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May 2023

## Affordability and Reliability for the Metropolitan Water District of Southern California

### An assessment of risks and paradigms in an era of climate change

#### Background

This assessment has been prepared for the California Water Impact Network (C-WIN), a statewide non-profit organization dedicated to the equitable and sustainable distribution of water in California. Its purpose is to present an assessment of risks and potential impacts from the Metropolitan Water District's (MWD or Metropolitan) continued pursuit of new water delivery infrastructure from the Sacramento-San Joaquin Delta (Delta). However, it is not a substitute for a comprehensive socioeconomic analysis that should be conducted before Metropolitan votes on whether to finance new water conveyance infrastructure.

The current proposal under consideration, the Delta Conveyance Project (DCP), has an estimated cost of \$16 billion.<sup>1</sup> MWD has not yet published an estimate of its cost share and how much it would increase rates; however, MWD has produced a 10-year budget outlook and Integrated Resources Plan (IRP) that provide data and assumptions about the District's cost structure and supply and demand scenarios.<sup>2</sup> Moreover, MWD has embarked on a strategic planning process designed to update the IRP and budget outlook to evaluate more dynamic scenarios under a changing climate.<sup>3</sup> These documents provide much of the documentation for the assessment presented in this report.

It is my sincere hope that MWD and other policymakers seriously grapple with the issues raised in this assessment, regardless of their views on C-WIN's advocacy.

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<sup>1</sup> See <https://mavensnotebook.com/2020/09/30/met-bay-delta-committee-delta-conveyance-update-in-preparation-for-upcoming-board-vote/>, accessed March 22, 2023.

<sup>2</sup> See <https://www.mwdh2o.com/how-we-plan/integrated-resource-plan/>, and MWD's biennial budget for fiscal years 2022/23 and 2023/24, which includes the 10-year financial forecast. The budget is available at: <https://mwdh2o.legistar.com>.

<sup>3</sup> MWD staff developed packets for a Board Member retreat held February 13 & 14, 2023. Those materials are available at <https://mwdh2o.legistar.com>. MWD staff also developed a Refined Water Supply and Demand Gap Analysis in 2021, which is available on the IRP section of MWD's website at: <https://www.mwdh2o.com/how-we-plan/integrated-resource-plan/>.

California’s climate is changing rapidly, and its disadvantaged communities are bearing the brunt of the impacts. We need new approaches to water management that are rooted in equity and elevate ecological resilience and affordability over unconstrained agricultural production and lush urban landscapes. There is no such thing as an economically and environmentally responsible “all of the above” strategy. We face tough choices and a need for leaders willing to make them.

### **Section I: A Need for Unified and Adaptive Planning**

MWD’s IRP and its fiscal management should be integrated, but historically they have been separated, leading to disparate assumptions and budgetary commitments that do not reflect the changing water supply and demand landscape. While the current IRP presents an analysis of climate change impacts on future water supplies, the current 10-year budget outlook presents a much more static picture of sales projections. In particular, the budget outlook assumes relatively stable demand along with undiminished deliveries from the Colorado River Aqueduct (CRA).<sup>4</sup> These assumptions are unsupported by ongoing reductions in urban water use and the well documented drying and overallocation of Colorado River watershed.

Overall urban water use in MWD’s service area has been in decline for over 20 years.<sup>5</sup> The reduction is driven both by increased use of efficient fixtures and devices and by behavioral changes from increased water awareness and higher rates during more frequent and severe drought cycles. Moreover, state policies, from emergency conservation rules<sup>6</sup> to long-term efficiency standards<sup>7</sup> have created additional transparency and accountability for water suppliers’ demand management portfolios.

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<sup>4</sup> MWD 10-year forecast, Attachment 1, page 209 of 344. Adopted by the MWD board on 4/12/2022 as item 7-3.

