

**REPORT TO AD HOC ADVISORY COMMITTEE  
FALLBROOK PUD AND RAINBOW MWD WHOLESALER  
REORGANIZATION**

**Submitted by  
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**DRAFT  
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**EXECUTIVE SUMMARY (in preparation)**

## 1. HOW SAN DIEGO COUNTY GETS ITS WATER

**Q. If I am served by a member agency of the San Diego County Water Authority (SDCWA), where does my water come from?**

**A.** Your water comes from one of two sources: (1) *local supplies* -- water your member agency obtains from local sources that it controls, and (2) water supplied to your member agency by SDCWA.

**Q. What are local supplies?**

**A.** Historically, local sources were groundwater and surface water within the local area of the urban water agency. Before 1947, the San Diego region relied entirely on local surface water runoff and groundwater pumped from local aquifers.

Over time, local sources have expanded to include the use of treated wastewater from local wastewater plants, the use of desalinated local groundwater and, also, desalinated seawater (some of the seawater at the Carlsbad Facility is contracted for by SDCWA member agencies Carlsbad MWD and Vallecitos WD, and counts as part of their local supplies).

However, as the region's population and economy have grown, local supplies became insufficient to meet the region's water needs.

**Q. How did San Diego County's local supplies come to be augmented?**

**A.** In 1928, the Metropolitan Water District of Southern California (MWD) was formed to develop, store and distribute supplemental water in Southern California, with the specific intention of importing water to the region from the Colorado River. MWD built the Colorado River Aqueduct (CRA) during the 1930s to convey this water, with the aqueduct coming into operation in 1941. The founding members were Los Angeles and its neighboring cities in Los Angeles County.

World War II caused a great increase in water consumption in San Diego and threatened to deplete the region's available local water supply. The solution was to connect the region to the Los Angeles area CRA and import Colorado River water from MWD. In 1943, engineering studies were completed in 1943 for an aqueduct that would connect with the terminus of the CRA at what is now called Lake Mathews and convey water south across Riverside County and into San Diego County. The San Diego County Water Authority was organized with nine original members in June 1944 under an enabling act of the California State Legislature known as the

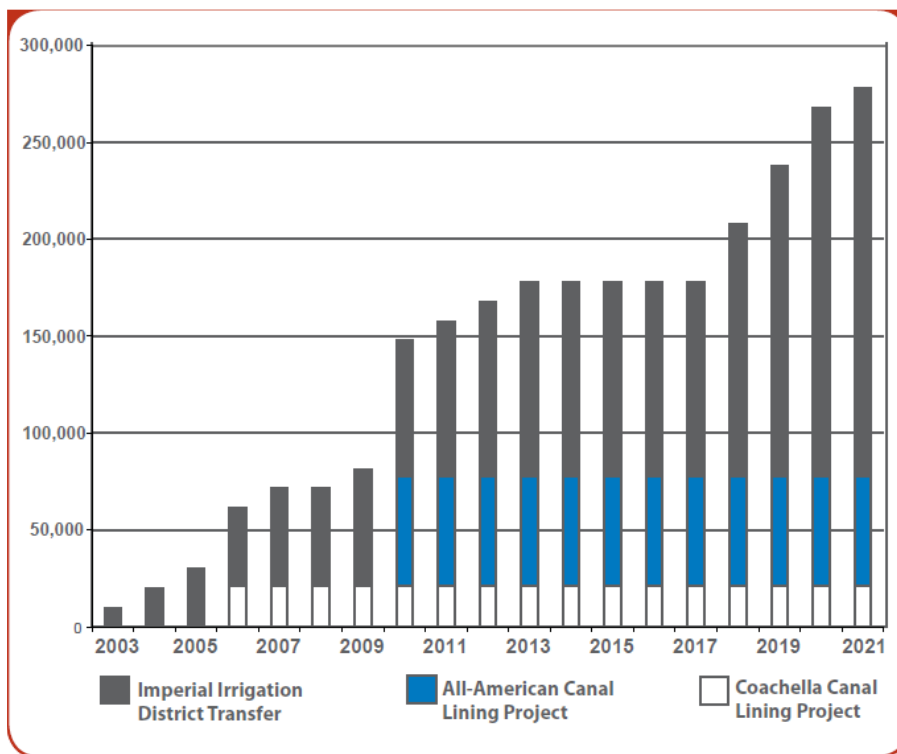
County Water Act.<sup>1</sup> The primary purpose was to contract with MWD as a member agency and supply imported MWD water to the region. The San Diego Aqueduct was completed and placed in operation in December 1947. Between the 1950s and the 1980s, SDCWA constructed four additional aqueducts that are all connected to MWD’s distribution system and import water to the County.

SDCWA supplies from 75% to 95% of the region’s water consumption, depending on hydrologic conditions and yield from local supplies.

**Q. Where does SDCWA get its water from?**

**A.** For almost sixty years, from 1947 to 2003, MWD was the sole provider of imported water to SDCWA. This changed in 2003; starting that year, SDCWA began to receive water purchased in a transfer agreement with Imperial Irrigation District (IID). In 2007, SDCWA started to receive an amount of water from projects that lined portions of the All-American Canal (AAC) and the Coachella Canal (CC) in order to conserve water that infiltrated into the ground while the canals were unlined. The ramp-up in the delivery of this water from the Colorado River is depicted in the graph below:<sup>2</sup>

**FIGURE 1: Build-up of QSA Water to be obtained by SDCWA.**



<sup>1</sup> SDCWA now has 24 member agencies.

<sup>2</sup> Source: SDCWA, 2010 Urban Water Management Plan, page 4-4. June 2011.

The water obtained by SDCWA from IID and from the canal lining is referred to as *QSA water*. It is conveyed from the Colorado River to the SDCWA service area by MWD using the CRA under a 2003 agreement known as the Exchange Agreement.

In addition, in 2016, SDCWA started to receive desalinated seawater from the Carlsbad Desalination Facility.

**Q. Why did SDCWA decide to broaden its source of water beyond water from MWD?**

**A.** SDCWA decided it needed to expand the sources from which it received water in the light of its experience with MWD during the drought in 1991.

**Q. What happened to SDCWA during the drought in 1991?**

**A.** The period from 1987 to 1992 saw one of the major droughts in California's history.

This was by no means California's first drought. There had been multi-year droughts in California in 1918-1920, 1928-1934, 1947-1950, 1976-1977 and, subsequently, there were droughts in 2007-2009 and 2012-2016. But, the droughts prior to 1976-1977 occurred when California's population was much smaller and before major reservoirs had been constructed.

What made the droughts of 1976-1977, 1987-1992, 2007-2009 and 2012-2016 so significant was the combination of very low precipitation, low runoff, and severely depleted reservoir storage.

1976-1977 was the single most severe drought in terms of precipitation and runoff, but it was just a two-year drought and the water supply impact was not as severe as in the subsequent longer droughts starting with 1987-1992.

The drought of 1987-1992 came as a major shock to Southern California's water system. In April 1990, MWD's Board had approved a first-ever drought management plan, calling on agricultural and municipal water users within its service area to voluntarily reduce their usage of water. Adopting a tougher approach, in December 1990 MWD mandated cutbacks in water use by agricultural and municipal users. In January 1991 it mandated sharper cutbacks. It increased the mandated cutbacks in February 1991 and again in March 1991, when it ended up by cutting deliveries of water for agricultural use by 90% and deliveries for municipal use by 30%. MWD came within a few weeks of an even more severe cutback – it had given notice of an upcoming cutback of 50% in the County's water supply. This was unexpectedly avoided when heavy rains fell during the March Miracle of 1991.

The 30/90% cutbacks that were implemented were still devastating to SDCWA. SDCWA was almost entirely dependent on delivered water from MWD – MWD deliveries accounted for 95%



of the water supply in San Diego County in that year, with local supplies making up only 5%. By contrast, the City of Los Angeles relied on MWD for about 60% of its water, having its own supplies for the remainder. A 30% cutback on 60% of Los Angeles' municipal water supply equated to an 18% cutback, while a 30% cutback on 95% of San Diego County's water supply equated to a 28.5 percent cutback. MWD's cutback of deliveries for agricultural users was even more draconian for SDCWA since, in 1991, it accounted for 62.67 percent of MWD's total agricultural water sales.

In the event, the SDCWA Board decided to meld MWD's water supply cutbacks and impose a uniform rate on all member agencies and their customers, regardless of whether those were agricultural or municipal uses of water.

**Q. What were the consequences of the 1991 drought experience?**

**A.** The experience during drought in 1991 had important consequences both for SDCWA and also for MWD.

For SDCWA, the consequence was a desire for less dependence on MWD and "a unified regional resolve to use visionary planning and smart investments to ensure San Diego's water supplies would be more resilient to shortage."<sup>3</sup> This led to the 1998 agreement between SDCWA and IID under which SDCWA would purchase water from IID, and also to the negotiations between SDCWA and Poseidon Resources, initiated in 2002 and finally consummated in 2012, for the construction of the Carlsbad Desalination Facility.

For MWD, too, the consequence was a desire for greater resilience in its water supply, including more water marketing transactions and the acquisition of more water storage capacity outside MWD's service area.<sup>4</sup>

**Q. Where does MWD get its water from?**

**A.** MWD has two core sources of water. The first source, as noted above, was water from the Colorado River, for which MWD was established in 1928, and which it started to deliver in 1941. The second is water from the State Water Project (SWP), which is owned by the State of California.

