Report to Ad Hoc Advisory Committee Meeting: August 16, 2021

Michael Hanemann

Topics for today

- The context – whose water?
- The London Moeder Benefit Cost Analysis
- Water supply reliability for FPUD and RMWD as customers of EMWD
- Delta reliance impact
- Exit fee
- Next steps

The material being presented today is still a work in progress and should be treated as a draft.

- All comments and suggestions are welcomed.

The form of my report

- Rather than three separate documents covering each of the three issues assigned to me – impact on water supply reliability, rate impact, and exit fee – my report will take the form of a single integrated document.
- Part of the report text will be in a Question-Answer format that will be used in some of today's presentation.
- I will have a draft of the document to present in September, with all revisions to be completed for October.

Setting the context

Q. Isn't it the case that, if FPUD and RMWD exit from SDCWA, they still would end up receiving the same MWD water from turnouts on the same MWD pipes? Nothing would really change?

A. No – that is not the case.

To some degree, FPUD and RMWD would be receiving water from turnouts on the same pipes, but not completely.

More importantly, FPUD and RMWD would NOT be receiving the same water.

Q. Why will it not be completely the same pipes?

A. It will not be completely the same pipes because, while FPUD and RMWD receive some of their SDCWA-billed water from turnouts along pipes owned by MWD, they also receive other water from turnouts along pipes owned by SDCWA.

Over the period 2015-2019, 35% of the water received by FPUD came through turnouts on pipes owned by SDCWA; for RMWD, 76% of the water received came through turnouts on pipes owned by SDCWA.

If FPUD and RMWD depart from SDCWA, 100% of their water would have to come from turnouts on the MWD pipes.

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 Canal Lining water and IID Transfer water, from the Colorado River, and desalinated water from the Carlsbad Facility.

MWD base supply – water that it owns directly -- is water obtained under its right to Colorado River, water from the Colorado River purchased from IID, and water from the State Water Project obtained by MWD as a member agency of the SWP.

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. To repeat: isn't it true that MWD currently delivers to SDCWA some water from the SWP?

A. When MWD delivers water to SDCWA in its role as a supplier of water, some of the MWD supply is SWP water.

When MWD delivers water to SDCWA in its role as a conveyor of water, the water being conveyed is legally not SWP water: it is Colorado River water owned by SDCWA.

But, when MWD is delivering water to SDCWA in its role as a conveyor of water, it sometimes substitutes SWP water as a *replacement* for SDCWA's Colorado River water. This is known as in-lieu water.

The substitution is being made for operational convenience. It does not change the fact that whatever water MWD delivers as a conveyor to MWD is owned by SDCWA, not by MWD; it counts as Colorado River water, not SWP water; and it comes under SDCWA's water right to Colorado River water, not MWD's water right to Colorado River water nor MWD's right to SWP water.

Q. How much of the water delivered by MWD to SDCWA comes under MWD's water right and is owned by MWD (i.e., MWD acts as a supplier of water), and how much comes under SDCWA's water right and is owned by SDCWA (i.e., MWD acts as a conveyor)?

A. This has varied over time.

Before 2003, 100% of the water delivered by MWD to SDCWA came under MWD's water right.

Starting in 2003, some of the water delivered by MWD to SDCWA came under SDCWA's water right. That portion has grown over time.

Q. Why has the portion of water delivered to SDCWA as a conveyor rather than as a supplier grown since 2003?

A. Because the amount of Colorado River water acquired by SDCWA from the IID transfer and from Canal Lining ramped up over time. The amount of IID transfer water started at 10,000 AF/yr in 2003, grew to 100,000 AF/yr over ten years (2013), reached 193,000 AF/yr in 2020, and will now stay at 200,000 AF/yr through 2047 or beyond.

Over the past three years (FY 2018, FY 2019 and FY 2020), 38% of the water delivered by MWD to SDCWA was delivered by MWD as a supplier and 62% was delivered by MWD as a conveyor.

Comments on the London Moeder Advisors Report (9-15-2020)

Benefits Received by FPUD and RMWD

The LMA report equates the degree to which FPUD and RMWD benefit from their membership in SDCWA with the share of their water supply *not* "received from" MWD.