<sup>5</sup> MWD’s 2020 Urban Water Management Plan identified a 34 percent reduction in water use from the baseline established in the 2009 “20x2020” water efficiency statute (SBx7-7). See [https://www.mwdh2o.com/media/18477/7-8\\_board\\_letter.pdf](https://www.mwdh2o.com/media/18477/7-8_board_letter.pdf), attachment 1, ES-4 & ES-5.

<sup>6</sup> The state adopted emergency water conservation rules from 2014-2017 and again beginning in 2020. Details on these emergency regulations are available at: [https://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/regs/](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/regs/), accessed March 22, 2023.

<sup>7</sup> The legislature set statutory requirements for urban water use targets in multiple bills from 2009 onwards, including: SBx7-7 (2009), the “20x2020” targets, SB 555 (2015), water loss standards, SB 606 & AB 1668 (2018), long-term efficiency standards, and SB 1157 (2022), indoor water use efficiency target.

In addition, rate increases driven by investments in local and reliable supplies (i.e., additional recycled water and desalination) are also incentivizing residents and businesses to reduce water use. Regardless of whether the DCP is built, the increasing cost of water makes a rebound in customer demand highly unlikely. MWD's budgets neither account for these realities nor do they treat conservation as a source of supply. In contrast, the Los Angeles Department of Water and Power includes conservation as part of its supply portfolio.<sup>8</sup>

As recent proposals from California and the other states that use Colorado River water indicate<sup>9</sup>, California's share will decrease, it is just a question of how fast and how much. Although the Imperial Irrigation District uses nearly three times more Colorado River water than MWD<sup>10</sup>, MWD may be forced to cut back its CRA deliveries. While MWD's IRP recognizes this possibility, its current budget outlook assumes that CRA deliveries will increase beginning in 2028. This is a prime example of how MWD's budgeting process fails to reflect the harsh realities of climate change.

Making up for reduced CRA deliveries requires increased conservation, increased alternate supplies, or both. While the DCP may seem like a viable supply alternative, it has three foundational flaws: an exorbitant price tag, environmental restrictions on operations, and the impacts of climate change on deliveries.<sup>11</sup> MWD's budget and resource analyses should give equal weight to alternatives, which means incorporating increased hydrologic variability, fully assessing additional conservation potential, and taking an equity lens to potential budget and rate impacts of all future investments.

## **Section II: Existing affordability burdens and risks from financing the DCP**

Water affordability is a growing concern. Many low-income households already face water cost burdens exacerbated by the high cost of housing, energy, and other necessities.

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<sup>8</sup> See LADWP's 2021 Water Conservation Fact Sheet, available at: [www.ladwp.com](http://www.ladwp.com).

<sup>9</sup> See <https://www.latimes.com/environment/story/2023-02-01/california-offers-proposal-on-colorado-river-crisis>, accessed March 22, 2023.

<sup>10</sup> See <https://www.inkstain.net/2014/04/amacrq-colorado-river-use-bar-graph/>, accessed March 22, 2023.

<sup>11</sup> See [https://www.sierraclub.org/sites/www.sierraclub.org/files/2022-12/DCP%20DEIR%20Comments%2012\\_16\\_2022.pdf](https://www.sierraclub.org/sites/www.sierraclub.org/files/2022-12/DCP%20DEIR%20Comments%2012_16_2022.pdf), accessed March 22, 2023.

Although the state (using federal COVID-19 relief funds) provided one-time water debt relief in 2021-2022<sup>12</sup>, there is currently no state (or federal) water assistance program. Moreover, water agencies are prohibited from using ratepayer funds for low-income bill assistance due to Proposition 218.<sup>13</sup> Furthermore, there are significant upward cost pressures on water systems.<sup>14</sup> While Metropolitan was able to identify cost savings and other financial mechanisms to allow for a 5% annual rate increase for the 2023-2025 budgets, future rate increases will likely need to be higher.