The SWP stretches more than 600 miles from Lake Oroville on the Feather River in Butte County down to Lake Perris in Riverside County. MWD contracted with California's Department of

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<sup>3</sup> Pete Wilson, Foreword on *To Quench a Thirst: A Brief History of Water in the San Diego Region* as quoted in SDCWA Combined Response, 9-18-2020, p. 18.

<sup>4</sup> MWD's planning for the Eastside Reservoir (Diamond Valley Lake) had begun in 1987, and so predated the 1991 drought.

Water Resources (CDWR) in 1960 when the project was planned. MWD is one of 29 water agencies that have long-term contracts with the SWP. SWP was initially planned to deliver about 4.2 million acre-feet (MAF) of water, and MWD contracted for about 2 MAF, or about 48% of the total. MWD received its first deliveries of SWP water in 1972.

An important feature of the SWP contracts is that the full amount of water was not anticipated to be needed for at least the first 20-30 years. Facilities needed to transport the full 4.2 MAF were expected to be constructed over time as demands on the system increased. However, in a famous ballot in 1982, California voters rejected what was known as the Peripheral Canal Act that would have authorized building a canal around the periphery of the Sacramento-San Joaquin River Delta to move additional SWP water down to Central and Southern California. That left the SWP delivery capacity at about 2.7 MAF on average, and only about 1.2 MAF in a dry year. Following amendments to the SWP contracts under the 1994 Monterey Agreement, all SWP supplies are allocated to contractors in proportion to their original contractual entitlements. Thus, MWD's 48% share of total SWP contract entitlements allows it to receive about 1.35 MAF of average year SWP supplies, and about 0.6 MAF in a dry year depending on the severity of the drought.

In addition to a reduced supply of SWP water, MWD has also had to deal with a reduced supply of Colorado River water. Until 1963, MWD had a firm allocation of 1.2 MAF of Colorado River water through contracts with the U.S. department of Interior, which was enough to keep the CRA full. However, as the results of the U.S. Supreme Court's 1963 ruling in *Arizona v. California*, California's supply of Colorado River water was reduced to a total of 4.4 MAF and MWD's supply was reduced to 550,000 AF.

That ruling had little effect at first because Arizona and Nevada did not make use of the full apportionment of Colorado River water awarded to them by the U.S. Supreme court. In the interim, California water users, including MWD, took advantage of the situation to divert more Colorado River water than their allocation.

By the 1990s, the situation was different. By then, Las Vegas had grown into a large metropolitan area, and the Central Arizona Project, authorized by Congress in 1968 to deliver Arizona's apportionment of Colorado River water, had been completed. Arizona and Nevada were ready to take their full allocation of Colorado River water (2.8 MAF and 0.3 MAF, respectively). However, California water agencies, notably IID and MWD continued their high rates of diversion. On average during the 1990s, MWD was able to fill the CRA and California overall took 5.1 MAF of Colorado River water.<sup>5</sup> At this point the Secretary of the Interior stepped into the situation and moved to enforce the limits on California's use of Colorado River water.

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<sup>5</sup> The years 1996-2000 were relatively wet in the Colorado River watershed and the Secretary of the Interior was able to declare that surplus water was available, which benefited California's water users and gave them some time to prepare for the coming change.

The new arrangement on the Colorado River took effect when the Quantification Settlement Agreement (QSA) was signed in October 2003. This enforced the limits on California's use of Colorado River water, including MWD's limit of 550,000 AF.<sup>6</sup>

In addition to its contractual rights to SWP water and Colorado River water, MWD has augmented its water supply through water leasing and transfer arrangements with other parties outside its service area, including other holders of Colorado River water rights, other SWP contractors, and other California water agencies. To store this water, MWD developed additional storage, both the Eastside Reservoir (which was completed in 2000) and additional storage outside its service area, including storage in groundwater banks and storage in Lake Meade through the Colorado River's Intentionally Created Surplus program.

**Q. Where does Fallbrook Public Utility District (FPUD) get its water from?**

**A.** FPUD obtains its water from (i) some small local supplies and (ii) mainly from SDCWA.

Local supplies: according to FPUD's 2020 Urban water Management Plan, in Calendar Year (CY) 2020 FPUD obtained 100 AF from local groundwater and 517 AF of recycled water from its Fallbrook Water Reclamation Plant, for a total local supply of 617 AF.

SDCWA: In addition, FPUD obtained 8,303 AF from SDCWA in CY 2020.

**Q, Will FPUD's local supplies increase in the future?**

**A.** Yes: there are three projects that will increase FPUD's local supplies.

FPUD recently completed a rehabilitation of its Fallbrook Water Reclamation Plant which will allow it to increase the use of recycled water from 517 AF to 830 AF.

FPUD has been developing a major new local supply project, the Santa Margarita Conjunctive-Use Project, in collaboration with Camp Pendleton. The project involves capturing surface water flows during storms along the Santa Margarita, a short intermittent river that runs through Camp Pendleton, and storing the surplus flow in an aquifer on Camp Pendleton. Facilities to pump raw water from the aquifer near the Pendleton/FPUD boundary have been completed, and FPUD is currently constructing an advanced water treatment plant to desalinate the brackish groundwater extracted from the aquifer. It is estimated that the project will come online in 2022. The amount of water yielded is expected to vary with hydrological conditions; it has been assessed conservatively at an average annual yield of 4,200 AF.

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<sup>6</sup> In addition, MWD had completed a water transfer agreement with IID in 1988 to obtain about 106,000 AF out of IID's right to Colorado River water. Under certain conditions, however, MWD must provide 50,000 AF to the Coachella Valley Water District. Therefore, MWD's firm supply from the Colorado River is about 600,000 AF.

FPUD is also working on a project to obtain 300 AF of surface water by relocating a water right it held to the Santa Margarita but could not utilize to a diversion point on a tributary of the river outside its service area, upstream of Lake Skinner in Riverside County. Lake Skinner is MWD's reservoir that feeds MWD's Skinner Drinking Water Treatment Plant which provides drinking water to MWD's member agencies in Riverside and San Diego Counties. FPUD will store the water it diverts from the tributary in Lake Skinner, and MWD will wheel (convey) the water to FPUD via the SDCWA pipeline that connects SDCWA and MWD in return for a treatment charge plus a wheeling charge to be levied by MWD. When this comes into operation, it is conservatively expected to provide a yield of 300 AF for FPUD.

**Q. Where does Rainbow Municipal Water District (RMWD) get its water from?**

**A.** RMWD, like FPUD, is a member agency of SDCWA. It currently has no local supply and relies on SDCWA for the entirety of its water supply, which amounted to 14,297 AF in CY 2020.

**Q. Will RMWD develop some local supply in the future?**

**A.** RMWD is investigating the feasibility of developing local San Luis Rey River basin groundwater resources as a local supply of water. This would require the construction of a desalting plant or some other appropriate form of treatment facility for the groundwater extracted. In its 2020 Urban Water Management Plan, RMWD anticipates that this groundwater project might provide a local supply of 2,000 AF by 2030.

**Q. In its 2020 Urban Water Management Plan, FPUD states that it has historically purchased its water from "our two wholesalers, SDCWA and MWD."<sup>7</sup> Is that a correct statement?**

**A.** No, it is not correct.

So far in its history, FPUD has had no supply relationship with MWD. FPUD is not a member agency of MWD, and MWD does not sell water to non-member agencies. FPUD is a member agency of SDCWA and SDCWA is its sole wholesale supplier.

If FPUD starts to receive a surface water diversion from upstream of Lake Skinner, wheeled to it by MWD, then it will have a relationship with MWD. But MWD will then be serving in the roles of a transporter of the water and a (partial) conveyor of the water, not as a supplier of that water.

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<sup>7</sup> FPUD 2020 Urban Water Management Plan, p2.

**Q. Why does FPUD claim that MWD is its wholesale supplier?**

**A.** FPUD is focusing on a detail of the water distribution system in the northern part of San Diego County.

MWD’s water distribution line that comes down from Riverside County and connects to SDCWA’s distribution system is owned by MWD for some of its length and by SDCA for the rest. Although the county line demarcates the boundary of SDCWA’s service area, the county line did not serve as the demarcation point between the portion of the pipeline controlled by MWD and the portion controlled by SDCWA. Instead, the control demarcation points for Aqueducts 1, 2, 3 and 4 are located at varying distances into San Diego County.

