



london moeder
advisors

Rainbow M.W.D. & Fallbrook P.U.D.
Cost-Benefit Analysis of SDCWA Membership

September 15, 2020

825 10th Avenue
San Diego, CA 92101
619. 269.4010

2792 Gateway Road #104
Carlsbad, CA 92024
619.269.4012

londonmoeder.com



RMWD and FPUD – Cost Benefit Analysis

The purpose of this report is to provide a historical rate analysis and a forecast of the prospective impact of the proposed detachment of Rainbow Municipal Water District (“RMWD”) and the Fallbrook Public Utilities District (“FPUD”) from the San Diego County Water Authority (“SDCWA”) and subsequent annexation by the Eastern Municipal Water District (“EMWD”).

We have conducted a comprehensive analysis of the fees that SDCWA has collected from its member agencies over the ten-year period from 2010 to 2019 and have determined the amount in which RMWD and FPUD has been contributing to SDCWA member agencies. The proposed detachment of the two member agencies will certainly affect the remaining member agencies of SDCWA, the amount of which is detailed in this report. However, London Moeder Advisors has taken no position on such matter. Our results and conclusions cannot be interpreted as recommendations.

Research for this project was completed in September 2020. Conclusions and recommendations are strictly those of London Moeder Advisors. Users of this information should recognize that assumptions and projections contained in this report *will* vary from the actual experience in the marketplace. Therefore, London Moeder Advisors is not responsible for the actions taken or any limitations, financial or otherwise of property owners, investors, developers, lenders, public agencies, operators or tenants.

Executive Summary

The following bullet points summarize the key findings of this report.

- ➔ **Fixed Charge Analysis** – outlines the share of fixed charges required by SDCWA from all member agencies. In the years of 2010 to 2019 SDCWA collected a total of approximately \$1.2 billion in fixed charges, of which \$56 million (\$5.6 million annually) was paid by FPUD and RMWD (4.5% of total fixed charges).
 - Based on the number of meter equivalents serviced in these two jurisdictions \$34.5 million (2.8% of total fixed charges) would represent appropriate fixed charges.
 - Of the \$34.5 million (\$3.4 million annually), a total of \$6.5 million (\$649,000 annually) may directly benefit FPUD and RMWD. When compared to the historical average paid by FPUD and RMWD (\$5.6 million), suggests that FPUD and RMWD have been providing a \$5 million annual subsidy to the other member agencies.
 - In total, over the past ten years FPUD and RMWD have subsidized the remaining member agencies by \$49.5 million.

- ➔ **Benefit-to-Cost Ratio** – represents the proportional share of fixed charges paid by FPUD and RMWD.
 - During the years of 2010 through 2019, FPUD and RMWD achieved a benefit-to-cost ratio of 0.12 from the payment of fixed charges.¹
 - The remaining SDCWA member agencies have benefited from this imbalance representing a benefit-to-cost ratio of 1.04.²

- ➔ **Reallocation of Fees** – represents the impact to the remaining SDCWA member agencies from the proposed detachment of FPUD and RMWD.
 - Following the proposed detachment of FPUD and RMWD from SDCWA membership, SDCWA would be required to reallocate approximately \$5.6 million in annual fixed charges. This represents an annual increase in fixed charges of approximately \$6.23 per meter equivalent.

¹ A benefit-to-cost ratio of less than 1.0 means that the cost of the benefit exceeds the value the benefit received.

² A benefit-to-cost ratio greater than 1.0 means that more benefit was received compared to the cost of the benefit.

SDCWA Fixed Charge Analysis

The purpose of this section is to analyze the historical rates that SDCWA has collected from all of its member agencies. Additionally, we have forecasted the anticipated rates that SDCWA will collect for the next 10 years. This analysis focuses on the fixed charges for which SDCWA imposes on all member agencies on a non-variable basis. These charges include a customer service charge, storage charge, supply reliability charge and infrastructure access charge. Excluded from these fixed charges are those that are accessed by the wholesale water authority Metropolitan Water District of Southern California ("MWD"). The MWD fixed charges include the readiness-to-serve charge and capacity charge and will continue to be assessed to all member agencies receiving water from this wholesale district. For a description of the analyzed fixed charges see [County Benefit, SDCWA Fixed Charges](#).

The tables included in the following sections combines both RMWD and FPUD. For a breakout of each one of these agencies, see the tables in the Appendix ([RMWD Tables](#) and [FPUD Tables](#)).

Total Charges

Historical (2010-2019)

The share of fixed charges assessed to FPUD and RMWD in the ten years from 2010 through 2019 has ranged between 3.8% and 5.0% of the total charges required to fund programs and obligations of SDCWA. In 2010, FPUD and RMWD were allocated approximately \$2.8 million in fixed charges, approximately 3.8% of the all-member agency total. By 2019 approximately \$6.5 million in fixed charges were allocated to FPUD and RMWD, representing approximately 4.2% of the all-member agency total. Over these 10 years FPUD and RMWD has paid approximately \$56 million of the approximately \$1.2 billion collected in total from all member agencies by SDCWA. This represents 4.5% of the SDCWA total. The following table summarizes the total fixed charges collected by SDCWA between 2010 and 2019.

