

Testimony of Jeffrey Kightlinger, General Manager  
Metropolitan Water District of Southern California

S.1894  
California Emergency Drought Relief Act of 2015  
SUPPORT AND SEEK AMENDMENTS

H.R. 2898  
Western Water and American Food Security Act of 2015  
NO POSITION

Chairman Murkowski and Ranking Member Cantwell:

On behalf of the Metropolitan Water District of Southern California, I would like to thank you for the opportunity to testify today. We appreciate your leadership and the ongoing efforts of the Committee to address the challenges gripping our state and much of the Western United States during this fourth year of an historic drought.

On September 22, 2015, the Metropolitan Board of Directors voted to support S.1894 and to seek certain amendments. At the present time, our Board does not have a position on H.R. 2898.

I wish to personally thank Senator Feinstein for her legislation. S. 1894 not only seeks to address the immediate water crisis, but provides much-needed direction to better prepare for future droughts and achieve California's co-equal goals of providing reliable water supplies while restoring the Sacramento-San Joaquin Delta ecosystem.

Before addressing some of the legislative or policy specifics, I would like to take a step back to provide some background on Metropolitan. In cooperation with our 26 member agencies, Metropolitan has done extensive planning and made significant investments that have allowed us to withstand this and future droughts and to prepare California for future water challenges we will face.



**Metropolitan: A History of Regional Cooperation and Progress**

Every generation of Southern Californians has had to face drought and in every generation, Metropolitan has made the necessary investments to ensure water supply reliability for the region. Metropolitan was created by the California Legislature in 1928 to form a regional water cooperative of the rapidly urbanizing areas of Los

Angeles and Orange counties. In the throes of the Great Depression, voters of these counties approved \$220 million in bonds, funded through property taxes, to construct a 242-mile aqueduct from the Colorado River that would provide a needed water supply for future generations of Southern Californians. At that time, these urbanized areas had a combined assessed value of approximately \$2 billion. Today, urban Southern California has an assessed property value of approximately \$2 trillion. A secure reliable water supply has been one of the primary drivers fueling the great economic engine of this region for decades. If Southern California were a nation, it would be the 16<sup>th</sup> largest economy on the globe, just behind Mexico and ahead of Indonesia.

A generation after Metropolitan was formed, the district in 1960 became the cornerstone of the effort to build the California State Water Project. That same year, the state's voters approved bonds to finance the construction of the project. The SWP was the most expensive water project ever constructed and Metropolitan agreed to finance 50 percent of the project with a 75-year financing commitment. This water system, a modern engineering marvel, provided an additional water supply to the region from Northern California via the Feather River in the northern Sierra Nevada Mountains, down into the Sacramento River, then across the Delta. From there, pumps lift the water into aqueducts that eventually lead to the San Francisco Bay Area, Central Valley, and Southern California. This project now provides about 30 percent of Southern California's water supply. Some of the issues before us today pertain to how to best operate and manage this project amid new challenges of declining fish species, various stressors that threaten the health of the Delta estuary and climate change.



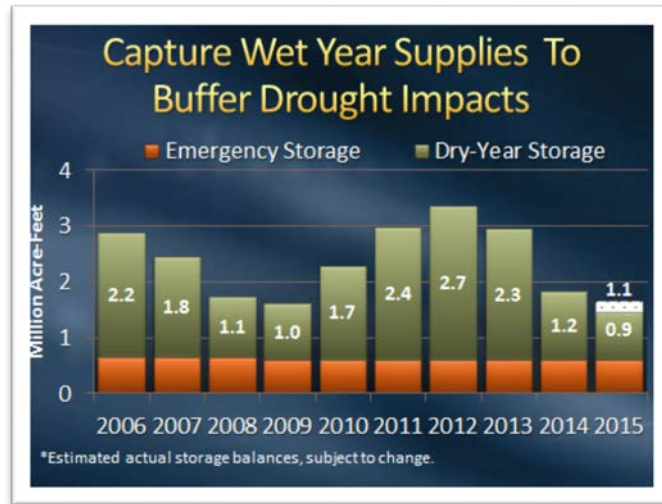
### **Drought: Lessons and Responses Past and Present**

The weather of the West is marked by dramatic shifts in hydrology ranging from deluges to droughts. Yet, our economy depends on a steady and reliable water supply. Drought cycles in particular have played an important role in re-examining water policies to better prepare for the future.