In consequence, FPUD and RMWD are each served by some turnouts owned by MWD and some owned by SDCWA. The details are presented in the following table:<sup>8</sup>

**TABLE 1**

<b>Metered Deliveries to Fallbrook PUD and Rainbow MWD (AF) <sup>1</sup></b>							
<b>(FY 2017 - FY 2021)</b>							
<b>Meter Description</b>	<b>Pipeline Turnout Structure Owner</b>	<b>Flow Control Facility (FCF) Owner</b>	<b>Meter Deliveries (AF)</b>				
			<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Fallbrook Public Utility District</b>							
DeLuz 1 FCF	MWD	MWD	2,180	2,264	1,541	1,426	1,579
Fallbrook 3 FCF	MWD	SDCWA	1,739	1,485	1,340	2,393	2,635
Fallbrook 4 FCF	SDCWA	SDCWA	1,132	1,499	1,197	292	0
Fallbrook 5 FCF	MWD	SDCWA	Not in Service				
Fallbrook 6 FCF	MWD	MWD	3,667	5,102	3,808	3,763	4,799
		<b>Total</b>	<b>8,718</b>	<b>10,350</b>	<b>7,886</b>	<b>7,874</b>	<b>9,013</b>
<b>Rainbow Municipal Water District</b>							
Rainbow 1 FCF	MWD	SDCWA	2,151	2,892	2,584	2,940	3,149
Rainbow 3 FCF	SDCWA	SDCWA	3,560	4,335	3,534	2,293	3,564
Rainbow 4 FCF	MWD	SDCWA	Not in Service				
Rainbow 5 FCF	SDCWA	SDCWA	Not in Service				
Rainbow 6 FCF	SDCWA	SDCWA	2,403	2,393	1,962	1,866	2,799
Rainbow 7 FCF	SDCWA	SDCWA	3,110	3,119	2,601	1,191	383
Rainbow 8 FCF	MWD	MWD	2,238	2,647	1,425	3,585	3,747
Rainbow 9 FCF	MWD	MWD	1,617	1,842	1,496	1,197	1,456
Rainbow 10 FCF	MWD	SDCWA	955	1,060	548	462	634
Rainbow 11 FCF	SDCWA	SDCWA	1,167	922	506	946	1,239
Rainbow 12 FCF	SDCWA	SDCWA	Not in Service				
		<b>Total</b>	<b>17,202</b>	<b>19,211</b>	<b>14,654</b>	<b>14,479</b>	<b>16,972</b>

<sup>1</sup> Represents water delivered to FPUD and RMWD. No adjustment for small volumes of interagency exchanges.

<sup>8</sup> Provided to me by SDCWA in an email dated 8-31-2021.

As shown, FPUD is currently being served by three pipeline turnouts owned by MWD and one owned by SDCWA. In 2021, for the first time, FPUD took delivery of no water from the turnout owned by SDCWA.

RMUD is currently being served by four pipeline turnouts owned by MWD and by four owned by SDCWA.

**Q. Are there any other SDCWA member agencies that have turnouts on a portion of the pipeline from Lake Skinner owned by MWD?**

A. No. FPUD and RMWD are the only SDCWA member agencies located sufficiently far north in San Diego County that they receive water from turnouts owned by MWD rather than SDCWA.

**Q. Does the fact that MWD owns a turnout from which FPUD or RMWD receives water make MWD a wholesale supplier to FPUD or RMWD?**

A. No. The fact that MWD owns a turnout from which a SDCWA member agency receives water does not make that member agency a wholesale customer – or any other form of customer – of MWD. The member agency is solely a customer of SDCWA.

This is so for several reasons.

SDCWA is the entity that acquired the water from MWD.

SDCWA is the entity billed by MWD for the water.

SDCWA owns the water it obtains from MWD.

SDCWA, through its Board of Directors, controls the disposition of the water obtained from MWD. The extent to which such water is made available to an SDCWA member agency is decided by SDCWA's Board of Directors.

**Q. Does the fact that SDCWA waives its Transportation Charge for water received by FPUD and RMWD from a turnout owned by MWD make that not SDCWA water?**

A. No. The fact that SDCWA has decided to waive its Transportation Charge for water received by FPUD and RMWD does not make this something other than SDCWA water, for the reasons stated above.

**Q. Is it the case that, if FPUD and RMWD exit from SDCWA, they still would end up receiving the same MWD water from the same turnouts on the same pipes? Nothing would really change?**

**A.** No – that is not the case.

FPUD and RMWD would not receive water from turnouts owned by SDCWA.

More importantly, FPUD and RMWD would NOT be receiving the same water as they receive as member agencies of SDCWA.

**Q. Why will it not be the same water?**

**A.** It will be water belonging to MWD and supplied by MWD, rather than water belonging to SDCWA and supplied to FPUD and RMWD by SDCWA.

**Q. How is water supplied by MWD different from water supplied by SDCWA?**

**A.** It is different in source, it is different in supply reliability, it is different in pricing, and it is different in Delta reliance.

**Q. How is MWD water physically delivered by MWD to FPUD and RMWD different in source from SDCWA water physically delivered by MWD to FPUD and RMWD?**

**A.** SDCWA, as an MWD member agency, purchases water from MWD. But this is supplemental water. SDCWA's base water supply – water that it owns directly – consists of QSA water from the Colorado River (canal lining water and IID Transfer water) and desalinated water from the Carlsbad Facility.

MWD base supply – water that it owns directly – consists of water obtained under its right to Colorado River and water purchased from IID, totaling approximately 600,000 AF, plus water obtained by MWD through its 48% share of the SWP supply.

**Q. Isn't it true that MWD currently delivers to SDCWA some water from the SWP?**

**A.** It is more complicated than that. MWD delivers molecules of SWP water to SDCWA in *two distinct capacities*.

MWD delivers water to SDCWA as a *supplier* of water. MWD also delivers water as a *conveyor* (wheeler) of water.

**Q. What is the difference between MWD’s role as a supplier of water versus its role as a conveyor of water?**

**A.** As a supplier of water, MWD is both selling the water and transporting the water to SDCWA. MWD owns the water supplied and it owns the conveyance facility. It charges for both the water supplied and for the conveyance.

As a conveyor of water, MWD is just transporting water which it does not itself own – the water is owned by SDCWA – and it is charging just for conveyance of SDCWA-owned water.

**Q. Is conveying water the same as wheeling water?**

**A.** A dictionary definition of wheeling water is the following:

“The conveying of water through the unused capacity in a pipeline or aqueduct by someone other than the owner.”

There is a subtle distinction between wheeling water and what MWD does for SDCWA under the 2003 Exchange Agreement between those two parties. Typically, wheeling occurs only if there is available capacity in the pipeline. In this case, however, MWD committed to making capacity available. SDCWA pays MWD a volumetric rate to cover MWD’s expenses in exchange for the conveyance of water. “Unlike the wheeling context, the Exchange Agreement does not literally call for the conveyance of water but instead for the *exchange* of water.”<sup>9</sup>

**Q. Is MWD selling or conveying the QSA water it delivers to SDCWA?**

**A.** This question was resolved in the course of rate litigation between SDCWA and MWD.

MWD had argued that the Exchange Agreement involved a purchase of water by SDCWA because, under the agreement, SDCWA gives MWD water (QSA water) and money and obtains from MWD different water – some blend of Colorado River water and SWP water.

The trial judge in San Francisco Superior court ruled against MWD and in favor of SDCWA. He held that “San Diego is not purchasing water from Met. San Diego is exchanging water with Met to make use of its own independent supplies. The parties agreed to exchange an equal amount of water; the only water quality requirement was for Met to provide San Diego with water of at least the same quality as the water Met received from San Diego. These facts underscore that the Exchange Agreement was not an agreement pursuant to which San Diego obtained water from Met, but instead an agreement pursuant to which Met in effect conveyed water on behalf of San Diego. That the Exchange Agreement differs in some respects from a wheeling contract

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<sup>9</sup> Karnow, August 28, 2015, p.27.



does not mean that the Exchange Agreement was not in substance an agreement to convey, rather than purchase water.”<sup>10</sup>

The trial judge’s ruling was relitigated before the California Court of Appeals in 2017. The Court of Appeals upheld the trial court on this point. It stated:

“The trial court found ‘the Exchange Agreement was not an agreement pursuant to which [the Water Authority] obtained water from [Metropolitan], but instead an agreement pursuant to which [Metropolitan] in effect conveyed water on behalf of [the Water Authority].’ ... We agree with this conclusion.”<sup>11</sup>

The Appeals Court further stated: “The purpose, structure and terms of the [exchange] contract make it clear that the Water Authority is not purchasing water from Metropolitan but from Imperial. As the trial court rightly discerned, the Water Authority is exchanging water with Metropolitan ‘to make use of its own independent supplies.’ ... In agreeing to pay rates equal to the Metropolitan-supplied water rates, the Water Authority did not agree it was purchasing Metropolitan water. There was no purchase of Metropolitan water...”<sup>12</sup>

**Q. When MWD delivers SWP water to SDCWA in exchange for QSA water, does it own that SWP water?**

**A.** When MWD delivers water to SDCWA in its role as a supplier of water, some of the MWD supply is SWP water, and MWD can be considered to own that water.

When MWD delivers water to SDCWA in its role as a conveyor of QSA water, the water being conveyed is water owned by SDCWA, regardless of whether it is actually Colorado River water or SWP water being conveyed in exchange for SDCWA’s QSA water.

The water that MWD delivers to SDCWA under the exchange agreement in its role as conveyor of water is owned by SDCWA, not by MWD; it counts as Colorado River water; and it comes under SDCWA’s water right to Colorado River water, not under either MWD’s water right to Colorado River water nor under MWD’s right to SWP water.

**Q. Is most of the water delivered by MWD to SDCWA QSA water (i.e., MWD acts as a conveyor of water) rather than MWD-owned water (i.e., MWD acts as a supplier)?**

**A.** That was not true at first, but it is true now – see Table 2 below:<sup>13</sup>

<sup>10</sup> Karnow, August 28, 2015, pp. 28-29.