For example, the report states that, prior to 2020, 85% of FPUD's water supplies "were received directly from MWD facilities," the remaining 15% being received from SDCWA facilities. From this, the report infers that FPUD benefits from SDCWA membership only for 15% of its water supply.

LMA makes a parallel argument with respect to RMWD.

This argument is not correct.

- Even if FPUD and RMWD were to receive *all* of their water supply as treated water from MWD's Skinner Water Treatment Plant delivered to them via flow control facilities owned by MWD, all of that water is a benefit of their SDCWA membership.

- FPUD and RMWD would not be in a position to receive any water from the Skinner Plant if
  - (1) SDCWA were not a member agency of MWD,
  - (2) had not contracted with MWD to receive that water, and
  - (3) had not forborne to deliver the entirety of that water to *other* SDCWA member agencies.

- Some of the water from Skinner is QSA water that belongs to SDCWA, not MWD.
  - MWD is acting as a conveyor, not a supplier.
- The rest of the water from Skinner is MWD water (from the State Water Project or obtained under MWD's rights to Colorado River water) which has been purchased by SDCWA from MWD as a member agency.
  - MWD is acting as a supplier.
- Either way, all of the water received by FPUD and RMWD from Skinner belongs to SDCWA and comes to FPUD and RMWD as a benefit of their membership in SDCWA.
- FPUD and RMWD do not have a right to the water flowing in MWD-owned pipes through their service area.

- Therefore, LMA's assessment, based on share of water received by FPUD and RMWD from turnouts on SDCWA pipes rather than turnouts on MWD pipes over the period 2010 – 2019, that FPUD and RMWD benefited from their membership of SDCWA only a fraction of what they paid to SDCWA is not correct.
  - The LMA estimate of benefits is too low.
  - All the water FPUD and RMWD received from turnouts on MWD pipes belonged to SDCWA and came as a benefit to FPUD and RMWD of their membership status in SDCWA.

The fair share of SDCWA fixed charges

- During 2010 – 2019, SDCWA received approximately $1.233 billion in revenue from fixed charges from member agencies – the customer service charge, storage charge, supply reliability charge and infrastructure access charge.
  - The charges paid by FPUD and RMWD over that period amounted to approximately $56 million, or 4.5% of the SDCWA total.
- Over that period, FPUD and RMWD consistently comprised approximately 2.7% to 2.9% of all meter equivalents served by SDCWA.
- LMA assert that FPUD and RMWD paid more than their fair share of SDCWA fixed charges since they should have paid their share of meter equivalents (2.8%).
  - FPUD and RMWD would have paid a total of $34.5 million in fixed charges to SDCWA over the period 2010 – 2019, instead of $56 million.

  - I disagree.

- FPUD and RMWD consistently used more water per meter equivalent than other SDCWA member agencies.
  - 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.
  - Basing the allocation of all fixed charges on meter equivalent rather than volume of water received would be unfair to the other SDCWA member agencies.
- There is no reason to apportion the fixed costs of water supply among wholesale customers based on the member agencies' shares of the total number of meter equivalents serviced by the wholesale agency.
- It is more appropriate to allocate fixed costs of wholesale supply based on member agencies' (i) share of annual water deliveries, or something like (ii) their share of peak deliveries.

Conclusion

- The LMA Report's benefit-cost analysis is not correct.
- The measurement of the benefits received by FPUD and RMWD is not correct for the reason I have just stated.
- The measurement of the "fair share of fixed charges" attributed by LMA to FPUD and RMWD is not correct for the reason I have stated.
- Consequently, the estimate in the Report that FPUD and RMWD have subsidized the remaining member agencies by $49.5 million over the period 2010 – 2019 lacks foundation and is incorrect.

Supply reliability – FPUD and RMWD

FALLBROOK PUD ANNUAL DEMAND AND SUPPLY (AF/yr)					
		DEMAND	LOCAL SUPPLY	EXTERNAL SUPPLY	% EXTERNAL
Calendar Year					
2020		8,920	617	8,303	93.1%
2025		9,475	5,430	4,045	42.7%
2030		9,799	5,430	4,369	44.6%
2035		10,381	5,430	4,951	47.7%
SOURCE: 2020 Urban Water Management Plan					

RAINBOW MWD ANNUAL DEMAND AND SUPPLY (AF/yr)

Calendar Year	DEMAND	EXTERNAL SUPPLY	% EXTERNAL
2020	14,297	14,297	100.0%
2025	13,750	13,750	100.0%
2030	15,200	13,200	86.8%
2035	14,672	12,672	86.4%

SOURCE: 2020 Urban Water Management Plan

- FPUD: Some growth in demand, large increase in local supply, fall from 93% to ~45% in reliance on external supply.
- RMWD: Decline in demand, small local supply will develop.

