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16	SUPERIOR COURT OF THE STATE OF CALIFORNIA	
17	COUNTY OF SAN FRANCISCO	
18	SAN DIEGO COUNTY WATER AUTHORITY,	Case No. CPF-10-510830 Case No. CPF-12-512466
19	Petitioner and Plaintiff,	DECLARATION OF DEVENDRA N. UPADHYAY
20	vs.	Hon, Curtis E.A. Karnow
21	METROPOLITAN WATER DISTRICT OF	Dept.: 304
22	SOUTHERN CALIFORNIA; ALL PERSONS INTERESTED IN THE VALIDITY OF THE	Actions Filed: June 11, 2010; June 8, 2012
	RATES ADOPTED BY THE METROPOLITAN WATER DISTRICT OF	Trial Date: March 30, 2015
<ul><li>24</li><li>25</li></ul>	SOUTHERN CALIFORNIA ON APRIL 10, 2012 TO BE EFFECTIVE JANUARY 1, 2013 AND JANUARY 1, 2014; and DOES 1-10,	
26	Respondents and Defendants.	, in the second of the second
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-1-DECLARATION OF DEVENDRA N. UPADHYAY

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## DECLARATION OF DEVENDRA N. UPADHYAY

I, DEVENDRA N. UPADHYAY, declare and state as follows:

- 1. I am the Group Manager of the Water Resources Management Group of The Metropolitan Water District of Southern California ("MWD"). I have held this position for about five years. Prior to this position, I was the Budget and Financial Planning Section Manager at MWD for three years. I was also employed at MWD from 1995 to 2005 working in the Planning and Resources Division.
- As Group Manager, I am responsible for managing MWD's water resource portfolio in accordance with the Board's policies and directives. Among other things, I oversee and manage: (a) development and use of MWD's imported water supplies; (b) development and implementation of MWD's programs related to conservation, local resource projects, groundwater recovery and conjunctive use; and (c) planning activities and policy guideline development related to MWD's water supply plans and integrated resources plans.
- The following is based on my personal and professional knowledge and if 3. called as a witness, I could and would testify competently thereto under oath.

#### MWD'S WATER RESOURCES PORTFOLIO

- 4 MWD was organized for the purpose of providing a supplemental imported water supply to its member agencies. Soon after it was established in 1928, MWD executed a contract with the Secretary of the Interior for delivery of Colorado River water supplies. The Colorado River remained MWD's sole source of water until it executed a contract in 1960 with the California Department of Water Resources (DWR) for water from the State Water Project (SWP).
- 5. MWD is a supplier of supplemental water to its 26 member agencies, who vary in the amount of local supplies they have available to meet their demands. Overall, MWD's imported supplies are used to cover approximately one-half of the total demands in its service area. For example, for the fiscal year ending June 30, 2014, MWD's member agencies used about 1.94 million acre-feet of local water supplies to meet demands, and used 1.91 million acre-feet of imported water delivered by MWD to cover demands in excess of local supplies. For the fiscal years 2011 through 2014, MWD's deliveries of imported water have ranged from 1.7 million acre-

feet to 2.0 million acre-feet. These volumes have provided from 47% to 50% of the total water supplies used in the MWD service area.

- 6. The volume of water from MWD's two sources of imported supply varies from year to year. During the fiscal years from 2011 through 2014, the supplies of Colorado River water ranged from a low of 438,000 acre-feet in FY2012 to a high of 1,107,000 acre-feet in FY2014. The volume of SWP supplies during this period ranged from 805,800 acre-feet to 1,363,400 acre-feet.
- 7. In addition, there are annual variations in the amount of SWP and/or Colorado River supplies delivered to each particular member agency, which are tied to hydrologic conditions, customer demands, and operational constraints (e.g., loss of local groundwater supplies due to contamination).
- 8. The variability in MWD water supplies and the demands of its member agencies, both from year-to-year and from agency-to-agency, requires that MWD maintain flexibility to vary the sources of water supplies provided to each member agency. Each year, MWD must consider the amount of water available to move into the service area from the Colorado River and SWP. In addition, each source of supply involves different water quality issues and requires different costs to be incurred. Operationally, MWD must be able to meet demands—both short-term peak demands and the overall annual demands—of all its member agencies. MWD maintains an interconnected system that generally allows for delivery of water from each of its imported water sources to the member agencies; but ensuring deliveries to all the member agencies requires balancing the available supply from each source of imported water.