<sup>11</sup>

<sup>12</sup>

<sup>13</sup> This uses data provided to me by SDCWA in an email dated 9-2-2021.

TABLE 2 BREAKDOWN OF WATER DELIVERED BY MWD TO SDCWA (AF)

Fiscal Year	QSA Water	MWD Water	Total	QSA Share
2012	156,604	282,948	439,552	35.6%
2013	183,500	296,472	479,971	38.2%
2014	180,256	325,729	505,985	35.6%
2015	180,123	305,039	485,162	37.1%
2016	179,347	187,057	366,404	48.9%
2017	178,278	189,919	368,197	48.4%
2018	194,326	163,639	357,965	54.3%
2019	192,241	132,831	325,072	59.1%
2020	230,430	82,843	313,273	73.6%
2021	274,702	42,322	317,024	86.7%
2012-2021	1,949,807	2,008,798	3,958,604	49.3%
2012-2013	340,104	579,420	919,523	37.0%
2017-2021	1,069,977	611,554	1,681,531	63.6%
2020-2021	505,132	125,165	630,297	80.1%

As the table shows, over the past decade, the water delivered by MWD to SDCWA breaks down almost evenly between MWD-owned water and QSA water, but the share QSA water has risen steadily, from 37% in 2012 and 2013 to almost 64% in the last five years, to 80% in the most recent two years.

## 2. HOW DID DETACHMENT COME TO BE AN ISSUE

### Q. Are FPUD and RMWD different from other SDCWA member agencies?

A. Two features stand out as points of some difference between FPUD and RMWD versus other SDCWA member agencies.

First, as noted above, FPUD and RMWD are the only member agencies located sufficiently far north in San Diego County that they receive water from turnouts owned by MWD rather than by SDCWA.

Second, FPUD and RMWD are heavily agricultural users of water. Agricultural water use in SDCWA's service area overall amounted to about 37,050 AF, or 8% of total water use in the service area in 2020.<sup>14</sup> However, in RMWD agricultural use amounted to 8,876 AF out of a total use of 14,297 AF in 2020, or 62%.<sup>15</sup> FPUD had about 2,676 AF of agricultural use, or about 30% of total water use.<sup>16</sup>

Other SDCWA member agencies with significant levels of agricultural use include Valley Center MWD, Ramona MWD, Yuima MWD and the City of Escondido, all located in the northern parts of the County.

The primary crops grown by SDCWA's agricultural water users include avocado, citrus, cut-flowers, vegetables, vine crops and nursery products. These are generally high value agricultural crops. Nevertheless, a high price for water is an issue for many agricultural producers, even of high value crops. And SDCWA's charges for water have risen significantly over the past 20 years.

As an illustration of the upward trend in the cost of SDCWA water, Figure 2 reproduces a chart prepared by RMWD and presented to the RMWD Board of Directors on December 3, 2019 plotting the SDCWA all-in melded water rate from FY 1999 through FY 2019.<sup>17</sup>

The all-in melded rate was roughly \$500/AF in FY 1999 and had been at about that level for at least two years earlier and it started to rise significantly around 2008, reaching around \$1,000/AF around 2010 and \$1,600/AF in 2019.

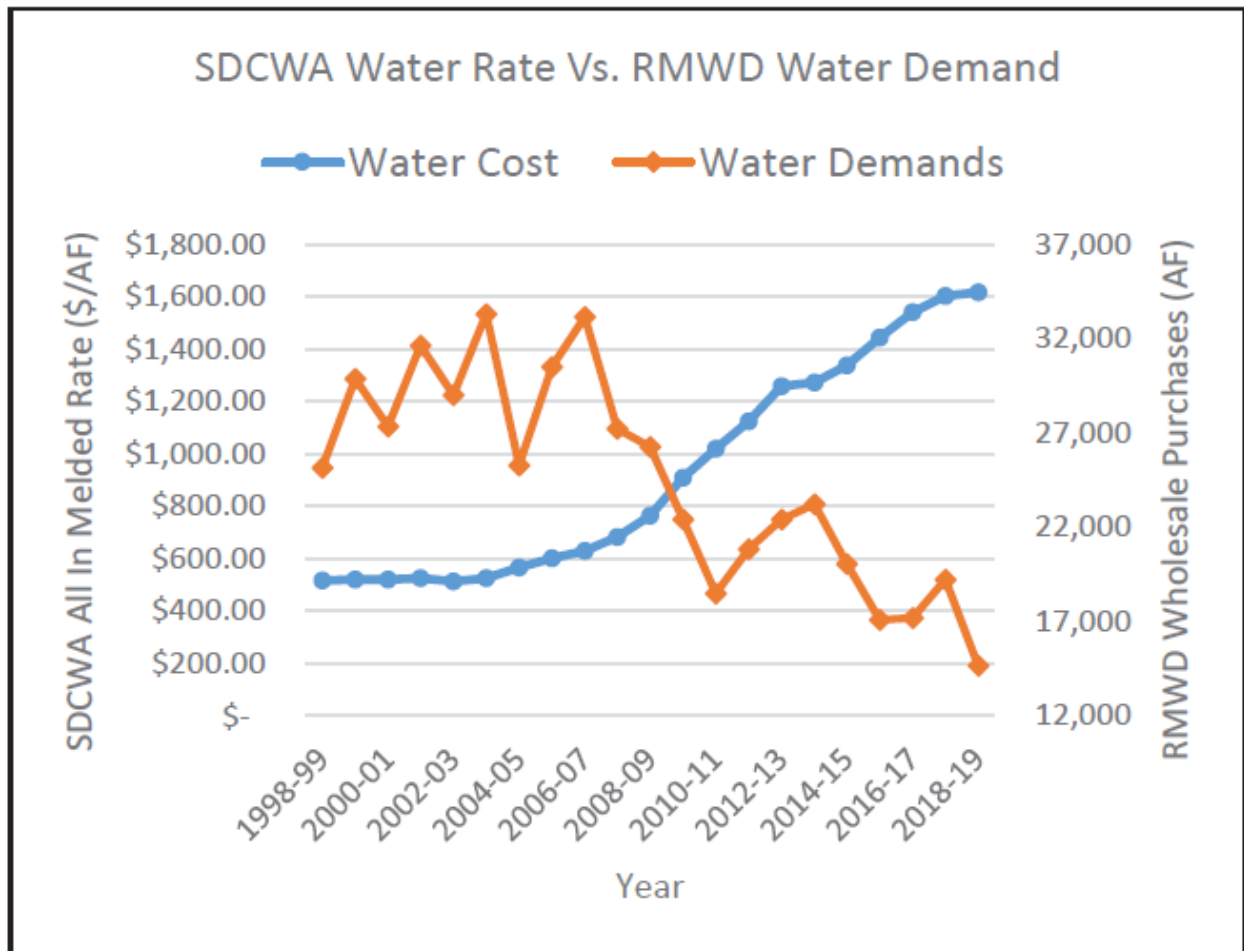
<sup>14</sup> SDCWA 2020 Urban Water Management Plan p. ES-1.

<sup>15</sup> RMWD 2020 Urban Water Management Plan, Table 4-1, p. 4-1.

<sup>16</sup> FPUD 2020 Urban Water Management Plan p. 12.

<sup>17</sup> Memorandum Subject: Consider Adoption of a Resolution of Application Authorizing the General Manager to Prepare and Submit an Application to the San Diego LAFCO to detach from SDCWA and Annex to EMWD." Page 46 of 238.

**FIGURE 2 SDCWA Water Rate vs RMWD Water Demand**



**Q. What caused SDCWA’s all-in merged water rate to rise significantly?**

**A.** For any water agency, there is always upward pressure on operating costs, including cost increases from the wholesale supplier, in this case MWD.

Table 3 below shows that MWD rate increases were a major driver of SDCWA rate increases at least during the period 2006-2011:<sup>18</sup>

<sup>18</sup> San Diego Taxpayers Educational Foundation, Water Rate Formation Backgrounder, July 2012, p.9. Retrieved on 9-22-2021 from <https://static1.squarespace.com/static/5af07fd050a54f8fc370c748/t/5b50f151562fa7ad87d637ea/1532031314404/Water+Rate+Backgrounder.pdf>

<b>Table 3: Tier 1 Untreated Supply Price (\$/acre foot)</b>					
	MWD	% Change		SDCWA	% Change
2007	\$359.08	-2.8%		\$395.96	-1.4%
2008	\$366.69	2.1%		\$407.44	2.9%
2009	\$431.96	17.8%		\$485.43	19.1%
2010	\$499.28	15.6%		\$548.79	13.1%
2011	\$527.00	5.6%		\$597.00	8.8%
<b>TOTAL % CHANGE</b>		<b>42.7%</b>			<b>48.6%</b>

What other factors could have caused SDCWA's all-in water rate to rise so sharply?

**Q. Could the sharp increase in SDCWA's all-in water rate be due to the introduction of QSA water?**

**A.** It appears that the answer is NO.

As explained above, before SDCWA's QSA water became available, it was entirely dependent on MWD as the source of the water it distributed. So, the arrival of QSA water would have triggered the increase in SDCWA's water rate if and only if that was a more expensive source of water for SDCWA than water purchased from MWD.

At least currently, this is not the case, based on data provided to me by SDCWA.<sup>19</sup>

MWD's Tier 1 rate is \$777/AF.