MWD will need to invest in local supplies, such as additional conservation, local groundwater storage, its recycled water project and stormwater capture, regardless of whether the DCP is built. MWD's current 10-year budget, which includes the recycled water project, forecasts rates going up to \$1,956 per acre-foot by 2032.<sup>15</sup> That figure, however, likely understates the likely cost given the inevitable reductions in CRA deliveries and continued variability in SWP deliveries, which make it probable that MWD will institute scarcity pricing, reduced allocations, or both at some point in the next decade. (MWD has already instituted these measures during prior drought periods, including 2021-2022). Regardless, the cost of MWD water is ultimately passed on to customers via rates, and MWD, like all SWP contractors, is obligated to pay for the SWP construction and operation costs, regardless of how much water they take.<sup>16</sup> Thus, MWD must continue paying for the SWP even as its customers will be increasingly unwilling or unable to pay. Those that can reduce bills through reduced consumption will, and those that struggle to pay their bills may pay less, resulting in more customer service expenses trying to provide assistance and more debt on utility books, further raising the cost for necessary capital investments.

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<sup>12</sup> See [https://www.waterboards.ca.gov/arrearage\\_payment\\_program/](https://www.waterboards.ca.gov/arrearage_payment_program/), accessed March 22, 2023.

<sup>13</sup> *Dreher v. City of Los Angeles Department of Water and Power*, Superior Court of California, March 29, 2022.

<sup>14</sup> See <https://www.waterboards.ca.gov/conservation/assistance/>, accessed March 22, 2023.

<sup>15</sup> MWD 10-year forecast, Attachment 1, pages 210-11 of 344. Adopted by the MWD board on 4/12/2022 as item 7-3.

<sup>16</sup> State Water Project Water Supply Contract Amendments for Water Management, Partially Recirculated Environmental Impact Report, State of California (Natural Resources Agency, Department of Water Resources), Chapter 3, February 2020. Accessed from: <https://www.acwd.org/DocumentCenter/View/3506/SWP-Water-Supply-Contract-Amendments-PRDEIR-Feb2020-PDF?bidId=>, May 1, 2023.

MWD's current debt service of \$282-287 million/year accounts for nearly 14% of its budget. If MWD agrees to reimburse DWR for 50% of the projected DCP cost, it would be responsible for covering \$8 billion in state debt, more than double MWD's current debt of \$3.88 billion.

Moreover, the DCP construction timeline is estimated to be 12-14 years and DWR projects that it would not start delivering water until 2040.<sup>17</sup> By that time, even under optimistic climate and economic scenarios, the cost of MWD water would be between \$2,500 and \$3,000 per acre-foot. Adding the DCP would push MWD water costs into a range where even the Carlsbad seawater desalination plant is cost competitive for a much more reliable supply.

The two scenarios below outline the major risk of cascading impacts that MWD faces:

**Scenario 1:** MWD rate increases (to pay for major capital investments) further depress demand, resulting in decreased revenues, and extreme pressure for further rate increases, significant cuts to operating budgets, or both.

Concurrently, the MWD rate increases would be passed through in retail rates, potentially creating additional fiscal instability as greater numbers of residential customers miss payments on high bills.

**Scenario 2:** Extended drought and permanent mandatory reductions in CRA deliveries prompt MWD member agencies to accelerate their own investments in alternative supplies, reducing their willingness to pay for MWD water and operating costs (including debt payments), leading to significant reductions to MWD's budget and the need for drastic cuts, rate increases, or both.

Metropolitan's current fiscal model relies heavily on water sales to member agencies. As those sales decrease, MWD will be forced to raise rates, secure alternate revenue sources, cut personnel and operating costs, or some combination of the three. Now is the time for MWD to demonstrate full transparency and accountability for its cost structure and investment decisions, and to be forthright about the equity and affordability consequences of its choices.

### **Section III: Recommendations**

These recommendations are offered to support informed decision making and transparency for the 19 million people within MWD's service area.