SDCWA Fixed Charges
Rainbow MWD & Fallbrook PUD

Year	Total SDCWA Fixed Charges Collected	Fixed Charges Paid by FPUD & RMWD (Actual)	% of County
2010	\$73,438,236	\$2,764,056	3.8%
2011	\$94,561,632	\$4,322,772	4.6%
2012	\$108,939,032	\$4,924,066	4.5%
2013	\$115,611,812	\$5,608,001	4.9%
2014	\$118,999,524	\$5,920,868	5.0%
2015	\$119,991,896	\$5,794,826	4.8%
2016	\$146,046,844	\$6,815,783	4.7%
2017	\$148,012,564	\$6,627,607	4.5%
2018	\$153,152,016	\$6,706,283	4.4%
2019	\$154,053,354	\$6,520,391	4.2%
10-Year Total	\$1,232,806,910	\$56,004,653	4.5%

Source: SDCWA yearly June board meeting documents, Administrative & Finance Committee

10-Year Forecast (2020-2029)

Based on the annual average increase of each fixed charge between 2010 and 2019, the share of fixed charges forecasted for FPUD and RMWD will range between 4.1% and 4.3% of the total charges required to fund programs and obligations of SDCWA.

In 2020, FPUD and RMWD were allocated approximately \$7.2 million in fixed charges, approximately 4.3% of the all-member agency total. By 2029 approximately \$11.9 million in fixed charges are forecasted to be allocated to FPUD and RMWD, representing approximately 4.1% of the all-member agency total.

Over the next 10 years, FPUD and RMWD are forecasted to pay approximately \$91.2 million of the approximately \$2.2 billion collected in total from all member agencies by SDCWA. This represents 4.1% of the SDCWA total.

The following table summarizes the total fixed charges forecasted to be collected by SDCWA between 2020 and 2029.

SDCWA Fixed Charges
Rainbow MWD & Fallbrook PUD

Year	Total SDCWA Fixed Charges Collected ¹	Fixed Charges Paid by FPUD & RMWD (Actual) ²	% of County
2020	\$168,660,248	\$7,239,510	4.3%
2021	\$171,653,316	\$7,169,632	4.2%
2022	\$183,112,881	\$7,627,610	4.2%
2023	\$195,381,920	\$8,117,024	4.2%
2024	\$208,520,251	\$8,640,160	4.1%
2025	\$222,592,268	\$9,199,482	4.1%
2026	\$237,667,304	\$9,797,637	4.1%
2027	\$253,820,020	\$10,437,479	4.1%
2028	\$271,130,826	\$11,122,078	4.1%
2029	\$289,686,333	\$11,854,741	4.1%
10-Year Total	\$2,202,225,369	\$91,205,353	4.1%

¹ Based on annual average increase 2010-2019

² Based on Scheduled 2021 Share of Fixed Charges

Meter Equivalents

We have analyzed the total metered connections of each member agency in comparison to those of FPUD and RMWD. This provides an order of magnitude into the service required by FPUD and RMWD.

The number of metered connections for water service in a member agency are counted on a meter equivalent basis. Meaning, a meter of diameter size less than 1-inch is counted as one meter and any meter of larger size is applied a meter equivalency factor to calculate total meter equivalents ("ME's") of that meter.

Between 2010 and 2019 there were a total of 908,302 to 925,093 meter equivalents serviced through the SDCWA system. FPUD and RMWD have consistently comprised approximately 2.7% to 2.9% of all meter equivalents in the SDCWA system. The following table summarizes the share of meter equivalents serviced in FPUD and RMWD's service area.

SDCWA Meters Equivalents *Rainbow MWD & Fallbrook PUD*

Year ¹	Total SDCWA Meter Equivalents (ME)	Meter Equivalents (ME)	% of County
2010	908,302	24,716	2.7%
2011	912,321	24,554	2.7%
2012	914,166	24,629	2.7%
2013	917,630	24,799	2.7%
2014	920,194	24,877	2.7%
2015	923,710	26,277	2.8%
2016	917,831	26,457	2.9%
2017	920,636	26,095	2.8%
2018	925,093	26,542	2.9%
2019	925,093	26,542	2.9%

Source: SDCWA yearly June board meeting documents, Administrative & Finance Committee

¹ As of December 31 of current year.

Meter Equivalents Fair Share

Historical (2010-2019)

We have prepared an alternative method of allocating these fixed charges on a meter equivalents basis. When the percentage of county meter equivalents is applied to the total SDCWA fixed fees required in each year the result is an adjusted fair share (ME fair share) of the fixed charges collected by SDCWA.