- FPUD currently relies on external supply (now from SDCWA) for 93% of its water supply.
- Starting next year, FPUD will bring local supply online and will rely on external supply for 43% of its water supply, growing to about 48% by 2035.

- RMWD is 100% reliant on external supply both now, but will become 86% reliant starting in 2030.

EMWD

- Both wholesaler and retailer of water. Also treats wastewater.
- Supplies (1) raw & treated water and (2) recycled water.

	2020
Raw & treated water	
Retail service area	84,673
Wholesale service area	36,384
Subtotal	121,057
Recycled water	
Retail service area	31,243
Wholesale service area	1,285
Subtotal	32,528
TOTAL DEMAND	153,585

EMWD supply

- As well as it supply of recycled water, EMWD has some local supply of groundwater.
- Its non-local supply is from MWD.
- It uses its local supply mainly for its retail service area (46% of retail supply) and less for its wholesale service area (21% of wholesale supply).
  - MWD water is 54% of retail supply and 79% of wholesale supply.

	2020
Retail service area	
EMWD Local supply	
Groundwater*	22,362
Recycled Water**	31,244
From MWD	62,310
Subtotal	115,916
Wholesale service area	
EMWD Local supply	
Groundwater	6,467
Recycled Water	1,285
From MWD	29,917
Subtotal	37,669
TOTAL SUPPLY	153,585

- EMWD wholesale customers receiving treated water fall into two groups:
  - Most wholesale customers face a supply charge for treated from EMWD of $1,350/AF.
  - A couple of customers – Rancho California Water District and Elsinore Valley MWD – have MWD pipes passing through their service area and take MWD water directly from turnouts on the MWD pipes.
  - They are billed by MWD through EMWD. They pay the MWD Tier 1 charge ($1,104/AF) plus an administrative fee of $11/AF to cover EMWD expenses, for a total of $1,115/AF.
  - These two districts do not receive local groundwater supply from EMWD – they receive only MWD water from MWD pipes.
    - They are making no use of EMWD's water distribution system.
- If FPUD and RMWD join the EMWD service area, EMWD plans to treat them the same as Rancho California and Elsinore Valley – they will make no use of EMWD's distribution system, and they will pay an $11/AF administrative fee.

EMWD expects significant growth in demand

- Between 2020 and 2035, EMWD expects a growth of ~ 22% in its service area population (retail and wholesale).
- This will trigger a significant increase in demand for water.

					Demand growth	
	2020	2030	2035		2020-2030	2020-2035
Raw & treated water						
Retail service area	84,673	108,300	114,400		23,627	29,727
Wholesale service area	36,384	52,400	54,400		16,016	18,016
Subtotal	121,057	160,700	168,800		39,643	47,743
Recycled water						
Retail service area	31,243	49,020	54,500		17,777	23,257
Wholesale service area	1,285	5,180	5,600		3,895	4,315
Subtotal	32,528	54,200	60,100		21,672	27,572
TOTAL DEMAND	153,585	214,900	228,900		61,315	75,315

Growth in EMWD demand without FPUD and RMWD

- While its retail and wholesale service population are both expected to grow by about 22% between 2020 and 2035, its demand for water is expected to grow by 46% (retail service area) and 59% (wholesale service area).
  - By 2035, it will need to supply an additional 75,315 AF/yr.
- To meet this demand, EMWD will increase its supply of local groundwater and also its supply of recycled water, as well as needing more water from MWD.
- EMWD will increase local groundwater by 38%, recycled water by 31%, and external supply from MWD by 27%.
- It will need to import an extra 24,920 AF/yr from MWD by 2035.