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<sup>17</sup> See <https://www.deltaconveyanceproject.com/>, accessed March 22, 2023.

1. Develop and make public DCP cost estimates that incorporate dynamic hydrologic conditions and equity analysis
2. Conduct a comprehensive alternatives analysis that evaluates significant investments in local projects
3. Fully incorporate dynamic hydrology into financial planning
4. Reevaluate what reliability means in a changing climate
5. Evaluate business model changes including tiered pricing and equity allocations

As existing critiques have noted, the DCP cost estimates were developed when interest rates were lower and therefore, were the project to move ahead, it would likely end up costing more than projected.<sup>18</sup> Moreover, as comments on the environmental review analysis demonstrate, the DCP would have tremendous impacts both within and outside the Delta and the proposed mitigation measures are profoundly inadequate.<sup>19</sup> Therefore, it is prudent for any current cost estimate to project costs using both higher interest rates and increased mitigation costs.

In addition, a complete DCP cost estimate must include allocation scenarios that incorporate variable hydrology, environmental requirements for operations, and affordability impacts at the retail level. The analysis should begin with DWR's long-term SWP deliveries estimate of 60% of contracted allocations and build in lower allocation percentages based on more extreme drought scenarios, potential state and federal restrictions (e.g., via updated water quality control plans), and decreasing member agency demand due to high rates for SWP water. While the DCP is promoted as being able to provide more reliable supplies, the promised reliability is highly uncertain given the dynamic economic, regulatory, and climatic conditions. If the promised reliability does not materialize and the actual costs for MWD members agencies for treated SWP water exceed \$3,500 or \$4,000 per acre-foot (or more), how much will those prices drive down demand? Furthermore, some member agencies are more dependent on SWP water than

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<sup>18</sup> See, for example, NRDC's March 7, 2022 letter to MWD, titled "Re: Concerns regarding Metropolitan's Proposed Budget and Rates, Including Opposition to Metropolitan's Proposed Funding for Planning Costs of the Proposed Sites Reservoir and Delta Conveyance Projects."

<sup>19</sup> See [https://www.sierraclub.org/sites/www.sierraclub.org/files/2022-12/DCP%20DEIR%20Comments%2012\\_16\\_2022.pdf](https://www.sierraclub.org/sites/www.sierraclub.org/files/2022-12/DCP%20DEIR%20Comments%2012_16_2022.pdf), accessed March 22, 2023.

others. If the less dependent agencies are able to shift away from SWP water and refuse to approve take or pay-style contracts, how will MWD recoup its DCP investment costs?

The DCP cost estimate should also evaluate affordability and equity impacts. MWD's service area reflects extreme income inequality. While MWD does not control retail agency rate setting and cost structure decisions, it does have a commitment to diversity, equity, and inclusion and giving voice to all of the communities served by its member agencies. Thus, MWD must use an equity lens to evaluate allocation of costs, including delivered water costs and programmatic costs (i.e., conservation funds). If the DCP costs are allocated to member agencies through rates and existing cost share formulas, which communities will bear disproportionate impact? If MWD, with its significant staff and budgetary resources does not conduct this analysis, who will? As the utility debt data during COVID-19 pandemic demonstrated, it is primarily BIPOC communities that experience the greatest impacts when there are economy and society-wide shocks. The DCP is not a pandemic or a bank collapse, but it is a project whose costs would have economic reverberations over decades. Those reverberations would not be felt equally, and it is incumbent upon the entity deciding whether to finance the majority of the project to be upfront and transparent about impacts to the most vulnerable communities, because water supply reliability is a chimera when you can't afford your bill.