Following this method for the years 2010 to 2019, the adjusted fair share of fixed charges to FPUD and RMWD would range between approximately \$2 million in 2010 and \$4.4 million in 2019. The following table delineates the adjusted fair share of fixed charges assessed to FPUD and RMWD for each year between 2010 and 2019.

SDCWA ME Fair Share
Rainbow MWD & Fallbrook PUD

Year	Total SDCWA Fixed Charges Collected	Equivalent Meters (ME)	% of County	ME Fair Share
2010	\$73,438,236	24,716	2.7%	\$1,998,344
2011	\$94,561,632	24,554	2.7%	\$2,545,010
2012	\$108,939,032	24,629	2.7%	\$2,934,981
2013	\$115,611,812	24,799	2.7%	\$3,124,415
2014	\$118,999,524	24,877	2.7%	\$3,217,095
2015	\$119,991,896	26,277	2.8%	\$3,413,438
2016	\$146,046,844	26,457	2.9%	\$4,209,883
2017	\$148,012,564	26,095	2.8%	\$4,195,347
2018	\$153,152,016	26,542	2.9%	\$4,394,110
2019	\$154,053,354	26,542	2.9%	\$4,419,971
10-Year Total	\$1,232,806,910		2.8%	\$34,452,595

Using this method, the fair share payment by FPUD and RMWD would have been approximately \$34.5 million in total between 2010 and 2019. **This translates to an overpayment of approximately \$21.5 million based on meter equivalents.**

10-Year Forecast (2020-2029)

We have prepared a 10-year forecast (2020 to 2029) based on a meter equivalents basis. The adjusted fair share of fixed charges to FPUD and RMWD is forecasted to range between approximately \$4.8 million in 2020 and \$8.3 million in 2029. The following table delineates the adjusted fair share of fixed charges forecasted to FPUD and RMWD for each year between 2020 and 2029.

SDCWA ME Fair Share
Rainbow MWD & Fallbrook PUD

Year	Total SDCWA Fixed Charges Collected	Equivalent Meters (ME) ¹	% of County ¹	ME Fair Share
2020	\$168,660,248	26,513	2.9%	\$4,818,973
2021	\$171,653,316	26,513	2.9%	\$4,904,491
2022	\$183,112,881	26,513	2.9%	\$5,231,915
2023	\$195,381,920	26,513	2.9%	\$5,582,467
2024	\$208,520,251	26,513	2.9%	\$5,957,856
2025	\$222,592,268	26,513	2.9%	\$6,359,923
2026	\$237,667,304	26,513	2.9%	\$6,790,648
2027	\$253,820,020	26,513	2.9%	\$7,252,165
2028	\$271,130,826	26,513	2.9%	\$7,746,770
2029	\$289,686,333	26,513	2.9%	\$8,276,940
10-Year Total	\$2,202,225,369		2.9%	\$62,922,149

¹ As of December 31 of 2019

Using this method, the fair share payment by FPUD and RMWD is forecasted to be approximately \$62.9 million over the next 10 years. **This translates to an overpayment of approximately \$28.3 million based on meter equivalents.**

County Benefit

We have analyzed the use of funds collected through the various fixed charges SDCWA receives from its member agencies. We have determined that the appropriate share of funds is not being used to the benefit of FPUD and RMWD. Therefore, we have analyzed the impact of the removal of non-benefit charges from FPUD and RMWD historically from 2010 through 2019. The following section describes the purpose of the four fixed charges we analyzed.

SDCWA Fixed Charges³

- **Supply Reliability Charge (“SRC”)**: is a fixed charge established in 2016 to recover a portion of the costs associated with the Water Authority’s highly reliable water supplies, which includes desalinated and IID transfer waters.
- **Customer Service Charge**: is set to recover costs that are necessary to support the functioning of the Water Authority.
- **Storage Charge**: is set to recover costs associated with the Emergency Storage Program (“ESP”) and Carryover Storage Program.
- **Infrastructure Access Charge (“IAC”)**: is imposed on member agencies as a condition of maintaining connections to Water Authority facilities.

The following key assumptions have been made to quantify the actual value of benefit received from the use of funds collected through these fixed charges.

Key Assumptions

- During periods of drought and limited water supply, SDCWA will only be able to provide emergency water supplies to 25% to 33% of RMWD’s service area.
- During periods of drought and limited water supply, SDCWA will only be able to provide FPUD with 15% of its water supply needs.
- Reliable water supplies from desalinization projects funded through the Supply Reliability Charge would not benefit FPUD or RMWD during periods of drought and limited water supply as connections to these facilities do not reach the areas of FPUD and RMWD.
- Prior to 2020, FPUD received 15% of water supplies from SDCWA facilities. The remaining 85% of water supplies were received directly from MWD facilities. FPUD currently does not receive water from SDCWA facilities. Currently all of FPUD water supplies are received directly from MWD facilities.
- RMWD currently receives 35% of water supplies from SDCWA facilities. The remaining 65% of water supplies are received directly from MWD facilities.
- The forecasted increase in fixed charges is based on the average annual increase between 2010 and 2021.

