

**Written Testimony of Adel Hagekhalil**  
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**Southern California**  
**Before the**  
**Senate Budget Committee**  
**May 22, 2024**

Chair Whitehouse, Ranking Member Grassley, I appreciate the opportunity to testify today regarding Metropolitan's management of California's recent droughts, its fiscal impacts, and our strategies for addressing future water challenges amidst the backdrop of climate change.

Metropolitan is the largest wholesale drinking water provider in the United States. We are comprised of 26-member public agencies, including 14 cities, 11 municipal water districts, and one county water authority, that collectively serve drinking water to approximately 19 million people and businesses in more than 300 cities and numerous unincorporated communities in Southern California. Metropolitan supplies the water to sustain Southern California's \$1.6 Trillion economy. Our principal sources of water are from Northern California via the State Water Project (SWP) and the Colorado River; about half of the region's water supply are imported from these two sources. The remainder of the region's water supply comes from local sources including the Los Angeles Aqueduct, groundwater, recycled water, and desalination.

The state of California and Metropolitan Water District are renowned for our complex and integrated water systems, as well as our commitment to water use efficiency. This combination of water reliability and water use efficiency have long worked together to sustain the well-being of our communities and make California's significant contribution to the national economy possible. However, the challenges we face today are enormous. Water year 2020 to 2022 was the driest consecutive three-year period in California. Notably, this extreme drought period was immediately preceded by and followed by extraordinarily wet years in 2019 and 2023. Over the last five years we have swung from record levels of water in storage to record breaking drought conditions and back again. We now have record levels of water in storage. California has always had the most volatile year-to-year precipitation in the nation, but this rapid swing is unprecedented.

The recent drought challenged Metropolitan's ability to reliably provide water to our service area. The State Water Project's primary storage reservoir, Lake Oroville, reached its lowest level since it was filled in the 1970s and in Dec. 2021 the state Department of Water Resources announced that Metropolitan would only receive enough water to meet human health and safety needs. Unfortunately, this low water allocation highlighted a vulnerability in Metropolitan's regional water delivery system. Six of our 26 member agencies that serve nearly 7 million people were severely impacted by water shortages. As a result, Metropolitan and our member agencies implemented extraordinary measures to limit the use of SWP water and mitigate the worst effects of the drought.

The Metropolitan Board of Directors adopted a resolution in 2022 that strongly recommended cities and water agencies across Southern California eliminate ornamental grass that serves no recreational or community purpose – grass known as non-functional turf. We launched an aggressive multimedia conservation campaign, that promoted water-saving behaviors, and offered a range of incentive programs for residents and businesses to replace turf and install efficient devices. In total, we invested \$46 million in conservation rebates, landscape, and irrigation efficiency measures in fiscal year 2022. Our commitment to conservation is unparalleled, with more than \$900 million invested in recent decades on programs to reduce our water needs and we have seen great success. In fact, the annual water demands of Southern California would be more than 1 million acre-feet higher were it not for these investments and a commitment to standards that require ever more efficient products and landscaping.

During the drought we also dramatically reoperated our distribution system to utilize as much stored water as possible and began or accelerated work on projects totaling hundreds of millions of dollars to re-engineer our existing water delivery system and improve our operational flexibility. For example, in June 2021 we completed a \$30 million pump station rehabilitation project to bring Colorado River water to a part of our region that previously primarily received

state water project water. Another project allowed water stored in Metropolitan's Diamond Valley Lake in Hemet to flow by gravity to a treatment plant in Riverside for the first time in Metropolitan history, helping to preserve limited SWP supplies.

Additionally Metropolitan accelerated its work with the Antelope Valley-East Kern Water Agency to create a high desert water bank. This project allows us to store SWP supplies in the Antelope Valley groundwater basin, about 70 miles north of Los Angeles. Metropolitan is funding the \$211 million construction of the project on AVEK property, which was formerly farmland and vacant land. The first phase of this project will be completed in 2027, although we were able to make early deliveries into the basin beginning in October 2023. Once completed, this program will allow us to annually store and withdraw up to 70,000 acre-feet of state water project water – enough to serve the annual needs of 210,000 Southern California homes.

Even as California's precipitation becomes more erratic, the Colorado River, another key water source for Metropolitan, has endured significant drought periods since the early 2000s, resulting in further pressure on the West's overall water outlook. Thanks to our strong conservation ethos, long-standing partnerships with the agricultural contractors, and funding assistance from the Inflation Reduction Act, California has conserved a record amount of Colorado River water this year. Colorado River deliveries to the state in 2023 were the lowest since 1949 – 700,000 acre-feet lower than the state's 4.4 million acre-foot apportionment. Metropolitan has stored a total of 1.6 million acre-feet of water in Lake Mead – equivalent to about 25 feet of elevation in the reservoir. We added 480,000 acre-feet of water to Lake Mead in 2023 alone.

Metropolitan's 2020 Integrated Water Resources Plan Regional Needs Assessment utilized scenario planning to quantify impacts to water reliability under various climate change conditions. It found that infrastructure to recycle, capture, move, and store water will be increasingly important to ensure the continued reliability of water supplies for the communities we serve. Metropolitan is now developing our Climate Adaptation Master Plan for Water to

guide our future capital investments and business model as we confront our new climate reality in the years and decades ahead. Additionally, we have committed as an organization to reducing our carbon footprint and are working to be carbon neutral by 2045.