A generation after the historic investment in the State Water Project came the drought of the late 1980s and early 1990s. This led to significant water shortages in the Southland and a complete rethinking of Metropolitan's water management programs, investments and planning objectives. Since that time, the region has spent billions of dollars to develop new and improved infrastructure that can transport and store imported water supplies in wet years in order to have sufficient supplies in reserve for drought and emergencies. Overall, Metropolitan has increased its network of local storage assets more

than 13-fold since the early 1990s. Metropolitan currently has capacity to store more than 5.5 million acre-feet of water above and below-ground. Thanks to these investments, we entered the current drought cycle with more water in storage than at any time in our history.

Investing in storage was one important lesson learned from previous droughts. Diversification of supply was another. Soon after managing through the drought of 1991, Metropolitan turned its attention to developing its first long-term water vision, our Integrated Water Resources Plan (IRP). That plan was adopted in 1996. It provided a road map for the coming generation to expand conservation through plumbing code reforms and device subsidies to make homes and businesses more water efficient. Metropolitan also began to provide direct financial assistance to local agencies that sought to develop their own supplies including recycled water, groundwater cleanup and storage projects. While Southern California has five million more people than it did in 1985, total water use has not increased. Thanks to this lowering of per-capita water use, the region has conserved and stored more water rather than consuming it wastefully. The bottom line is this: Had we not reacted to the previous drought with sound improvements to our water management strategy, Southern California and all of the state would be in the throes of a water crisis far greater than what we are facing today.



Lake Oroville

And now, a generation after the drought of 1991, a much more severe drought is gripping California. It comes at a time when monumental water policy issues are before this Committee, Metropolitan, California and the West.

**Historic Drought Conditions Require Unprecedented Actions**

This drought is straining California and the Metropolitan system unlike any before. The northern portion

of our distribution system depends on supplies arriving from Northern California via the State Water Project, yet the lack of a Sierra snowpack has significantly curtailed these deliveries. Our local supplies from Southern California’s groundwater basins have been greatly reduced by the absence of rain. The physical ability to move water from our

Colorado River system to these basins had been limited or non-existent, requiring changes to this distribution system.



**Turf Removal: Before and After**

In response to the current drought, Metropolitan has invested in the largest conservation program not only in its history and California's, but the largest seen anywhere in the nation. Earlier this year, our Board directed \$450 million into a series of durable permanent conservation efforts such as rebates for turf removal, low-flow showerheads and toilets, and high-efficiency dishwashers and washing machines. We estimate that more than 170 million square-feet of turf will be removed as a result of this effort, which is more than three times the statewide goal set by Governor Jerry Brown in an executive order last April. The total conservation program is projected to save more than 70 million gallons of water a day for Southern California, or enough water for 160,000 households. The district is also conducting a \$5.5 million public

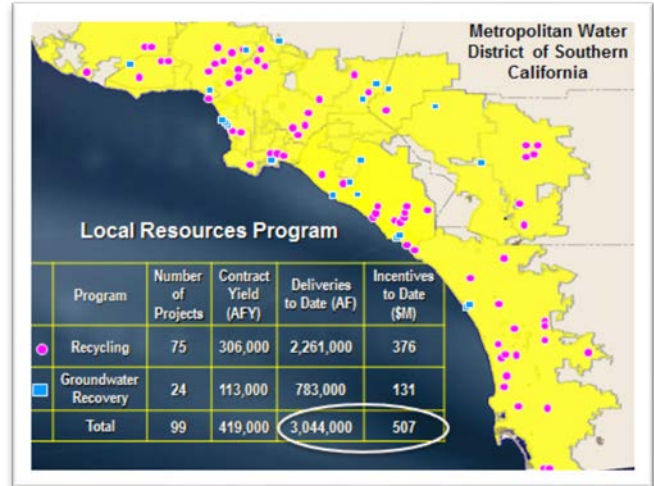
education and outreach campaign in five languages to help all Southern Californians make lasting and permanent reductions in the water they use. The campaign is getting the word out and Southland communities are meeting the goal set by Governor Brown for a 25 percent reduction in residential urban water use during this drought.

