the Sacramento-San Joaquin Delta Conservancy to construct up to 3,500 acres of wetland and up to 1,500 acres of rice fields on Webb Tract, located in Contra Costa County. The project's goals are to stop or reverse subsidence on the deeply subsidized island, sequester carbon, generate income from long-term leases of the rice fields, and generate revenue from carbon sequestered in rice and wetlands. The income generated from the project is expected to fund its long-term maintenance and monitoring costs. The project will have the added benefit of providing a habitat for migratory birds and other species in the Delta. The Delta Conservancy grant will fund the design, environmental documentation, permitting, and construction of the wetland.



Metropolitan's headquarter building courtyard.

Public Hearing Notice

To coincide with the report preparation, the MWD Act requires Metropolitan to “hold an annual public hearing during which the district shall review its urban water management plan for adequacy in achieving an increased emphasis on cost-effective conservation, recycling, and groundwater recharge and invite knowledgeable persons from the fields of water conservation and sustainability to the hearing.” The MWD Act also provides that Metropolitan “shall consider factors of availability, water quality, regional self-sufficiency, benefits for species and environment, the totality of life-cycle costs, including avoided costs, and short- and long-term employment and economic benefits.”

While the Urban Water Management Plan is prepared and updated every five years per state requirements (Metropolitan's 2020 UWMP was adopted in May 2021), Metropolitan hosts an annual hearing to share progress on fiscal year plan objectives and to receive public comments. Metropolitan held a public hearing on January 13, 2025 to receive public and stakeholder input. Comments received at the hearing are on file at Metropolitan and are available upon request.



Glossary of Terms

CAP

Climate Action Plan

CAMP4W

Climate Action Master Plan for Water

CDFW

California Department of Fish and Wildlife

CEC

Constituent of Emerging Concern

CO2e

Carbon Dioxide equivalent

CRA

Colorado River Aqueduct

CRB

Colorado River Basin

DVL

Diamond Valley Lake

Delta RMP

Delta Regional Monitoring Program

DWR

Department of Water Resources

EPA

Environmental Protection Agency

EQIP

Environment Quality Incentives Program

EWCP

Emergency Water Conservation Program

FSA

Future Supply Actions Funding Program

FEIS

Final Environmental Impact Statement

GHG

Greenhouse Gas

GIS

Geographic Information System

GPCD

Gallons Per Capita Per Day

ICP

Innovative Conservation Program

IRP

Integrated Water Resources Plan

LRP

Local Resources Program

MSSC

Multi-State Salinity Coalition

MWQIP

Municipal Water Quality Investigation Program

PVU

Paradox Valley Unit

RFI/SOO

Request for Information and a Statement of Objectives

SCP

Salinity Control Program

Sanitation Districts

Los Angeles County Sanitation Districts

SCSC

Southern California Salinity Coalition

SoCalGas

Southern California Gas Company

STEAM

Science, Technology, Engineering, Arts, and Math

SWP

State Water Project

USBR

United States Bureau of Reclamation

UWMP

Urban Water Management Plan

WSIP

Water Savings Incentive Program



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About Metropolitan

The Metropolitan Water District of Southern California is a state-established cooperative of 26 member agencies - cities, municipal water districts, and one county water authority - that directly or indirectly serve about 19 million people in six counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies and helps its members develop increased water conservation, recycling, storage, and other resource management programs.

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