CURRENT AND PROJECTED SUPPLY FROM EMWD (AF/yr)			
	2020	**2030**	**2035**
Retail service area			
EMWD Local supply			
Groundwater*	22,362	32,153	32,153
Recycled Water**	31,244	53,020	66,500
From MWD	62,310	72,147	70,247
Subtotal	115,916	157,320	168,900
Wholesale service area			
EMWD Local supply			
Groundwater	6,467	7,500	7,500
Recycled Water	1,285	5,180	5,600
From MWD	29,917	44,900	46,900
Subtotal	37,669	57,580	60,000
TOTAL SUPPLY	153,585	214,900	228,900
* Includes desalinated groundwater and Saboba Settlement water			
** Excludes recycled water used for recharge			

Growth in EMWD demand with FPUD and RMWD

- If FPUD and RMWD join EMWD, this will create an additional demand for MWD water.
  - FPUD and RMWD will not receive EMWD's local groundwater , nor any of its recycled water.
- EMWD's demand for water from MWD, which was 92,227 AF/yr in 2020, would then rise to 134,770 AF/yr, an increase of 42,543 AF/yr (46%).

CURRENT AND PROJECTED DEMAND FOR WATER FROM EMWD (AF/yr)						
					Demand growth	
	2020	2030	2035		2020-2030	2020-2035
TOTAL DEMAND	153,585	214,900	228,900		61,315	75,315
Retail service area Total	115,916	157,320	168,900		41,404	52,984
Wholesale service area Total	37,669	57,580	60,000		19,911	22,331
RAW & TREATED WATER						
Fallbrook PUD demand		4,369	4,951			
Rainbow MWD demand		13,200	12,672			
Wholesale with FPUD & RMWD	36,384	69,969	72,023		33,585	35,639
Total Raw/Treated (retail plus wholesale	121,057	178,269	186,423		57,212	65,366
with FPUD and RMWD after 2020)						
DATA SOURCE: EMWD, FPUD & RMWD 2020 Urban Water Management Plans						

The availability of water from EMWD

- Most of EMWD's wholesale customers are connected to EMWD's distribution network.
  - For this they pay EMWD a water rate which is set above the MWD Tier 1 rate in the amount of $246/AF in order to account, in part, for their use of EMWD's infrastructure.
  - They either do receive or could possibly receive some local groundwater and/or recycled water from EMWD.
- If FPUD and RMWD join EMWD, they would not be connected to EMWD's distribution network.
  - For this they would pay EMWD a water rate set at the MWD Tier 1 rate plus $11/AF.
  - They could not receive local groundwater or recycled water from MWD.
- In the event of a shortfall in supply availability from MWD, EMWD itself could not help them out with its local supply.

Delta Reliance

- Since 2003, MWD has relied on SWP water for an average of about 63% of its supply.
  - The remainder is MWD's supply from the Colorado River.
- Over the past three years, SDCWA has relied on MWD in its role as a supplier of water (as opposed to as a conveyor of water) for 38% of its water.
- Therefore, on average over those years, SDCWA has relied on SWP water for about 24% (= 0.38*0.63) of its water.
- If FPUD and RMWD switch from SDCWA to EMWD, they will switch from relying on SWP water for 24% of their supply to relying on SWP water for 63% of their supply.

Exit fee

- Last week, I sent the following request to SDCWA, 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.

From an economic perspective, it seems to me that there is a sound economic case for requiring some sort of departure fee: the majority of the water received by FPUD and RMWD from SDCWA in recent years has been – either directly or in lieu – QSA water purchased by SDCWA and conveyed to SDCWA by MWD. This is water for which SDCWA has made a long-term purchase commitment.

Before I develop my own recommendation for the terms and magnitude of a departure fee, I would be interested in hearing directly from the parties – SDCWA, FPUD and RMWD – their own recommendations for a departure fee, including whether it should be a single lump sum payment or an annual payment for a number of years, what amount and, if payable over a number of years, then how many years. I would also like the parties to specify in detail the rationale for their assessment of this departure fee.

Next steps for September meeting

- Receive comments and suggestions on what is being presented today.
- Follow up with SDCWA on request for data and/or explanations.
  - This focuses in particular on details of rate impact calculation.
- Complete rate impact analysis.
- Complete and write up supply reliability impact analysis.
- Follow up, if needed, with EMWD for data and/or explanations.
- Follow up with conversations, as needed, with SDCWA, FPUD and RMWD on suggestions regarding an exit fee.
- Draft an exit fee analysis
- Prepare a complete draft of my report