### MWD's COLORADO RIVER SUPPLIES

- 9. California's rights to Colorado River water are governed by the Boulder Canyon Project Act of 1928 that limits California to 4.4 million acre-feet per year (mafy), plus one-half of any surplus water.
- 10. MWD was the first California agency to execute a contract with the Secretary of the Interior for Colorado River water. That 1930 contract provided for delivery to MWD of up to 1,050,000 acre-feet per year (afy).

- 11. Other California agencies objected to MWD's contract due to concerns that its priority in time would give MWD a priority in right over their contracts. The objections were resolved in 1931 by a Seven Party Agreement that established three senior priorities for agricultural agencies, including the Imperial Irrigation District (IID), to use 3.85 million afy. MWD holds the fourth priority to 550,000 afy, bringing the total to California's 4.4 mafy limit.
- 12. The Seven Party Agreement established additional priorities. The fifth priority to 662,000 afy was shared by MWD (550,000 afy) and San Diego (112,000 afy). However, Colorado River water to meet these priorities was only available when additional water supplies (either surplus water and/or unused water from Arizona and Nevada) allowed for California to exceed its 4.4 million afy limit.
- incorporate the terms of the Seven Party Agreement. The City of San Diego executed a contract with the Secretary for Colorado River water in 1933, which also reflected its portion of the fifth priority water right under the Seven Party Agreement. San Diego also obtained capacity in the All-American Canal that was constructed to deliver Colorado River water to IID, but it never built a pipeline to connect the city to the Canal, so its Colorado River water remained unused. In 1946, San Diego's Colorado River contract was assigned to MWD and merged with MWD's contract when the voters of the San Diego County Water Authority, of which the City of San Diego is a member agency, approved annexing to MWD.
- 14. MWD's priority rights to California's Colorado River water supplies now total 1,212,000 afy (550,000 afy under Priority 4 and 662,000 afy under Priority 5).
- 15. MWD constructed, owns, and operates the Colorado River Aqueduct (CRA) to deliver its Colorado River water supplies. The CRA has the capacity to deliver 1,250,000 afy, and MWD uses additional water made available by other programs or stored in Lake Mead to deliver a full CRA when required to meet its operational needs.

#### MWD's STATE WATER PROJECT SUPPLIES

16. The SWP is a complex system of dams, reservoirs, aqueducts, pumping stations, power facilities and ancillary facilities that stretch from Lassen County in Northern

California to Riverside County in the south. The SWP is owned and operated by the Department of Water Resources (DWR) on behalf of the State of California.

- 17. In 1959, the State Legislature adopted the Burns-Porter Act, which authorized construction of the SWP and provided that \$1.5 billion in general obligation bonds could be issued for that purpose. Most of the SWP facilities were completed by the mid-1970s, though additional components have been constructed since that time.
- Its purposes include flood control, water supply, recreation, and fish and wildlife enhancement, each of which is treated as a separate purpose for project cost allocation. The water supply purpose is further divided into water conservation and water transportation, which again are treated separately. The water conservation purpose of the SWP includes the dams constructed to retain the water flowing from the Sierra Nevada mountains and to store the water until needed for delivery. The water transportation purpose includes the California Aqueduct, pumping plants, power generating plants, and other facilities needed to move the water from storage reservoirs to the SWP contractors.
- 19. The water supply of the SWP is delivered to 29 public agencies located throughout the State, including MWD, pursuant to long-term water supply contracts entered into with DWR. In 1960, MWD executed the first and largest of these contracts, which then served as the prototype for the remaining water supply contracts.
- 20. The relationship between DWR and MWD, as well as other state water contractors, is very different than in a typical commercial contract. First, the contractors are ultimately liable for all water conservation and water transportation costs that are incurred. DWR serves merely as a pass-through for payment of the costs of SWP facilities.
- 21. Second, DWR is fully reimbursed for the costs of constructing and operating the SWP facilities regardless of the volume of water delivered. DWR operates the SWP, but MWD and the other contractors bear the responsibility to pay all the costs, including the costs of the bonds that financed the SWP.