³ San Diego County Water Authority, Administrative and Finance Committee

- The forecasted fixed charges are reallocated based on the meter equivalent levels as of December 31, 2019. It is assumed the share of meter equivalents between all remaining member agencies of SDCWA remains constant through 2029.

The following conclusions were made to three of the four fixed charges based on our key assumptions in conjunction with our findings regarding the use of funds of these fixed charges.

- RMWD is responsible for 35% of the IAC previously assessed.
- RMWD is responsible for 30% of the Storage Charge
- FPUD is not responsible for IAC, Storage Charge and Supply Reliability Charge.
- FPUD is responsible for 15% of the IAC previously assessed.
- FPUD is responsible for 15% of the Storage Charge
- The Supply Reliability Charge was adjusted using the accepted SDCWA methods with the exclusion of desalination water costs from this formula.

After the appropriate fixed charges were identified, we reduced the meter equivalents adjusted fair share of fixed charges by the amount corresponding to the charges that have no benefit to FPUD and RMWD. This results in an adjusted fair share that represents a quantified actual benefit to FPUD and RMWD.

The difference between the adjusted fair share (actual benefit) amount and the actual amount paid by FPUD and RMWD is a direct benefit to the remaining SDCWA member agencies that has been subsidized by FPUD and RMWD.

Historical (2010-2019)

As the following table details, the total fixed charges between 2010 and 2019 that we have identified to be of no benefit to FPUD and RMWD totals approximately \$28 million. When compared to the total fair share of fixed charges based on meters equivalent, this results in approximately \$6.5 million of actual benefit fixed charges during this 10-year period.

When the actual benefit amount of charges is compared to the historical amount actually paid to SDCWA by FPUD and RMWD, approximately \$49.5 million of benefit to the remaining member agencies of SDCWA has been subsidized by FPUD and RMWD over the 10-year period. This essentially translates to FPUD and RMWD paying an annual subsidy of approximately \$5 million to the remaining SDCWA member agencies.

SDCWA No-Benefit Charges

Rainbow MWD & Fallbrook PUD

Year	FPUD & RMWD Fixed Charges (Actual Paid)	ME Fair Share	No Benefit Charges	Adj. Fair Share (Actual Benefit)	Diff. to Actual (County Benefit)
2010	\$2,764,056	\$1,998,344	(\$1,419,953)	\$578,391	+\$2,185,665
2011	\$4,322,772	\$2,545,010	(\$1,916,565)	\$628,445	+\$3,694,327
2012	\$4,924,066	\$2,934,981	(\$2,283,298)	\$651,682	+\$4,272,384
2013	\$5,608,001	\$3,124,415	(\$2,783,375)	\$341,040	+\$5,266,961
2014	\$5,920,868	\$3,217,095	(\$3,023,122)	\$193,973	+\$5,726,895
2015	\$5,794,826	\$3,413,438	(\$2,932,674)	\$480,764	+\$5,314,062
2016	\$6,815,783	\$4,209,883	(\$3,444,060)	\$765,823	+\$6,049,960
2017	\$6,627,607	\$4,195,347	(\$3,405,764)	\$789,584	+\$5,838,023
2018	\$6,706,283	\$4,394,110	(\$3,402,338)	\$991,772	+\$5,714,511
2019	\$6,520,391	\$4,419,971	(\$3,347,122)	\$1,072,849	+\$5,447,542
10-Year Total	\$56,004,653	\$34,452,595	(\$27,958,271)	\$6,494,324	+\$49,510,329
Annual Average	\$5,600,465				+\$4,951,033

Source: SDCWA yearly June board meeting documents, Administrative & Finance Committee

10-Year Forecast (2020-2029)

The following table details the 10-year forecast (2020 to 2029) of the total fixed charges that we have identified to be of no benefit to FPUD and RMWD. In total, the charges that have no benefit totals approximately \$43.7 million over the ten-year period. When compared to the total fair share of fixed charges based on meters equivalent, this results in approximately \$19.2 million of actual benefit fixed charges during this 10-year period.

When the actual benefit amount of charges is compared to the forecasted amount actually paid to SDCWA by FPUD and RMWD, approximately \$72 million of benefit to the remaining member agencies of SDCWA will be subsidized by FPUD and RMWD over the 10-year period. This essentially translates to FPUD and RMWD paying an annual subsidy of approximately \$7.2 million to the remaining SDCWA member agencies.