SDCWA adds to this the MWD's Readiness to Serve charge (RTS) and MWD's Capacity Charge (CC) which are each fixed charges for a member agency in any given year. The RTS is a fixed monetary amount, apportioned among member agencies on a rolling average use (volume) basis. The Capacity Charge is a charge per cfs based on the member agency's peak flow (cfs) of water from MWD. SDCWA combines those two charges and then nets out the MWD charge assessed separately to parcels under the Standby Availability charge.

SDCWA combines this net fixed charge with the MWD Tier 1 rate to form an all-in MWD rate.

The following is the calculation of SDCWA's all-in MWD rate as presented to the SDCWA Board on February 25, 2021:<sup>20</sup>

<sup>19</sup> Email to me from SDCWA dated 7-16-2021.

<sup>20</sup> Presentation by Kara Mathews.

	CY 2020	CY 2021	CY 2022
<b>All-in MWD Rate</b>			
MWD Untreated Tier 1 Rate	\$208	\$243	\$243
Transportation	547	534	556
Readiness-to-Serve Charge	179	161	174
Capacity Charge	103	137	156
<b>Total</b>	<b>\$1,037</b>	<b>\$1,075</b>	<b>\$1,129</b>

This is compared with SDCWA's melded QSA, whose calculation was given in the same Board presentation:

## 2021 QSA Melded Rate Calculation

Description	Rate (\$/AF)		Supply (AF)	=	Cost (\$M)
IID Transfer	\$688	x	200,000	=	\$137.6
IID Early Transfer	\$214	x	5,000	=	\$ 1.1
IID Socioeconomic Reimbursement	(\$2)	x	205,000	=	\$ (0.3)
Canal lining OM&R	\$17	x	77,700	=	\$ 1.3
Canal lining Debt Service <sup>^</sup>	\$76	x	77,700	=	\$ 6.0
<b>Total Cost (\$M)</b>					<b>\$145.5</b>
<b>Total 2021 Supply (AF)</b>					<b>282,700</b>

<sup>^</sup>Estimate

\*Not a Board-approved rate

<b>Melded QSA Supply Rate (\$/AF)</b>	<b>\$515</b>
<b>MWD Exchange Rate</b>	<b>\$534</b>
<b>Melded QSA All-In Rate*</b>	<b>\$1,049</b>

The comparison indicates that, over the period analyzed here, QSA water is slightly cheaper for SDCWA than MWD water:

## MWD vs. QSA Melded Supply (\$/AF)

	CY 2020	CY 2021	CY 2022
<b>All-in MWD Rate</b>			
MWD Untreated Tier 1 Rate	\$208	\$243	\$243
Transportation	547	534	556
Readiness-to-Serve Charge	179	161	174
Capacity Charge	103	137	156
<b>Total</b>	<b>\$1,037</b>	<b>\$1,075</b>	<b>\$1,129</b>

<b>All-in QSA Melded Supply Rate</b>			
QSA Supply	\$504	\$515	\$531
MWD Exchange	482	534	556
<b>Total</b>	<b>\$986</b>	<b>\$1,049</b>	<b>\$1,087</b>

**Difference:** (\$51) (\$26) (\$42)



As of February 2021

Assuming something like this held true over the period since 2010, the arrival of QSA would not explain the increase in SDCWA's all-in rate to member agencies over this period.

### Q. Could the sharp increase in SDCWA's all-in water rate be due to the desalinated seawater from the Carlsbad Facility?

A. At a projected 2020/2021 unit cost of \$2,752/AF,<sup>21</sup> water from the Carlsbad Facility is significantly more expensive for SDCWA than purchased MWD water with an all-in rate of

<sup>21</sup> Presentation by Jeremy Crutchfield to SDCWA Board of Directors, October 22, 2020.

\$1,075/AF. But this is unlikely to explain most of the escalation in the SDCWA's all-in water rate for two reasons.

First, the sharp increase in SDCWA's all-in rate began around 2010, but SDCWA did not start receiving Carlsbad water until 2016.

Second, between 2016 and 2020, Carlsbad water accounted for only 10% or less of the water delivered by SDCWA -- see Table 4.



TABLE 4 TOTAL WATER USE IN SDCWA SERVICE AREA, BROKEN DOWN BY SOURCE						
Water Authority Supplies						
Fiscal Year	Local Supplies	Seawater Desalination	QSA	From MWD	Total Water Used	Total Supplied by SDCWA
1999	150,173	-	-	454,436	604,609	454,436
2012	111,914	-	156,604	282,948	551,466	439,552
2013	104,081	-	183,500	296,472	584,052	479,971
2014	97,185	-	180,256	325,729	603,170	505,985
2015	53,668	-	180,123	305,039	538,830	485,162
2016	62,875	25,599	179,347	187,057	454,877	392,003
2017	74,910	34,421	178,278	189,919	477,528	402,618
2018	125,699	34,907	194,326	163,639	518,570	392,871
2019	98,526	40,036	192,241	132,831	463,634	365,108
2020	116,706	33,157	230,430	82,843	463,137	346,431
2021	138,171	47,530	274,702	42,322	502,725	364,554
BREAKDOWN OF ALL SOURCES BY SHARE						
Fiscal Year	Local Supplies	Seawater Desalination	QSA	From MWD		
1999	24.8%	-	-	75.2%		
2012	20.3%	-	28.4%	51.3%		
2013	17.8%	-	31.4%	50.8%		
2014	16.1%	-	29.9%	54.0%		
2015	10.0%	-	33.4%	56.6%		
2016	13.8%	5.6%	39.4%	41.1%		
2017	15.7%	7.2%	37.3%	39.8%		
2018	24.2%	6.7%	37.5%	31.6%		
2019	21.3%	8.6%	41.5%	28.6%		
2020	25.2%	7.2%	49.8%	17.9%		
2021	27.5%	9.5%	54.6%	8.4%		
BREAKDOWN OF SDCWA SUPPLY BY SOURCE						
Fiscal Year		Seawater Desalination	QSA	From MWD		
1999		-	-	100.0%		
2012		-	35.6%	64.4%		
2013		-	38.2%	61.8%		
2014		-	35.6%	64.4%		
2015		-	37.1%	62.9%		
2016		6.5%	45.8%	47.7%		
2017		8.5%	44.3%	47.2%		
2018		8.9%	49.5%	41.7%		
2019		11.0%	52.7%	36.4%		
2020		9.6%	66.5%	23.9%		
2021		13.0%	75.4%	11.6%		

If 10% of SDCWA’s water costs about \$1,700/AF more than the other two sources of water used by SDCWA (MWD water and QSA water), that would raise SDCWA’s cost by only \$170/AF.

Therefore, it does not appear that bringing online water from the Carlsbad Desalination Facility provides a major explanation for the sharp increase in SDCWA’s all-in water rate after 2010.

**Q. Did anything else change that could explain the sharp increase in SDCWA’s all-in water rate after 2010?**

**A.** Figure 2 depicts something else that changed over this period – a dramatic reduction in the amount of water purchased by RMWD from SDCWA – this fell by half, from being somewhere in the range of 27,000 – 32,000 AF through about 2006 to around 15,000 AF by 2019.

The reduction in water use demand may have been especially pronounced in RMWD because of the large component of agricultural water use, which is likely to be more price-sensitive than urban use generally. However, striking reduction in water use was occurring at this time throughout SDCWA’s service area. This phenomenon was not limited to RMWD.

Figures 3 and 4 provide evidence of a general decline in water use throughout SDCWA’s service area.

**FIGURE 3<sup>22</sup>**

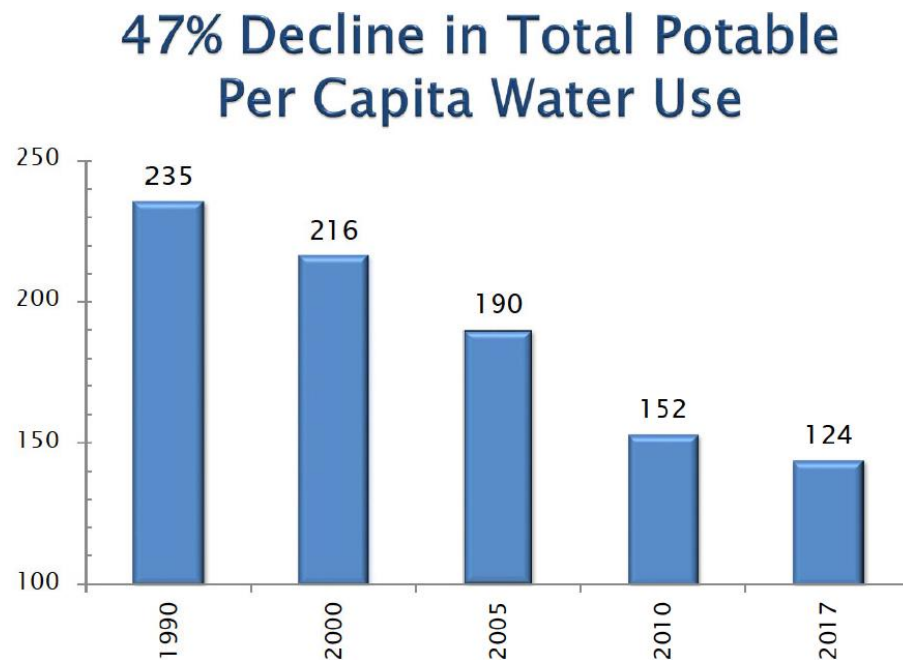


Figure 3 identifies a 35% reduction in per capita water use in the SDCWA service area between 2005 and 2017.