MWD also has a duty to the people within its service area to fully evaluate alternatives to the DCP. Various reports recommending alternatives to the DCP exist and MWD should engage with them fully.<sup>20</sup> Moreover, MWD should use apples-to-apples cost comparisons that account for a range of risks and benefits for each source, including conservation. As described above, the SWP is not inherently more reliable than conservation and local supplies like stormwater capture. The DCP (and the SWP in general) also have significant environmental impacts, while investments like conservation, stormwater capture, and groundwater remediation have multiple benefits, including enhancing equity if investments are

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<sup>20</sup> C-WIN and the Sierra Club have both published reports on alternatives to the DCP. See: <https://static1.squarespace.com/static/59ee697fa9db0955b9b1c0ba/t/63b37bbdfd-c2740ec4c42818/1672707007103/EWC-Report2022.pdf>, accessed March 23, 2023, and <https://www.sierraclub.org/sites/www.sierraclub.org/files/2022-12/Sierra%20Club%20California%20Smart%20Water%20Alternatives%202022.pdf>, accessed March 23, 2023.

made in disadvantaged communities. A meaningful alternatives analysis would also describe and quantify the opportunity cost of investing in the DCP. It would ask questions such as how many local projects would unlikely receive funding? How much ongoing litigation would occur? And, what are the consequences of MWD tying itself politically to large agribusiness that is willing to stop at nothing to maintain profits?<sup>21</sup>

Regardless of whether MWD moves ahead with financing the DCP or not, it needs to adjust its financial planning to incorporate the state's changing hydrology. Linear models showing small and incremental changes do not reflect the highly dynamic conditions effecting both supply and demand. Any 10-year financial outlook should include a range of scenarios with at least one multi-year dry period, where supply and demand drop by at least 15%. Otherwise, the MWD budget projections will overstate demand and revenue projections. Moreover, the budget projections should include a permanent reduction in deliveries from the Colorado River Aqueduct. One of the scenarios developed by MWD staff for the strategic planning process contemplates significantly reduced deliveries, which is a good start.<sup>22</sup> However, a fully integrated planning process requires commensurate and non-linear financial impacts analysis.

These updated analyses and cost estimates should also push MWD to reevaluate its vision for reliability. During the 2010s, as increasingly devastating forest fires raged across the state, policymakers decided to reduce risk by cutting off power in some rural areas when conditions raised the likelihood of fire starts from transmission lines.<sup>23</sup> In addition, state energy officials have increasingly relied on demand response (e.g., quick and short-duration reductions in electricity use) to keep the electric grid functioning without blackouts on the hottest summer days. These policies are examples of difficult decisions made in response to climate change impacts. Similarly, MWD may need to develop a more dynamic

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<sup>21</sup> As Lois Henry's excellent reporting has documented, large agribusiness has no qualms putting poor Black and Brown communities at risk to protect their profits. See: <https://sjvwater.org/high-drama-ugly-deeds-politics-and-moments-of-kindness-swirl-amid-the-waters-of-a-re-emerging-tulare-lake/>, accessed March 23, 2023.

<sup>22</sup> See the Refined Water Supply and Demand Gap Analysis from 2021, which is available on the IRP section of MWD's website at: <https://www.mwdh2o.com/how-we-plan/integrated-resource-plan/>.

<sup>23</sup> See: <https://www.cpuc.ca.gov/PSPS/>, accessed March 23, 2023.

approach to reliability, wherein huge infrastructure investments to secure water for existing demand is not the only available strategy. Customers in MWD's service area have demonstrated the capacity to conserve when asked, both during extended droughts and for short-duration periods to allow for system maintenance. Maintaining reliable supply in our changing climate is a collective effort.

Moreover, MWD has multiple tools available to support member agencies with the greatest unrealized conservation potential. They include MWD's conservation and communications programs, functioning as a venue to share retail agency best practices, providing technical assistance on implementing statutory and regulatory requirements (i.e., water waste ordinances and drought surcharges<sup>24</sup>), and, potentially moving to an equity-based approach to pricing, wherein member agencies that demonstrate a commitment to affordability and equitable allocation of conservation budgets receive a discount or priority allocations during extended dry periods.