SDCWA No-Benefit Charges *Rainbow MWD & Fallbrook PUD*

Year	FPUD & RMWD Fixed Charges (Forecasted)	ME Fair Share	No Benefit Charges	Adj. Fair Share (Actual Benefit)	Diff. to Actual (County Benefit)
2020	\$7,239,510	\$4,818,973	(\$3,740,261)	\$1,078,713	+\$6,160,797
2021	\$7,169,632	\$4,904,491	(\$3,614,575)	\$1,289,917	+\$5,879,715
2022	\$7,627,610	\$5,231,915	(\$3,810,811)	\$1,421,104	+\$6,206,506
2023	\$8,117,024	\$5,582,467	(\$4,012,792)	\$1,569,675	+\$6,547,348
2024	\$8,640,160	\$5,957,856	(\$4,219,740)	\$1,738,116	+\$6,902,044
2025	\$9,199,482	\$6,359,923	(\$4,430,650)	\$1,929,273	+\$7,270,209
2026	\$9,797,637	\$6,790,648	(\$4,644,248)	\$2,146,401	+\$7,651,237
2027	\$10,437,479	\$7,252,165	(\$4,858,938)	\$2,393,227	+\$8,044,253
2028	\$11,122,078	\$7,746,770	(\$5,072,756)	\$2,674,015	+\$8,448,064
2029	\$11,854,741	\$8,276,940	(\$5,283,297)	\$2,993,643	+\$8,861,098
10-Year Total	\$91,205,353	\$62,922,149	(\$43,688,067)	\$19,234,081	+\$71,971,272
Annual Average	\$9,120,535				+\$7,197,127

Benefit-to-Cost Ratio

The purpose of this section is to summarize the subsidy that FPUD and RMWD has funded between 2010 and 2019 by calculating a benefit-to-cost ratio. A benefit-to-cost ratio greater than 1.0 means that more benefit was received compared to the cost of the benefit. A benefit-to-cost ratio of less than 1.0 means that the cost of the benefit exceeds the value the benefit received.

Historical (2010-2019)

Over this 10-year period, FPUD and RMWD paid approximately \$56 million in fixed charges to SDCWA. Of this \$56 million, we have concluded that the appropriate share of fixed charges would have resulted in approximately \$6.5 million in charges. This results in an overall benefit-to-cost ratio of 0.12 for FPUD and RMWD.

The following table summarizes the benefit-to-cost ratio of FPUD and RMWD and the benefit-to-cost ratio of SDCWA under the established conditions over the years 2010 through 2019.

SDCWA Benefit-to-Cost Ratio

Rainbow MWD & Fallbrook PUD

Year	Fixed Charges Paid by FPUD & RMWD (Actual)	Adj. Fair Share (Benefit)	Benefit-to-Cost Ratio (FPUD & RMWD)	Benefit-to-Cost Ratio (Rest of County)
2010	\$2,764,056	\$578,391	0.21	1.03
2011	\$4,322,772	\$628,445	0.15	1.04
2012	\$4,924,066	\$651,682	0.13	1.04
2013	\$5,608,001	\$341,040	0.06	1.05
2014	\$5,920,868	\$193,973	0.03	1.05
2015	\$5,794,826	\$480,764	0.08	1.05
2016	\$6,815,783	\$765,823	0.11	1.04
2017	\$6,627,607	\$789,584	0.12	1.04
2018	\$6,706,283	\$991,772	0.15	1.04
2019	\$6,520,391	\$1,072,849	0.16	1.04
10-Year Total	\$56,004,653	\$6,494,324	0.12	1.04

10-Year Forecast (2020-2029)

Over the next ten-year period, FPUD and RMWD is forecasted to pay approximately \$91.2 million in fixed charges to SDCWA. Of this \$91.2 million, we have concluded that the appropriate share of fixed charges will result in approximately \$19.2 million in charges. This results in an overall benefit-to-cost ratio of 0.21 for FPUD and RMWD.

The following table summarizes the benefit-to-cost ratio of FPUD and RMWD and the benefit-to-cost ratio of SDCWA under the forecasted conditions over the years 2020 through 2029.

SDCWA Benefit-to-Cost Ratio
Rainbow MWD & Fallbrook PUD

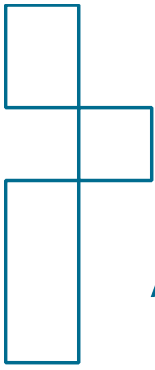
Year	Fixed Charges Paid by FPUD & RMWD (Forecasted)	Adj. Fair Share (Benefit)	Benefit-to-Cost Ratio (FPUD & RMWD)	Benefit-to-Cost Ratio (Rest of County)
2020	\$7,239,510	\$1,078,713	0.15	1.04
2021	\$7,169,632	\$1,289,917	0.18	1.04
2022	\$7,627,610	\$1,421,104	0.19	1.04
2023	\$8,117,024	\$1,569,675	0.19	1.03
2024	\$8,640,160	\$1,738,116	0.20	1.03
2025	\$9,199,482	\$1,929,273	0.21	1.03
2026	\$9,797,637	\$2,146,401	0.22	1.03
2027	\$10,437,479	\$2,393,227	0.23	1.03
2028	\$11,122,078	\$2,674,015	0.24	1.03
2029	\$11,854,741	\$2,993,643	0.25	1.03
10-Year Total	\$91,205,353	\$19,234,081	0.21	1.03

Reallocation of Fees

The purpose of this section is to assess the impact to the remaining member agency fixed charge allocation resulting from the proposed detachment of FPUD and RMWD.