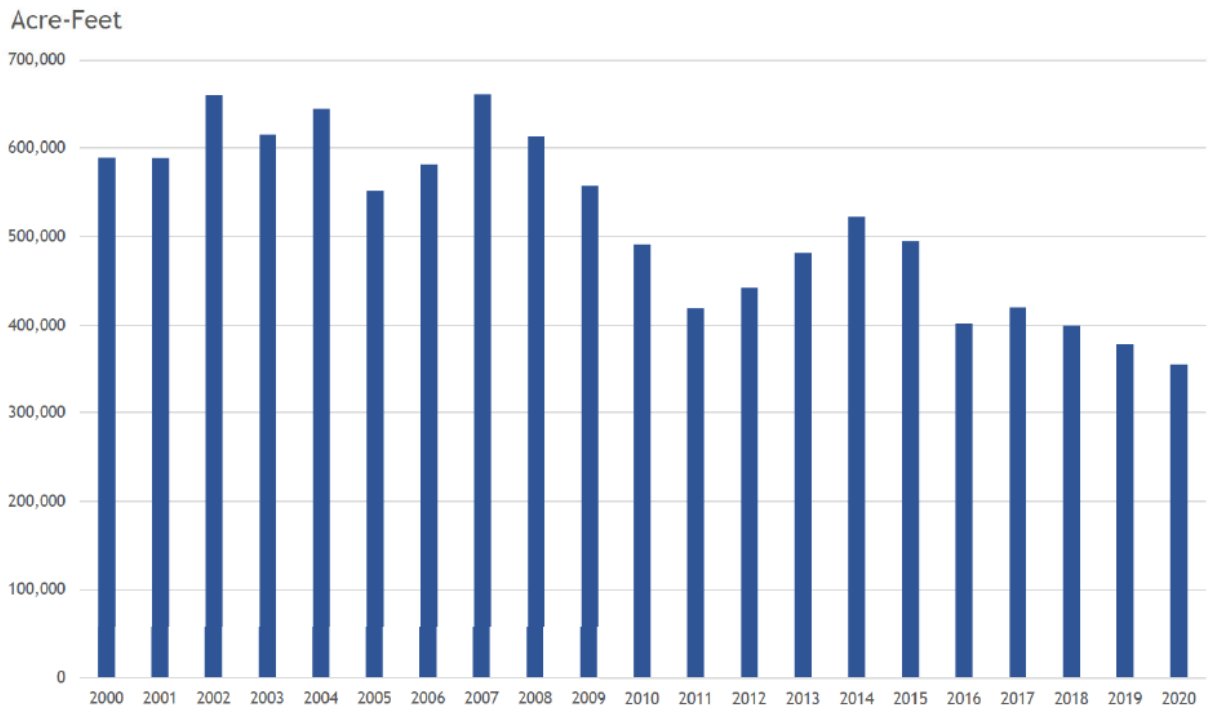
Figure 4 tracks water sales to by SDCWA to member agencies, where:

<sup>22</sup> Presentation by Tim Bombadier to SDCWA Board, February 22, 2018.

**SDCWA WATER SALES = TOTAL WATER USE IN SERVICE AREA – MEMBER  
AGENCY LOCAL SUPPLIES**

FIGURE 4<sup>23</sup>

## Historical Water Sales



Total sales declined from over 600,000 AF in 2008 to about 365,000 AF in 2020, a reduction of almost 40%.

**Q. Could the reduction in SDCWA sales to member agencies between 2008 and 2020 have had an impact on SDCWA's all-in water rate over that period?**

**A. Yes.**

This comes about from the fact that most of SDCWA operating costs are what economists call *fixed costs* – that is, costs that effectively do not change from one year to the next with variation in the volume of water delivered by SDCWA that year to its member agencies.

<sup>23</sup> Presentation by Sandra L. Kerl to SDCWA Board of Directors, January 28, 2021.

Table 5 presents a breakdown of SDCWA expenditures during FY 2020.

<b>TABLE 5 BREAKDOWN OF SDCWA EXPENDITURES FY20 ADOPTED BUDGET</b>			
			<b>Cost</b>
<b>ITEM</b>	<b>\$ Thousands</b>	<b>Percent</b>	<b>Type</b>
Water Supply			
Colorado River Water			
MWD Wheeling Cost	\$119,184	15.1%	Fixed
All other Colorado River water costs	\$124,414	15.8%	Fixed
Water Purchased from MWD	\$82,967	10.5%	Variable
Carlsbad Desal Plant	\$97,934	12.4%	Fixed
All Other Water Supply Expenses	\$61,639	7.8%	Fixed
Subtotal	\$486,138	61.7%	
Operating Departments*	\$54,252	6.9%	Fixed
Debt Service*	\$148,716	18.9%	Fixed
CIP Expenditures*	\$81,111	10.3%	Fixed
Equipment Replacements*	\$3,012	0.4%	Fixed
Grant Expenditures*	\$13,162	1.7%	Fixed
Other Expenditures*	\$1,944	0.2%	Fixed
<b>TOTAL</b>	<b>\$788,335</b>	<b>100.0%</b>	
* FY20 obtained by halving FY20 & 21 amount in Table 1.			
SOURCE: SDCWA Adopted Budget FY 2021 & 2022, Table 1, p.26.			

Non-water supply expenditures are fixed costs.

Today, most of the SDCWA's water supply costs are also fixed costs. Of SDCWA's three sources of water, QSA water and Carlsbad Desalination water are also fixed costs for SDCWA because it contracted to pay for specified quantities of water from those sources. Only MWD water is a variable cost for SDCWA because it has discretion to purchase more or less MWD water.

Around the time of 2008, however, MWD water was a larger component of SDCWA's supply than it is today, and that made the variable cost component of SDCWA's expenditures a larger component than it is today.

For simplicity, say that 45% of SDCWA's expenditure back then was fixed cost and 55% was variable. With that cost structure, if SDCWA experienced a 40% drop the demand for its water over a relatively brief period of time, as happened to SDCWA after 2008, the financial impact would be as follows:

The variable cost, accounting for 55% of total operating cost, is reduced by 40%.

The other 45% of operating cost, being fixed cost, does not change.

Overall operating cost drops by 22% ( $= 0.4 * 55\%$ ).

Total units of water sold drops by 40%.

Operating cost per unit of water delivered *rises* by 30% ( $= 0.78/0.6$ )

This calculation suggests that the drop in member agencies' demand for water from SDCWA would itself have contributed towards the sharp increase in SDCWA's all-in rate after 2008.

### 3. THE FINANCIAL IMPACT OF DETACHMENT

This section analyzes the financial impact on the other member agencies of SDCWA if FPUD or/and RMWD detach from SDCWA.

The detachment of a member agency reduces the revenues received by SDCWA. It also may reduce the expenses incurred by SDCWA in operating in water supply and distribution system. The key question will be the net impact: will revenues be reduced by more or less than operations expenses?

#### Q. How large are FPUD and RMWD in relation to the other SDCWA member agencies?

A. FPUD and RMWD accounted for 1.7%<sup>24</sup> of the population served by SDCWA in FY 2020 and 8.1%<sup>25</sup> of the acreage in SDCWA's service area.<sup>26</sup> In FY2020, FPUD and RMWD together received 6.4%<sup>27</sup> of the water delivered by SDCWA in FY 2020 to member agencies, which represents a higher rate of usage per capita, but not per acre, than the average across all member agencies.

In FY 2019, FPUD and RMWD together accounted for 5.9% of the water supplied by SDCWA to member agencies, while at the same time accounting for 2.9% of the meter equivalents. Specifically, In FY 2019 FPUD and RMWD received 22,253 AF from SDCWA for use by their 26,542 meter equivalents (ME), amounting to a usage of 0.8384 AF per ME. In FY 2019, the other member agencies combined received 356,277 AF for use by 898,551 ME, amounting to an average usage of 0.3965 AF per ME.

*The average usage of SDCWA water per meter equivalent within the FPUD and RMWD service areas in FY 2019 was more than twice that of the other member agencies (0.8384 AF/ME versus 0.3965 AF/ME).*

Going forward, FPUD's share of water delivered to SDCWA member agencies will fall as the Santa Margarita Conjunctive-Use Project comes on line.

Moreover, about 42% of the water received by FPUD and RMWD has come under the SDCWA's Permanent Special Agricultural Water Rate (PSAWR) program for agricultural water users in the SDCWA service area. Under this program, eligible agricultural users served by member agencies pay a reduced rate water, which sets the supply charge as equivalent to MWD's Tier 1 rate and adds in SDCWA's charges for treatment, transportation and customer service while omitting SDCWA's storage and supply reliability charges. For CY 2021, this lowers SDCWA's melded all-in

<sup>24</sup> = 54,944/323,060.6.

<sup>25</sup> = 75,658/934,777.5.

<sup>26</sup> These and the following statistics are taken from the SDCWA Annual Report FY 2020, consulted online at [sdcwa.org/annualreport/2020/diversification-and-operation/water-sources-and-uses.php](http://sdcwa.org/annualreport/2020/diversification-and-operation/water-sources-and-uses.php) on 6/11/2021.