### **A New Metropolitan Vision Amid New Circumstances: Groundwater**

To build on these past successes and prepare for future growth, climate change and other challenges to water supply, Metropolitan is currently updating its IRP, to provide an even more robust long-term water resources strategy to meet our mission of providing a high quality, reliable water supply for its service area. While the work is not complete and our Board has yet to make final decisions, the analysis to date is providing new and valuable insights.



Some of the most compelling findings relate to groundwater. Southern California is fortunate to have large and productive groundwater basins in parts of our service area. All have been carefully managed and operated for decades. Yet because of this drought, these groundwater basins have been tapped to nearly the full extent of their sustainable management ranges. The basin managers are telling us to expect lower yields in the future. Collectively, the loss in groundwater production is roughly equivalent to the amount of water necessary to serve a city the size of San Diego for a year.



While these groundwater basins are partially recharged by local rainfall, imported water provided by Metropolitan is absolutely essential to replenishing the basins. Metropolitan has provided financial assistance to develop recycled water for years, but we are now exploring a maiden effort with the Sanitation Districts of Los Angeles County to develop the largest single water recycling project in the nation. Currently, the Sanitation Districts operate a facility near the Los Angeles International Airport that treats wastewater and discharges it to the Pacific Ocean. We are exploring large-scale recycling to purify this water to drinking water standards and use it to replenish groundwater basins in at least three counties. This project will take decades for full build-out and will be an important new source of water. Yet even at full capacity, it will not make up for all of the expected decrease in yield from the region’s groundwater basins.

### The Colorado River

Southern California depends on the Colorado River for about 25 percent of our supply. But the River has been experiencing drought conditions since the turn of the



Lake Mead behind Hoover Dam

century. The long-term studies point to an imbalance between supply and demand. Overall, California has the largest share of the River among the seven western states, with 4.4 million acre-feet of an allocated supply. Yet Metropolitan’s share of the state’s supply is only 550,000 acre-feet. Our Colorado River aqueduct has a capacity of more than twice that, at 1.2 million acre-feet. The aqueduct historically ran at full capacity

when that water was needed because of surplus conditions on the River and unused

allocations by other states. But that chapter in our water history is now behind us. Ahead of us is the challenge to work cooperatively among the Basin states and with our intra-state agriculture partners.

A leading example in our partnership with agriculture is the one we have forged in California's Palo Verde Valley in the Sonoran Desert south of the Mojave Desert and within Riverside and Imperial counties. Palo Verde has some of the most senior water rights on the River. We have a voluntary program with farmers in that valley to fallow a portion of their land in drought cycles, when we at Metropolitan are looking for additional water supplies for a full aqueduct. We paid farmers to enter this program and provide additional compensation every year in which we fallow lands for supply. In so doing, we have provided the community with funds for local economic development projects while supporting agriculture. Metropolitan also owns farmland in this valley. Recently our Board of Directors approved the purchase of additional lands in the valley, providing even greater opportunities to both maintain agriculture activities and provide water supplies to Metropolitan when needed. This project alone does not solve our challenge of stabilizing our overall supply of water from the Colorado River. But it does exemplify the kind of partnership that is possible and needed in the years ahead. All of us who depend on the Colorado River must work towards closing the gap between supply and demand in each state.

### **Federal Government Can Help California Meet Drought Challenges**

These various examples of what is happening inside Metropolitan point to the fact that there is no single solution to Southern California's water challenge. We need to embrace an "all of the above" strategy to provide reliable water supplies in the future. This begins with local actions such as Southern California's longstanding commitment to conservation, more storage and sound groundwater management. While we have invested in many of these actions through local water rates, outside financial assistance can greatly accelerate progress. That is why partnering with the federal government is so important to meet the challenges ahead.

We support the efforts of S. 1894 to provide additional funding and foster regulatory incentives to ensure greater water supply reliability and reduce water use throughout our region. S. 1894 includes funding for the WaterSense labeling and certification program, and supports innovative water supply and conservation technologies. The federal government can also help us prepare for future droughts with long-term planning and projects that will expand our water supplies. S. 1894 includes a competitive grant program through Title XVI to authorize \$200 million in recycled water funding through 2020. Partnering in these investments can help diversify water portfolios throughout the West.