- 22. Third, the contractors have a right to continue receiving water in perpetuity; DWR cannot unilaterally terminate the contracts, even at the end of their current terms. Under the SWP contract MWD has a participation right to receive its proportionate benefit of the SWP facilities, including both conserved water supply and conveyance.
- 23. In years when there are sufficient supplies for a 100% allocation under the SWP, MWD is entitled to receive 1.9 million af. In the 42 years since deliveries to MWD commenced, the SWP has provided MWD with a 100% allocation in 25 years. MWD received only five percent of its allocation last year, 2014. Regardless of the allocation of water delivered, in all years the SWP contractors, including MWD, are required to pay their proportionate share of the SWP costs.
- 24. One other right MWD has under its contract with DWR is the right to use the SWP to convey water that MWD may acquire from third parties. MWD has also extended the use of this conveyance right to its member agencies. This allows member agencies to avoid payment of charges that DWR would impose on entities that do not have conveyance rights in the SWP system.
- 25. Because DWR separates the water conservation and water transportation functions of the SWP, DWR has "disaggregated" its bills to reflect the distinct nature of the costs incurred for these functions. Indeed, the SWP contracts expressly provide for both a Delta Water Charge to cover the costs associated with SWP conservation facilities and a Transportation Charge to cover the costs associated with SWP conveyance facilities.
- 26. Consistent with the terms of its contract, MWD began making payments toward the capital cost of SWP facilities in 1963. However, Metropolitan did not take any deliveries of SWP water until 1972, by which time it had already paid \$118 million to DWR under the SWP contract.

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### MWD's SUPPORT FOR LOCAL WATER RESOURCE PROJECTS

27. In 1999, the California Legislature enacted Section 130.5 of the MWD Act requiring that MWD expand water conservation, water recycling, and groundwater recovery efforts to increase these elements of the local water supply in its service area.

28. When it adopted a new, unbundled rate structure in 2001, MWD included a Water Stewardship Rate that would collect revenues to help fund local water conservation, recycling, and groundwater recovery projects within its service area. The Water Stewardship Rate is collected for each acre-foot of water delivered to all member agencies.

29. The revenue collected by the Water Stewardship Rate is used exclusively for projects within MWD's service area. The projects funded by these revenues include water conservation, wastewater recycling, and groundwater recovery projects. The water conservation projects (e.g., efficient toilet subsidies) reduce demands on member agencies, which results in lower demands for imported water into the service area. Wastewater recycling and groundwater recovery programs create local water supplies that member agencies sell to meet their local demands, thus reducing demands for imported water. The resulting benefit to MWD is not a water supply for sale, but the avoidance of new infrastructure that would be needed if demands for imported water supplies were higher. MWD's infrastructure costs are shared among its member agencies through its rates and charges, and therefore, the avoided infrastructure costs benefit all the member agencies.

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30. MWD does not expend any of the revenues collected by the Water Stewardship Rate for developing imported water supplies from outside its service area.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed in Los Angeles, California on March 16, 2015.

DEVENDRA N. UPADHYAY

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16	SUPERIOR COURT OF THE STATE OF CALIFORNIA		
17	COUNTY OF SAN FRANCISCO		
18	SAN DIEGO COUNTY WATER AUTHORITY,	Case No. CPF-10-510830 Case No. CPF-12-512466	
19	Petitioner and Plaintiff,	DECLARATION OF JON C.	
20	VS.	LAMBECK	
21	METROPOLITAN WATER DISTRICT OF	Hon. Curtis E.A. Karnow Dept.: 304	
22	SOUTHERN CALIFORNIA; ALL PERSONS INTERESTED IN THE VALIDITY OF THE	Actions Filed: June 11, 2010; June 8, 2012	
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-1-DECLARATION OF JON C. LAMBECK

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## **DECLARATION OF JON C. LAMBECK**

I, JON C. LAMBECK, declare and state as follows::