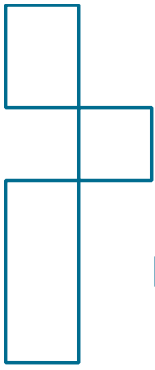
Based on the last year of our analysis (2019), the total meter equivalents contained within all member agencies of SDCWA was approximately 925,000. With the proposed detachment of FPUD and RMWD, the total SDCWA meter equivalents will be reduced by 26,542 to a new total of 898,551.

In the period between 2010 and 2019, FPUD and RMWD paid a total of approximately \$56 million, or an average of approximately \$5.6 million annually. This represents the hypothetical amount that SDCWA will have to re-allocate to the remaining member agencies in order to avoid an increase in variable water rates. When compared to the number of remaining meter equivalents (898,551 ME's), the reallocation of approximately \$5.6 million annually will translate to an average increase of approximately \$6.23 annually per meter equivalent to the remaining SDCWA members.



london moeder
advisors

Appendix



london moeder
advisors

RMWD Tables

Cost-Benefit Analysis
Rainbow M.W.D. Historical (2010-2019)

Year	Total SDCWA Fixed Charges Collected	Fixed Charges Paid by RMWD (Actual)	% of County	Meter Equivalents (ME)	% of County	ME Fair Share	No Benefit Charges ¹	Adj. Fair Share (Actual Benefit)	Diff. to Actual (County Benefit)	Benefit-to-Cost Ratio (RMWD)	Benefit-to-Cost Ratio (Rest of County)
2010	\$73,438,236	\$1,316,592	1.8%	13,098	1.4%	\$1,059,002	(\$650,373)	\$408,629	+\$907,963	0.31	1.01
2011	\$94,561,632	\$2,479,080	2.6%	12,924	1.4%	\$1,339,566	(\$930,623)	\$408,944	+\$2,070,136	0.16	1.02
2012	\$108,939,032	\$2,797,105	2.6%	12,984	1.4%	\$1,547,273	(\$1,095,919)	\$451,354	+\$2,345,751	0.16	1.02
2013	\$115,611,812	\$3,345,270	2.9%	13,117	1.4%	\$1,652,605	(\$1,477,171)	\$175,435	+\$3,169,835	0.05	1.03
2014	\$118,999,524	\$3,567,321	3.0%	13,184	1.4%	\$1,704,955	(\$1,634,625)	\$70,330	+\$3,496,991	0.02	1.03
2015	\$119,991,896	\$3,481,515	2.9%	14,505	1.6%	\$1,884,230	(\$1,572,203)	\$312,027	+\$3,169,488	0.09	1.03
2016	\$146,046,844	\$4,096,206	2.8%	14,108	1.5%	\$2,244,889	(\$1,874,404)	\$370,485	+\$3,725,721	0.09	1.03
2017	\$148,012,564	\$3,903,920	2.6%	14,265	1.5%	\$2,293,414	(\$1,801,921)	\$491,493	+\$3,412,427	0.13	1.02
2018	\$153,152,016	\$3,936,813	2.6%	14,665	1.6%	\$2,427,836	(\$1,786,654)	\$641,182	+\$3,295,631	0.16	1.02
2019	\$154,053,354	\$3,873,321	2.5%	14,665	1.6%	\$2,442,125	(\$1,786,573)	\$655,552	+\$3,217,769	0.17	1.02
10-Year Total	\$1,232,806,910	\$32,797,143	2.7%			\$18,595,897	(\$14,610,466)	\$3,985,431	+\$28,811,712	0.12	1.02
Annual Average		\$3,279,714							+\$2,881,171		

Source: SDCWA yearly June board meeting documents, Administrative & Finance Committee

¹ 65% Infrastructure Access, 70% Emergency Storage, Supply Reliability Charge (excl. desalination water costs)

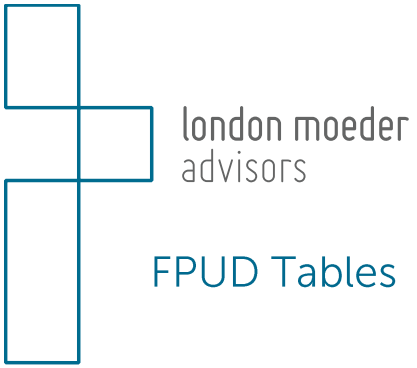
Cost-Benefit Analysis
Rainbow M.W.D. 10-Year Forecast (2020-2029)