## **S. 1894: Fostering Progress in the Delta**

An “all of the above” strategy also means that, while we will need more local supplies and conservation, imported supplies will remain the foundation on which we build. That is why hearings like this are so important to help us work together to solve the ongoing challenges in the Delta.

In California, every storm is precious. Every opportunity to safely capture supply is important. Wet periods can provide California the water to keep in storage to survive future droughts if there is sufficient storage to capture and adequate plumbing to move the supply. S.1894 has provisions that will allow us to manage storm flows better in the short-term and helps to develop long-term storage.

Both California’s State Water Project and the U.S. Bureau of Reclamation’s Central Valley Project face operational restrictions that threaten our ability to capture peak storm flows when they pass through the Delta. A few winters ago, as an example, the first major storm of the season in December brought a sub population of adult delta smelt, a state and federally listed species, southward toward the project pumps in a plume of turbid water. A small number of these fish were detected at the pumping facilities of the two projects. Within days the facilities were forced to the lowest levels of pumping for the year in an effort to protect the smelt. Meanwhile the water supplies flowing through the Delta were at the highest level of the year. A precious opportunity to capture water supplies was lost. As a result in the following weeks, the systems failed to capture a quantity of water that would have been sufficient to supply the entire city of Los Angeles for more than a year. And this lost opportunity occurred in the midst of a four-year drought when every drop was sorely needed. Moments like this have reinforced for Metropolitan the need to modernize the state’s water system’s infrastructure and to improve real-time monitoring and operations in the Delta so that sensitive species and public water supplies are both protected. S. 1894 is a prudent, positive and rational response to challenges such as this.

Regarding S. 1894, this testimony includes three attachments that help guide Metropolitan’s positions on this specific legislation and the Delta overall. In 2007, our Board set specific benchmarks to assess any potential solution to the Delta water system and ecosystems. Some proposals satisfy some of the benchmarks. Very few work to meet all the needs of the environment, reliable water supply, seismic risk, water quality and other challenges. Those benchmarks are attached. So are principles that the Board recently adopted to analyze federal proposals such as S. 1894. Lastly, Metropolitan’s Board approved a detailed position supporting S. 1894 while advancing a series of specific amendments. At the present time, our Board does not have a position on H.R. 2898, but we note that many provisions in the bill are similar to concepts set forth in S. 1894.

An important feature of S. 1894 is its emphasis on better monitoring on a real-time basis to understand the abundance and location of important fish species such as salmon and smelt in the Delta. While Metropolitan supports water supply restrictions when they are scientifically demonstrated to be necessary to protect endangered species, we firmly believe there are missed opportunities to safely capture water supplies within the confines

of the existing biological opinions that could be regained if the agencies had better information. Good monitoring and good measurement, using sound science, will lead to better management. We lost a number of opportunities to safely capture water back in 2013 and 2014. In 2015, with help from the federal agencies, California made great strides in effectively managing the system, learning from past mistakes. We will need more of this cooperative effort as we move forward. With even better monitoring and information, the agencies could do better tomorrow.

Working within the Endangered Species Act, we support actions to address ongoing conflicts between water supply operations and native fisheries through enhanced scientific modeling and real-time monitoring for the benefit of people and fish. Every effort to protect migrating fish species on the San Joaquin River system should be taken, including pilot efforts such as transporting some of these fish via barges. Sacrificing public water supplies as the solution has not worked and will not work, but there are significant opportunities to address ecosystem and fisheries issues that should be pursued.

Among our drought legislation priorities is the need for legislative solutions that have strong bipartisan support. Southern California is an extraordinarily diverse region. Metropolitan could not function as the leading water planner for Southern California if our board members did not work jointly to embrace the common challenge and find that common ground. This same spirit of cooperation and collaboration must guide efforts to successfully address water issues today and in the future. Water is not a partisan issue. It's a health and safety issue. Fish, farms and families all need water to survive and our economy depends on it. We need everyone working together to address the drought impacting California and help us prepare for a reliable water future in the West.