The volatility of weather extremes also has financial implications. Drought periods compel us to double down on conservation and efficiency and investments in more resilient and climate adaptive infrastructure and local supplies while wet periods result in reduced demands and water sales. Additionally, the fixed costs for water treatment and delivery, such as infrastructure maintenance and treatment chemicals are increasing. Compounded, these impacts are demanding that water utilities examine current business models to ensure revenues can support fixed costs as well as needed investments in long-term climate and water resilience.

Metropolitan is currently evaluating four projects that will be considered by our Board for approval over the next several years. These projects singularly or in combination could address the district's climate resilience and reliability needs. Our Climate Adaptation Master Plan will provide the roadmap that will guide our Board's future decisions on investing in these projects. Projects being considered include:

- Pure Water Southern California, the largest water recycling facility in the country, which could produce up to 150 million gallons daily, enough water to serve more than 500,000 homes.
- Sites Reservoir, a proposed 1.5 million acre-foot off-stream reservoir project in northern California that would be integrated with operations of the State Water Project and Central Valley Project.
- Delta Conveyance Project, a proposal to modernize water infrastructure in the Sacramento-San Joaquin Delta by adding new facilities to divert water and upgrade the current conveyance system to include a single underground tunnel.
- The East-West Conveyance Portfolio, a series of capital improvement projects to ensure equitable water reliability for all communities served by Metropolitan with new

investments in system flexibility, allowing water to be captured when it is available and stored or moved to wherever it is needed most.

The estimated capital cost of these four projects totals more than \$30 billion in 2023 dollars. As of January 1, 2024, Metropolitan's current full service treated rate is \$1,256 per acre-foot and full service untreated rate is \$903 per acre-foot. For comparison PureWater Southern California, a potential new drought proof supply, is estimated to produce water costing around \$3000 per acre-foot in 2023 dollars, pending final project design and outside investments. The large project costs highlight the need for comprehensive funding solutions across all levels of government – local, state and federal – in order to meet the challenges that we face as a result of climate change and drought.

Historically Metropolitan has paid for its capital improvement projects principally through its tax base and/or ratepayers. However, the cost of projects needed to adapt to climate change is outpacing our ratepayers' ability to afford them. Federal grants can play a pivotal role to support local infrastructure projects, providing essential funding to help address pressing community needs. The importance of federal grants lies in their capacity to supplement local resources, particularly in areas facing financial constraints or lacking sufficient tax revenue to adequately fund infrastructure improvements. Unfortunately, there are not many federal grant programs to support the development of water infrastructure projects.

Most federal funding for water infrastructure projects flows through the Environmental Protection Agency's state revolving fund and is provided in the form of low interest loans for smaller water projects. EPA's WIFIA program is a useful tool to help finance large water infrastructure projects, but it too only provides loans. Metropolitan appreciates the creation of the Bureau of Reclamation's large-scale recycled water program in the Bipartisan Infrastructure Law. Unlike EPA's loan programs, this grant program could provide funding for up to 25% of our Pure Water Southern California project. Reclamation's authority for the large-scale recycled water program ends in 2026 and legislation is needed to extend the program and

provide additional funding. Additional federal funding in the form of grants would also enable us to accelerate critical projects, enhance affordability for vulnerable communities, and strengthen our resilience to the impacts of climate change.

Tax-exempt municipal bonds also play a critical role by financing infrastructure projects throughout the United States. These bonds are issued by state and local governments to fund a wide array of public infrastructure projects, leveraging their unique tax-exempt investment status. This tax advantage attracts a wide range of investors, including individuals, mutual funds, and institutional investors, allowing governments to raise capital at lower borrowing costs compared to taxable bonds. Tax-exempt municipal bonds enable local governments to finance infrastructure projects more affordably, ultimately leading to the development and maintenance of essential public assets. By lowering borrowing costs, municipalities can implement projects that might otherwise be financially not viable, which would simultaneously address critical infrastructure needs while stimulating economic growth. Moreover, the tax-exempt status of these bonds aligns with the broader public interest by encouraging investment in projects that benefit communities and contribute to overall societal well-being. In essence, tax-exempt municipal bonds serve as a vital tool for governments to efficiently raise capital for infrastructure development while leveraging private investment to support the public good.

The Tax Cut and Jobs Act of 2017 eliminated tax-exempt advance refundings by municipal issuers and Metropolitan supports current proposals to reinstate this provision to enable local governmental issuers to manage their debt portfolios more cost-effectively. Moreover, Metropolitan recommends that Congress explore enacting additional financing tools, like tax-credit bonds in the form of Qualified Zone Academy Bonds (QZABs), to help local governmental issuers face this infrastructure challenge ahead.

As we confront the challenges of climate change, we must also ensure drinking water remains affordable. Metropolitan supports re-authorization of the low-income water assistance

program (LIHWAP). LIHWAP was established as a temporary program and its funding expired at the end of Fiscal Year 2023. As Senator Padilla knows, water and sewer bills are rising more than twice as quickly as inflation and increasing faster than energy bills, medical expenses, and household incomes. Sustained federal assistance to help low-income households afford their water bills is a public health imperative on par with home energy and nutrition assistance. Help for low-income communities is essential as we work to build more resilient water systems and adapt to our changing climate.