Year	Total SDCWA Fixed Charges Forecasted	Fixed Charges Paid by RMWD (Forecasted) ¹	% of County	Equivalents (ME) ²	% of County	ME Fair Share	No Benefit Charges ³	Adj. Fair Share (Actual Benefit)	Diff. to Actual (County Benefit)	Benefit-to-Cost Ratio (RMWD)	Benefit-to-Cost Ratio (Rest of County)
2020	\$168,660,248	\$4,359,342	2.6%	14,658	1.6%	\$2,664,222	(\$2,035,287)	\$628,934	+\$3,730,408	0.14	1.02
2021	\$171,653,316	\$4,313,987	2.5%	14,658	1.6%	\$2,711,501	(\$1,955,060)	\$756,441	+\$3,557,546	0.18	1.02
2022	\$183,112,881	\$4,586,073	2.5%	14,658	1.6%	\$2,892,521	(\$2,058,806)	\$833,715	+\$3,752,359	0.18	1.02
2023	\$195,381,920	\$4,876,664	2.5%	14,658	1.6%	\$3,086,327	(\$2,165,120)	\$921,207	+\$3,955,457	0.19	1.02
2024	\$208,520,251	\$5,187,097	2.5%	14,658	1.6%	\$3,293,866	(\$2,273,488)	\$1,020,378	+\$4,166,720	0.20	1.02
2025	\$222,592,268	\$5,518,813	2.5%	14,658	1.6%	\$3,516,153	(\$2,383,256)	\$1,132,897	+\$4,385,916	0.21	1.02
2026	\$237,667,304	\$5,873,361	2.5%	14,658	1.6%	\$3,754,284	(\$2,493,608)	\$1,260,675	+\$4,612,686	0.21	1.02
2027	\$253,820,020	\$6,252,409	2.5%	14,658	1.6%	\$4,009,438	(\$2,603,537)	\$1,405,901	+\$4,846,508	0.22	1.02
2028	\$271,130,826	\$6,657,752	2.5%	14,658	1.6%	\$4,282,886	(\$2,711,811)	\$1,571,076	+\$5,086,676	0.24	1.02
2029	\$289,686,333	\$7,091,323	2.4%	14,658	1.6%	\$4,575,996	(\$2,816,933)	\$1,759,063	+\$5,332,260	0.25	1.02
10-Year Total	\$2,202,225,369	\$54,716,821	2.5%			\$34,787,193	(\$23,496,907)	\$11,290,287	+\$43,426,535	0.21	1.02
Annual Average		\$5,471,682							+\$4,342,653		

¹ Based on Scheduled 2021 Share of Fixed Charges

² As of December 31 of 2019

³ 65% Infrastructure Access, 70% Emergency Storage, Supply Reliability Charge (excl. desalination water costs)



Cost-Benefit Analysis
 Fallbrook P.U.D. Historical (2010-2019)

Year	Total SDCWA Fixed Charges Collected	Fixed Charges Paid by FPUD (Actual)	% of County	Meter Equivalents (ME)	% of County	ME Fair Share	No Benefit Charges ¹	Adj. Fair Share (Actual Benefit)	Diff. to Actual (County Benefit)	Benefit-to-Cost Ratio (FPUD)	Benefit-to-Cost Ratio (Rest of County)
2010	\$73,438,236	\$1,447,464	2.0%	11,618	1.3%	\$939,341	(\$769,580)	\$169,761	+\$1,277,703	0.12	1.02
2011	\$94,561,632	\$1,843,692	1.9%	11,630	1.3%	\$1,205,444	(\$985,942)	\$219,502	+\$1,624,190	0.12	1.02
2012	\$108,939,032	\$2,126,961	2.0%	11,645	1.3%	\$1,387,708	(\$1,187,379)	\$200,328	+\$1,926,633	0.09	1.02
2013	\$115,611,812	\$2,262,731	2.0%	11,682	1.3%	\$1,471,810	(\$1,306,204)	\$165,606	+\$2,097,125	0.07	1.02
2014	\$118,999,524	\$2,353,547	2.0%	11,693	1.3%	\$1,512,139	(\$1,388,496)	\$123,643	+\$2,229,904	0.05	1.02
2015	\$119,991,896	\$2,313,311	1.9%	11,772	1.3%	\$1,529,208	(\$1,360,471)	\$168,737	+\$2,144,574	0.07	1.02
2016	\$146,046,844	\$2,719,577	1.9%	12,349	1.3%	\$1,964,994	(\$1,569,656)	\$395,338	+\$2,324,239	0.15	1.02
2017	\$148,012,564	\$2,723,687	1.8%	11,830	1.3%	\$1,901,934	(\$1,603,843)	\$298,091	+\$2,425,596	0.11	1.02
2018	\$153,152,016	\$2,769,470	1.8%	11,877	1.3%	\$1,966,274	(\$1,615,684)	\$350,590	+\$2,418,880	0.13	1.02
2019	\$154,053,354	\$2,647,070	1.7%	11,877	1.3%	\$1,977,846	(\$1,560,550)	\$417,297	+\$2,229,773	0.16	1.01
10-Year Total	\$1,232,806,910	\$23,207,510	1.9%			\$15,856,698	(\$13,347,805)	\$2,508,893	+\$20,698,617	0.11	1.02
Annual Average		\$2,320,751							+\$2,069,862		