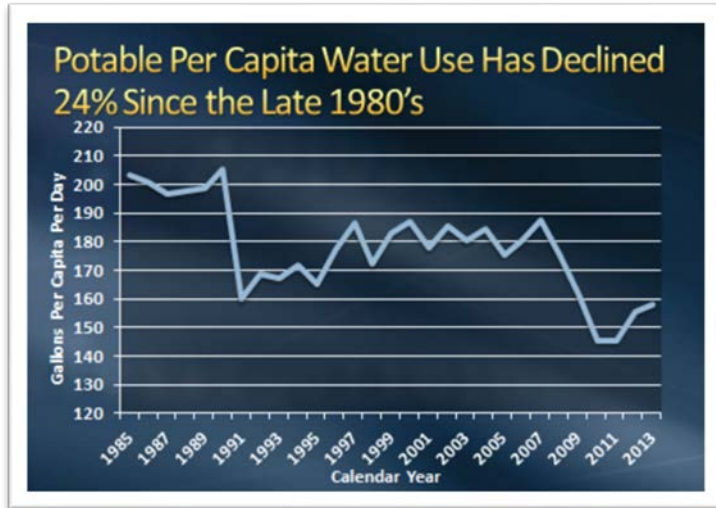
### **California's Water Action Plan: A State-Federal Partnership**

At this moment in California's fast-evolving water history, we find ourselves at more than a single crossroad. S.1894 attempts to address the immediate crisis of drought and provide important direction to better manage existing water systems to endure future droughts. The California WaterFix process, supported by the state and federal administrations, is advancing a historic set of long-term improvements to the water system. These plans seek to address existing conflicts with sensitive fish species and protect public water supplies for generations to come from seismic events, floods, climate change and other challenges. The state and federal agencies are on track to have a final plan next year and that will be the time when Metropolitan and other participating public water agencies decide whether to invest in the improvements and water operations as advanced by this plan.

The tandem California EcoRestore program seeks to accelerate restoration of tidal marsh and floodplain habitat, most of which has been lost over the past century and a half due to reclamation activities. Additionally, the State Water Resources Control Board is embarking on proceedings to identify water flow objectives and responsibilities in both the San Joaquin and Sacramento river watersheds.



The challenges are many and they are outlined in Governor Brown’s Water Action Plan, which Metropolitan fully embraces. The plan advances the much-needed “all of the above” strategy. As an example, conservation is happening at record levels throughout California during this drought, but it must become a permanent and lasting change in our lifestyle. Lowering water demand has been part of Metropolitan’s portfolio approach since the 1990s and will continue to be. Yet one worthy water management effort does not negate the need for another. In fact, one effort builds upon another. We also need modernized systems to safely and efficiently move water supplies from one part of the state to other regions. We need additional storage above- and below-ground to store these conveyed supplies. We need action at a local, regional, and state level to plan, invest, and



innovate to provide safe reliable water supplies in ways that also protect the environment. This action plan, and the steps underway at Metropolitan, embrace every tool in the toolbox to make progress in the months and years ahead.

### **The Delta: A Key to Statewide Progress**

Because of its strategic position in California water supply, the Delta is inevitably a center of political and policy discourse on water for the state and the West. John Muir explored the Sierra and coined it our Range of Light. In an average year, the Sierra Nevada is our largest supply of water, whether it be rain or snow. The 700,000 acre Delta is where the rivers of the western Sierra merge before heading to San Francisco Bay. It is the largest estuary on the West Coast of the Americas, home to 750 species of plants and animals, and supplies freshwater to more than 27 million Californians and three million acres of farmland. It is at the center of any reasoned and rational discussion on the future of water management in our state.

Our state has many regions, many views and many perspectives. Yet there is no getting around the need to properly manage the Delta and the water supply that flows through it for the good of the California economy and environment. With a sense of common purpose, we recognized that the consequences of inaction are simply unacceptable. There is no viable status quo. And we are confident that there is sufficient common ground that can be found via S.1894 and other proposals now before Congress.

We thank you for your efforts and leadership on these issues. We hope that you will look to Metropolitan to continue to be a constructive participant in addressing the many

water challenges that we all face today and in the future. Thank you again for the opportunity to testify today.