<sup>27</sup> =22,278.9/346,430.9.

rate for treated water from \$1,769/AF for municipal and industrial (M&I) users to \$1,295/AF for agricultural users under the PSAWR program. In exchange for the lower water rate, agricultural users receive a less reliably water supply. They are subject to higher cutbacks compared to M&I users in the event of a supply limit imposed by MWD (“an allocation”) or other water shortages faced by SDCWA. If MWD imposes a reduction in its supply of MWD water (as opposed to QSA water), deliveries to PSAWR users will be cut in the proportion used by MWD even if SDCWA cuts deliveries to M&I users by less due to the availability of QSA water and Carlsbad water.

**Q. What are the revenues that SDCWA receives from member agencies?**

A. SDCWA obtains revenue from certain water-related charges and from certain other charges. Table 6 details these charges.

<b>TABLE 6 SDCWA WATER RATES AND CHARGES CY 2021</b>		
	<b>ITEM</b>	
<b>CHARGED TO MEMBER AGENCIES</b>		
a	M&I Water supply rate (\$/AF)	\$940
b	Agricultural water supply rate (\$/AF)	\$777
c	Transportation rate (\$/AF)	\$150
d	Treatment rate (\$/AF)	\$295
e	Customer Service Charge - Total, all member agencies (\$)	\$25.6M
f	Storage Charge - Total, all member agencies (\$)	\$60.0M
g	Supply Reliability Charge - Total, all member agencies (\$)	\$38.84M
h	Infrastructure Access Charge (\$/meter equivalent)	\$4.24
<b>CHARGED TO PROPERTIES IN SERVICE AREA</b>		
i	Water Availability Standby Charge (per property in service area)	\$10
j	Ad Valorem Property Tax	VARIES
k	System Capacity Charge per new meter less than 1" (\$)	\$5,301
l	Treatment Capacity Charge per new meter less than 1" (\$)	\$147

Some of the items are charged to member agencies (items a-h), and others are charged to properties in the SDCWA service area (i-l).

Depending on the item, charges to member agencies vary by acre-feet of water supplied each month (items a-d), by the individual agency's share of the acre-feet supplied to all member agencies over a past three-year period (e,f) or five-year period (g), or by the number of individual meter equivalents served by the agency in the previous year (h).

**Q. If FPUD and/or RMWD leave SDCWA's service area, which of SDCWA's revenue sources would be reduced?**

**A.** If FPUD and/or RMWD leave SDCWA's service area, SDCWA's revenue from each item in the table will be reduced.

For each acre-foot less of water supplied by SDCWA, it foregoes \$1,090 (= 940 + 150) if the water is untreated and delivered by a member agency for M&I use, and \$1,385 (= 1,090 + 295) if it is treated.

If the water is delivered for agricultural use, SDCWA charges a member agency only \$927 (= 777 + 150) if the water is untreated, and \$1,222 (= 927 + 295) if it is treated. In doing this, SDCWA is reducing the commodity supply rate for water for agricultural use from the standard level of \$940 to a rate of \$777, which corresponds to MWD's Tier 1 rate for untreated water. In exchange for receiving the lower supply rate, agricultural customers of a member agency receive a less reliable water supply with a higher likelihood of being cut back in the event of shortage than M&I customers.<sup>28</sup>

The volumetric rates (a-d) represent the most highly variable sources of revenue for SDCWA. The least variable sources of revenue are the Water Availability Standby Charge and the ad valorem property tax (items i and j).<sup>29</sup> Intermediate in variability are items (e - h). These are fixed annual charges to member agencies designed to cover specific types of fixed costs incurred in connection with SDCWA's supply system.

**Q. If FPUD and RMWD were not member agencies of SDCWA, how much lower would SDCWA's annual revenue be?**

**A.** SDCWA submitted its analysis of this question in its memorandum to LAFCO on 9-18-2020.<sup>30</sup> That analysis was conducted using SDCWA's internal financial model, run in two modes: (1)

<sup>28</sup> This reflects the lower supply reliability of water obtained by SDCWA from MWD as compared to SDCWA's own sources (Colorado River and desalination). In the event of a shortage, SDCWA deliveries to member agencies for agricultural customers are cut back by the same percentage that MWD cuts its deliveries.

<sup>29</sup> The capacity charges (items k and l) are a one-time fee collected whenever a water delivery system is expanded to include new development.

<sup>30</sup> SDCWA Combined Response to Reorganization Applications by Fallbrook/Rainbow, Sep 18, 2020, pp. 54-62.



with FPUD and RMWD members (the present situation), and (2) with FPUD and RMWD not members (i.e. detachment).

I conducted an independent analysis using readily available published data, including SDCWA's Comprehensive Annual Financial Report and Carollo Inc's CY 2022 Cost of Service Study for SDCWA.<sup>31</sup>

SDCWA calculated that its revenue would be \$40.0 million lower if FPUD and RMWD both detached, broken down as a \$13.8 million revenue reduction if FPUD detached and a \$26.3 million revenue reduction if RMWD detached. My own analysis, which was necessarily less precise, supported that conclusion: my estimate was a combined revenue reduction of \$39.1 million.

**Q. If FPUD and RMWD were not member agencies of SDCWA, how much lower would SDCWA's expenditures be?**

**A.** SDCWA and I each analyzed this question, but my analysis lacked one element of the SDCWA analysis.

We both examined SDCWA's water-related operating expenses. Here, SDCWA estimated an expenditure reduction of \$27.2 million. My estimate was essentially identical – an expenditure reduction of \$27.5 million.

The element I could not assess was SDCWA's management of its reserve accounts. Like any other utility, SDCWA holds certain reserve accounts which are required to cover covenants on its outstanding debt or are designed to provide some cover against future volatility in sales. Depending on the circumstances, in any given year, SDCWA may find it needs to add to its reserves (requiring it to raise its rates that year so as to bring in additional revenue to meet the requirement for increased reserves) or it may find that it can draw down its reserves to some degree (permitting it to have lower rates that year because it can use funds drawn from the reserves to cover some of its cost of operations).

SDCWA included the reserve component into its analysis, but I was not able to account for this. SDCWA concluded that, with detachment of FPUD and RMWD, it would have been able to draw on \$3.6 million less of its reserve.

SDCWA calculated the current-year net effect of detachment at \$16.4 million in reduced net revenue, which would have to be made up in higher payments by the other member agencies. This was broken down into a net impact of \$5.7 million for FPUD detachment and \$10.7 million for RMWD detachment. Given that my own analysis dovetails with SDCWA's analysis with respect to the impacts of detachment on SDCWA water-related revenue and on water-related

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<sup>31</sup> I presented my preliminary analysis to the Ad Hoc Advisory Committee at its meeting on June 14, 2021, and I presented a revised analysis to the Ad Hoc Advisory Committee at its meeting on July 12, 2021.

operating expenses, the estimate of \$16.4 million for the current year net impact of detachment seems reasonable.

**Q. Is a one-year analysis of the net financial impact conclusive?**

**A. No.**

In the water business, conditions can vary from one year to another, as Table 4 above suggests. Weather conditions are different. Water use varies. Member agencies' demands on SDCWA vary. Streamflow that supports supplies available to SDCWA from both the Colorado River and the SWP vary. Also, what is needed to support SDCWA's reserves accounts varies.

The consequence is that one obtains a more realistic assessment of the financial impact of detachment by performing a multi-year assessment rather than an analysis of a single year

**Q. What does a multi-year analysis of the net financial impact of detachment show?**

**A.** SDCWA also presented a multi-year analysis of the financial impact of detachment as projected over the decade from CY 2022 through CY 2031. For this purpose, SDCWA used its internal projection of member agencies' annual demands for SDCWA water over this future decade, combined with the internal financial model for planning reserve additions and draw downs.

In that analysis, the annual financial impact of detachment by both FPUD and RMWD varied from year to year, depending on circumstances. The largest annual impact was a reduction of \$45.7 million in net revenue, and the smallest a reduction of \$11.2 million. The median was an annual reduction of \$33.9 million.

**Q. How large is this net financial impact in relation to SDCWA's total water-related revenue and water-related operating expenses?**

**A.** In FY 2020, SDCWA's operating revenues and expenses totaled around \$569 million. If one takes the range of \$16.4 million to \$33,9 million as the central estimate for the reduction in annual net revenue, that corresponds to a reduction ranging from 2.9% to 6.0% of annual operating revenue.

**Q. Is this just a one-year impact to net revenue?**

**A. No.**

It is a recurring annual loss of net revenue once the detachment occurs, lasting for as long as SDCWA does not have another buyer for the water that it would have sold to FPUD and RMWD.

**Q. Why does it impose a net cost on SDCWA when it sells less water to a member agency?**

**A.** There is a fiscal imbalance between SDCWA's cost structure and its revenue structure.

In FY 2020, SDCWA supplied 354,007 AF to member agencies and earned \$585.1 million in water related revenue. That corresponds to an all-in rate of \$1,653/AF (= 420,165 million/354,007 AF).