- 1. I am the Section Manager of the Power Operations and Planning Section in the Water System Operations Group of The Metropolitan Water District of Southern California ("MWD"). I have worked for MWD for 16 years.
- 2. Throughout my employment at MWD, I have been responsible for managing MWD's power resource portfolio in accordance with the Board's policies and directives. Among other things, I oversee and manage MWD's power contracts and costs for pumping imported water supplies to MWD's service area.
- The following is based on my personal and professional knowledge and if 3. called as a witness, I could and would testify competently thereto under oath.
- MWD was organized for the purpose of providing supplemental imported water supplies to its member agencies; and it provides these supplemental supplies from two sources—the Colorado River and the State Water Project.

# POWER REQUIRED TO DELIVER COLORADO RIVER WATER

- 5. The first source of water acquired by MWD was the Colorado River pursuant to the Boulder Canyon Project Act of 1928. The Act authorized the Secretary of the Interior to execute contracts for delivery of Colorado River water, and further authorized power contracts for electric energy generated at the Hoover Powerplant. The Hoover Dam and Powerplant are owned and operated by the federal government, acting through the Bureau of Reclamation.
- 6. In 1930, MWD executed contracts for both Colorado River water and Hoover power. MWD's Hoover power contract was renewed in 1987, with a term that expires in 2017.
- 7. MWD also executed a contract with the Secretary of the Interior in 1933 to provide the funding to construct Parker Dam on the Colorado River. Parker Dam creates Lake Havasu, which acts as the forebay for MWD's Intake Pumping Plant for Colorado River water.

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The Parker Dam contract grants MWD one-half of the electric energy generated at the Parker Powerplant. Parker Dam and Powerplant are owned and operated by the federal government, acting through the Bureau of Reclamation.

- 8. The contracts for MWD's purchase of power generated at the federally owned and operated Hoover and Parker Powerplants generally provide the power required to pump approximately 600,000 to 700,000 acre-feet of MWD's Colorado River water supplies annually. These energy supplies are insufficient to maintain pumping of a full Colorado River Aqueduct.
- 9. MWD has additional arrangements to obtain power supplies for pumping its Colorado River water. An agreement with Southern California Edison (Edison) allows MWD to exchange its Hoover and Parker power that is not used in one month for an equal amount of power in later months when MWD's power supplies are inadequate. The agreement also requires Edison to provide additional power to MWD called Benefit Energy. The amount of Benefit Energy MWD receives is inversely related to how much pumping occurs on the Colorado River Aqueduct; i.e., the more water pumped through the Aqueduct, the higher the electrical load, which reduces the benefits to Edison and reduces the Benefit Energy Edison is required to provide. Therefore, the amount of Benefit Energy available to MWD is reduced by any increase in pumping on the Colorado River Aqueduct.
- 10. The amount of energy provided by the Hoover and Parker federal power contracts and the exchange and Benefit Power agreement with Edison do not provide sufficient power to pump MWD's Colorado River water supplies in all years. For that reason, MWD is required to purchase supplemental power to move its Colorado River water supplies in some years.
- 11. MWD does not own or operate the generating plants that produce the power it uses to pump its Colorado River water supplies. As described above, those powerplants are owned and operated by the federal government. MWD does not have excess supplies of power to pump non-MWD supplies through the Colorado River Aqueduct. In any month in which MWD

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has unused power available under its federal power contracts, it exchanges the unused power for future Edison power supplies.