Now is the time for MWD to reevaluate its business model. The District is heavily reliant on water sales; those sales are likely to decline further for the reasons described in this assessment. In addition, MWD's use of property taxes to bolster its revenue stream is going to cause further affordability challenges for households already struggling to pay property tax bills. MWD's current budget relies on property tax revenue for 7% of total revenue, which is 11% of the total revenue from water sales, and the property assessment is forecast to rise 4% per year.<sup>25</sup> For a median Southern California house, which is valued at \$745,000<sup>26</sup>, MWD's ad valorem tax rate of 0.0035% results in an annual tax bill of \$2,608. Difficult budget and pricing decisions lie ahead. However, ***one way to ease the pressure is by abandoning the DCP***. MWD should also complete an evaluation of tiered pricing and equity allocation structures. These actions could send a more impactful price signal to communities with high water use, allow for additional sales revenue, or help to reduce demand to avoid triggering more stringent system-wide conservation requirements during extended dry periods. Most retail water suppliers already use some form of tiered pricing. MWD can do the same

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<sup>24</sup> Such as Water Code 365-367 (as established by SB 814, 2016).

<sup>25</sup> MWD 10-year forecast, Attachment 1, pages 27-28 of 344. Adopted by the MWD board on 4/12/2022 as item 7-3.

<sup>26</sup> See: <https://ktla.com/news/local-news/home-prices-rise-in-southern-california-for-1st-time-since-last-may/>, accessed May 1, 2023.

based on factors including SWP and CRA allocations, MWD storage conditions, affordability and equity metrics, and conservation potential.

In addition, MWD should consider options for diversifying its revenue stream. For example, due to its regional focus and its technical, managerial, and financial management capacity, MWD could serve as an administrator and consolidator for small water systems, through funding secured from the state and federal governments. Another possibility would be playing a larger role facilitating regional supply investments, such as large scale stormwater capture, groundwater remediation, and additional recycled water projects. As a large land owner, MWD may also be able to generate additional revenue through leases allowing for other critical infrastructure, such as renewable energy and telecommunications projects.

Finally, MWD should take a hard look at its cost structure, including salaries and benefits for its top executives. One place to start is the substantial planning budget for the DCP and Sites reservoir. MWD's 2022-23 and 2023-24 budget anticipates spending over \$6.5 million on professional services contracts for the Bay-Delta initiatives office.

### **Conclusion**

Southern California has a vibrant economy and the capacity to build resilience to climate change. The region will continue to need imported water; however, the days of less constrained imports are over and it is time for MWD to pivot to an approach that is more equitable and produces fewer social and environmental impacts borne by others in far away places. ***MWD can and should step into a leadership role, beginning with withdrawing its support for the DCP, and continuing with updates to its planning processes and business model.*** If MWD continues to pursue the DCP, it faces an economically unsustainable future for itself and one that increases affordability burdens and inequities for the people it serves.

*This assessment was written by Max Gomberg*

*Max Gomberg is an independent consultant working with California-based and national advocates on water affordability and climate equity. In July 2022, he resigned from his position as conservation and climate change manager at the State Water Resources Control Board (Water Board) due to a lack of urgency and political will to confront climate change. In his resignation letter, he wrote:*



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*“Witnessing the agency’s ability to tackle big challenges nearly eviscerated by this Administration has been gut wrenching. The way some of you have simply rolled over and accepted this has also been difficult to watch.”*

*During his tenure at the Water Board, Mr. Gomberg led development of water conservation, access, affordability, and climate change policies across California. Under his leadership, the Water Board developed a statewide plan for low-income water rate assistance, acquired \$1 billion for water debt relief, adopted a comprehensive climate change mitigation and adaptation policy, and implemented regulations to reduce urban water use. Mr. Gomberg has over 15 years of water policy experience and holds a BA from the University of Chicago and a Masters in Public Policy from UCLA.*