If SDCWA supplied one less acre-foot to a member agency in FY 2020, it surrendered about \$1,188 of water-related operating revenue, since the per-acre-foot component of SDCWA's water charges account for about 71.9% of its total water related revenue, the rest being the fixed charges – the Infrastructure Access Charge, the Customer Service Charge, the Storage Charge and the Supply Reliability Charge.<sup>32</sup>

However, if SDCWA supplied one less acre-foot to a member agency in FY 2020, it reduced its operating expenses by about \$253, since I estimate that variable water costs amount to about 15.3% of its operating expenses.<sup>33</sup>

The fiscal imbalance for SDCWA is that, if it supplies one less acre-foot to member agencies, it surrenders about \$1,188 in revenue but it lowers its expenses by only about \$253, generating a potential deficit of \$935.

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<sup>32</sup> 1188 = 0.719\*1653.

<sup>33</sup> 253 = 0.153\*1653.

#### **4. A DEPARTURE FEE**

One of the items I was asked to address is a potential departure fee. I was tasked with quantifying what - if any - departure fee (also referred to as exit charge) should be made a condition if the San Diego County LAFCO Commission approves either or both of the de-annexation proposals submitted by FPUD and RMWD.

I am aware that there is currently disagreement among some of the parties with respect to whether LAFCO has the legal authority to prescribe conditions of approval that include financial terms such as a departure fee. I am not being asked to opine on this legal question. I am being asked, instead, to examine whether there is a sound economic justification for requiring a departure fee and, if so, what is an appropriate amount for that fee.

##### **Q. Is there a sound economic justification for requiring a departure fee?**

**A.** Yes.

Since 1990, SDCWA has made major infrastructure investments and has taken on substantial contractual commitments for a more reliable water supply. The infrastructure investments and supply commitments have benefited all member agencies. These commitments are long-term in nature, and they impose a fixed and ongoing financial burden on SDCWA and its member agencies.

##### **Q. What is the purpose of a departure fee?**

**A.** The purpose of a departure fee is to provide an appropriate level of protection for SDCWA and the remaining member agencies in the short run while they adjust to the changed situation of a departure. The purpose is to cover SDCWA financial obligations that are fixed, ongoing and unavoidable after the departure for the duration of a period of adjustment.

The aim is to promote flexibility and efficiency in the management of scarce water resources and in the operation of a supply network that is essential to the wellbeing of the regional economy. It is not appropriate that the departure fee afford such protection in perpetuity. It is important that SDCWA and all its member agencies receive an economic signal about the need for efficient network organization and rationalization. Compensation in perpetuity would work against the objective of promoting the efficient use of the region's water infrastructure assets.

##### **Q. What portion of SDCWA's outstanding water-supply related obligations should serve as the basis for a departure fee?**

**A.** That is a judgment call.

On the one hand, like every other SDCWA member agency, FPUD and RMWD have benefited from all of the financial obligations incurred by SDCWA because member agencies are bound together by an integrated infrastructure network. Each member agency benefits to some degree from all investments in the infrastructure either directly or indirectly.

A member agency benefits directly from an investment in a particular source of supply or in a particular component of the infrastructure if it is directly served by that particular infrastructure component or it directly receives water from that particular supply source. But, even if a member agency is not served directly by that particular component and does not directly receive water from that particular supply source, the member agency still benefits indirectly through being part of an integrated water distribution network. If *other* member agencies receive water from particular source or through that particular component, it makes it possible for *this* member agency to receive water from another source within SDCWA's portfolio, thereby benefiting indirectly.

On the other hand, it is reasonable to recognize that FPUD and RMWD are in a somewhat special situation by virtue of both their particular location at the furthest end of SDCWA's distribution system and their rural and agricultural local economies.

In the light of these factors, I recommend that a departure fee target the portion of SDCWA's outstanding obligations that relates specifically to QSA water.

#### **Q. What is the amount of SDCWA's outstanding obligations that relates to QSA water?**

**A.** In its submission on 9-18-2020, SDCWA presented a table breaking down its contractual supply obligations as follows:<sup>34</sup>

<b>Desc.</b>	<b>CY 2021 Cost</b>	<b>Remaining Term (as of 1/1/2021) (yrs)</b>	<b>Escalation Factor</b>	<b>Net Present Value (3% Discount)</b>
IID	\$135,000,000	27	2.5%	\$3,401,733,753
MWD Exchange - IID	\$106,800,000	27	4.6%	\$3,642,717,018
Canal	\$1,233,099	93	3.0%	\$114,678,207
MWD Exchange - Canal	\$41,491,800	93	4.6%	\$9,029,224,611
Desal	\$111,846,000	26	3.0%	\$2,907,996,000
<b>Total</b>	<b>\$396,370,899</b>			<b>\$19,096,349,589</b>

The first four rows constitute the QSA water component of these obligations. The CY 2021 cost of the QSA component amounted to \$284.525 million.

#### **Q. What is a fair share of the QSA contractual obligation to assign to FPUD and RMWD?**

<sup>34</sup> Table 4.3.

A. I suggest that this be based on FPUD and RMWD shares of either total deliveries to SDCWA member agencies or of deliveries for municipal and industrial use, as opposed to deliveries made under SDCWA's special agricultural water rate program.

Table 7 provides an example of the calculation of this share using a demand projection for FY 2021 used by SDCWA in preparing its analysis of the rate impact of detachment for its 9-18-2020 submission.<sup>35</sup>

<b>TABLE 7 FPUD/RMWD SHARE IN TOTAL USE AND M&amp;I USE BY SDCWA MEMBER AGENCIES</b>				
	FY 2021 PROJECTED			
	Water delivery (AF)	Share		
<b>ALL USES</b>				
Fallbrook	4,010	1.2%		
Rainbow	13,518	3.9%		
Subtotal		5.0%		
All member agencies	348,272			
<b>PSAWR USE</b>				
Fallbrook	1,803	7.8%		
Rainbow	5,536	23.9%		
Subtotal		31.7%		
All member agencies	23,145			
<b>M&amp;I USE</b>				
Fallbrook	2,207	0.7%		
Rainbow	7,982	2.5%		
Subtotal		3.1%		
All member agencies	325,127			

In this projection, which reflects FPUD's imminent implementation of the Santa Margarita Conjunctive-Use Project, FPUD and RMWD together account for 5% of total water deliveries to all member agencies<sup>36</sup> and 3.1% of deliveries for municipal and industrial use.

**Q. Using the CY 2021 cost of SDCWA's contractual supply obligation for QSA water, what annual payment would be assigned to FPUD and RMWD?**

<sup>35</sup> Email from Pierce Rossum, 7-2-2021.

<sup>36</sup> This is down from an average of 6.4% over the period FY 2017-2020.

A. The amount of the annual departure fee depends on whether one uses the share of all member agencies deliveries received by FPUD and RMWD, or the share of deliveries to member agencies for municipal and industrial use. The resulting calculations are exhibited in Table 8.

<b>TABLE 8 CALCULATION OF A DEPARTURE FEE</b>		
	<b>Share</b>	<b>Annual payment</b>
<b>USING THE SHARE OF M&amp;I DELIVERIES</b>		
FPUD	0.7%	\$1,931,388
RMWD	2.5%	\$6,985,202
<b>Total</b>	<b>3.1%</b>	<b>\$8,916,590</b>
<b>USING THE SHARE OF TOTAL DELIVERIES</b>		
FPUD	1.2%	\$3,276,017
RMWD	3.9%	\$11,043,689
<b>Total</b>	<b>5.0%</b>	<b>\$14,319,705</b>

**Q. Over how long a period should an annual departure fee be required of FPUD and RMWD?**

A. The purpose of a departure fee is to provide an appropriate level of protection for SDCWA and the remaining member agencies in the short run while they adjust to the changed situation of a departure.

In the water industry, a period of 10 years would typically count as the short run for planning purposes. I therefore suggest that the departure fee be payable annually for a period of 10 years. I suggest that it be the same annual amount for each year during that period.

## **5. WATER SUPPLY RELIABILITY: SDCWA vs EASTERN MWD (In preparation)**



## **6. OTHER IMPLICATIONS (In preparation)**

## **BACKUP TABLE**

<b>TABLE SDCWA REVENUES FY2020 ACTUAL</b>			
<b>ITEM</b>	<b>\$ Thousands</b>	<b>Percent</b>	<b>Revenue Type</b>
<b>Water Related Revenue</b>			
Water Sales	\$420,165	63.3%	Variable
Infrastructure Access Charge	\$36,942	5.6%	Fixed
Customer Service Charge	\$25,600	3.9%	Fixed
Storage Charge	\$65,000	9.8%	Fixed
Supply Reliability Charge	\$37,430	5.6%	Fixed
<b>SUBTOTAL</b>	<b>\$585,137</b>	<b>88.1%</b>	
<b>Other Revenue</b>			
Property Tax	\$15,526	2.3%	Fixed
Standby Availability Charge	\$11,164	1.7%	Fixed
Capacity Charges	\$17,983	2.7%	Fixed
CIP	\$2,726	0.4%	Fixed
Hydroelectric Revenue	\$3,192	0.5%	Fixed
Investment Income	\$6,789	1.0%	Fixed
Other Revenue	\$21,542	3.2%	Fixed
<b>SUBTOTAL</b>	<b>\$78,921</b>	<b>11.9%</b>	
<b>TOTAL REVENUE &amp; OTHER INCOME</b>	<b>\$664,058</b>	<b>100.0%</b>	