- 12. As a result, MWD requires that any party seeking to move non-MWD water through its Colorado River Aqueduct to purchase, or arrange for MWD to purchase, the power supplies required to pump that water. The amount of power required to pump an acre-foot of water through the Aqueduct is 2,000 kilowatt-hours. The additional pumping would also reduce the amount of Benefit Power available to MWD under its agreement with Edison. To compensate for this loss to MWD, an additional 317 kilowatt-hours per acre-foot of water pumped must be provided to MWD. Finally, any Colorado River water that is pumped through MWD's Colorado River Aqueduct is diverted above Parker Dam and cannot generate energy at the Parker Powerplant. This reduces the power available to MWD under its right to one-half of the Parker energy. To compensate for this loss, an additional 32 kilowatt-hours per-acre foot are required to make MWD whole for undertaking to pump non-MWD water through the Colorado River Aqueduct that would otherwise have flowed through the Parker Powerplant. In total, 2,349 kilowatt-hours of energy must be provided to MWD to convey each acre-foot of non-MWD water supplies through the Colorado River Aqueduct.
- 13. Supplemental power can be purchased and transmitted to MWD to pump non-MWD water through the Colorado River Aqueduct. The market rate for electric energy prices is regularly tracked and published for various regions in California. During the period 2011 through 2014, MWD used the Platt's Market Report index as reflective of the supplemental power costs for electric energy used for its pump plants on the Colorado River Aqueduct. The regional index applicable to energy sold for use in the Colorado River Aqueduct area is designated Southof-Path-15.
- Any party seeking to pump non-MWD water through the Colorado River 14. Aqueduct would have to purchase, or arrange for MWD to purchase on its behalf, supplemental power at the cost reflected in the South-of-Path-15 index published by Platt's Market Report. Because MWD utilizes the pumping capacity on the Aqueduct for its own water supplies during off-peak hours to minimize its costs, the pumping of non-MWD water would occur during on-

peak hours and the on-peak price index published in Platt's Market Report is indicative of the price that would be paid to pump non-MWD water.

15. In addition, MWD would incur administrative costs to handle the purchasing and scheduling of the supplemental energy for delivery over the appropriate transmission systems to be used at MWD's pumping plants. In 2007, MWD calculated that the staff support requirement for scheduling transmission and delivery of supplemental power to pump non-MWD water through the Colorado River Aqueduct would be 28.4 hours per month. That estimate would be conservative for the years 2011 through 2014 because of increased complexity in the wholesale energy market.

## POWER REQUIRED TO DELIVER STATE WATER PROJECT WATER

- Resources (DWR) in 1960 for water supplies from the State Water Project. DWR constructed and operates the State Water Project, and is responsible for acquiring the power necessary to pump the water through the California Aqueduct to MWD's service area. MWD is contractually bound to pay for its share of the cost of the State Water Project regardless of the volume of water available in each year. MWD's financial obligation includes payment of the cost of energy incurred by DWR to pump any water delivered to MWD.
- 17. As with the Colorado River water supply, MWD does not own or operate the generating plants that produce the energy to pump the water to its service area. For the State Water Project, DWR uses hydroelectric energy produced by facilities constructed as part of the project and off-aqueduct facilities that DWR has invested in to obtain dedicated generating capacity. However, these power sources are insufficient to meet demands for operating the system at times, and DWR must then purchase power at market prices.
- 18. MWD pays for the power costs incurred by DWR to move water to MWD's service area through the State Water Project. There are two charges that recover the power costs the Variable charge and the Off Aqueduct Power Facilities charge.

- 19. The Variable component of the transportation charge recovers costs that vary with the volume of water delivered, which includes the power cost as the amount of power required varies with the volume of water being pumped. DWR calculates a system-wide average rate (\$/megawatt-hour) based on the net cost of energy used divided by the net energy required to pump all water moved through the State Water Project in that year. That rate is applied to each acre-foot of water delivered to State Water Project customers based on the power required to pump the water to each customer's delivery point on the system.
- 20. The Off Aqueduct Power Facilities charge recovers the capital and operating costs for DWR's investment in other power generating facilities than hydroelectric powerplants located in State Water Project facilities. DWR calculates a system-wide average rate based on the total costs for off-aqueduct power facilities divided by the total energy required to pump all water moved through the State Water Project in that year. That rate is applied to each acre-foot of water delivered to State Water Project customers based on the power required to pump the water to each customer's delivery point on the system.
- 21. All water conveyed through the State Water Project to MWD's service area is delivered at two locations on the California Aqueduct the West Branch delivery point is at Castaic Lake in Los Angeles County, and the East Branch delivery is taken at either Devil Canyon Powerplant in San Bernardino County or Lake Perris in Riverside County. MWD's State Water Project water supplies that are used to serve the San Diego County Water Authority are delivered through the East Branch of the California Aqueduct.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed in Los Angeles, California on March 16, 2015.

JON C. LAMBECK