Source: SDCWA yearly June board meeting documents, Administrative & Finance Committee

¹ 85% Infrastructure Access, 85% Emergency Storage, Supply Reliability Charge (excl. desalination water costs)

Cost-Benefit Analysis
Fallbrook P.U.D. 10-Year Forecast (2020-2029)

Year	Total SDCWA Fixed Charges Forecasted	Fixed Charges Paid by RMWD (Forecasted) ¹	% of County	Equivalents (ME) ²	% of County	ME Fair Share	No Benefit Charges ³	Adj. Fair Share (Actual Benefit)	Diff. to Actual (County Benefit)	Benefit-to-Cost Ratio (FPUD)	Benefit-to-Cost Ratio (Rest of County)
2020	\$168,660,248	\$2,880,168	1.7%	11,618	1.3%	\$2,118,160	(\$1,704,974)	\$413,186	+\$2,466,982	0.14	1.01
2021	\$171,653,316	\$2,855,645	1.7%	11,618	1.3%	\$2,155,749	(\$1,659,515)	\$496,234	+\$2,359,411	0.17	1.01
2022	\$183,112,881	\$3,041,537	1.7%	11,618	1.3%	\$2,299,667	(\$1,752,005)	\$547,662	+\$2,493,875	0.18	1.01
2023	\$195,381,920	\$3,240,360	1.7%	11,618	1.3%	\$2,453,750	(\$1,847,671)	\$606,079	+\$2,634,281	0.19	1.01
2024	\$208,520,251	\$3,453,063	1.7%	11,618	1.3%	\$2,618,751	(\$1,946,252)	\$672,499	+\$2,780,564	0.19	1.01
2025	\$222,592,268	\$3,680,669	1.7%	11,618	1.3%	\$2,795,478	(\$2,047,395)	\$748,083	+\$2,932,586	0.20	1.01
2026	\$237,667,304	\$3,924,277	1.7%	11,618	1.3%	\$2,984,801	(\$2,150,639)	\$834,162	+\$3,090,115	0.21	1.01
2027	\$253,820,020	\$4,185,070	1.6%	11,618	1.3%	\$3,187,659	(\$2,255,401)	\$932,258	+\$3,252,812	0.22	1.01
2028	\$271,130,826	\$4,464,326	1.6%	11,618	1.3%	\$3,405,061	(\$2,360,945)	\$1,044,116	+\$3,420,211	0.23	1.01
2029	\$289,686,333	\$4,763,417	1.6%	11,618	1.3%	\$3,638,095	(\$2,466,364)	\$1,171,730	+\$3,591,687	0.25	1.01
10-Year Total	\$2,202,225,369	\$36,488,532	1.7%			\$27,657,170	(\$20,191,161)	\$7,466,009	+\$29,022,523	0.20	1.01
Annual Average		\$3,648,853							+\$2,902,252		

¹ Based on Scheduled 2021 Share of Fixed Charges

² As of December 31 of 2019

³ 85% Infrastructure Access, 85% Emergency Storage, Supply Reliability Charge (excl. desalination water costs)

Corporate Profile

London Moeder Advisors

REPRESENTATIVE SERVICES

Market and Feasibility Studies	Development Services	Litigation Consulting
Financial Structuring	Fiscal Impact	Workout Projects
Asset Disposition	Strategic Planning	MAI Valuation
Government Processing	Capital Access	Economic Analysis

London Moeder Advisors (formerly The London Group) was formed in 1991 to provide real estate advisory services to a broad range of clientele. The firm principals, Gary London and Nathan Moeder, combine for over 60 years of experience. We have analyzed, packaged and achieved capital for a wide variety of real estate projects. Clients who are actively pursuing, developing and investing in projects have regularly sought our advice and financial analysis capabilities. Our experience ranges from large scale, master planned communities to urban redevelopment projects, spanning all land uses and development issues of all sizes and types. These engagements have been undertaken principally throughout North America and Mexico.

A snapshot of a few of the services we render for both the residential and commercial sectors:

- **Market Analysis** for mixed use, urban and suburban properties. Studies concentrate on market depth for specific products, detailed recommendations for product type, absorption and future competition. It also includes economic overviews and forecasts of the relevant communities.
- **Financial Feasibility Studies** for new projects of multiple types, including condominium, apartment, office, and master-planned communities. Studies incorporate debt and equity needs, sensitivity analyses, rates of return and land valuations.
- **Litigation support/expert witness services** for real estate and financial related issues, including economic damages/losses, valuations, historic market conditions and due diligence. We have extensive deposition, trial, mediation and arbitration experience.
- **Investment studies for firms acquiring or disposing of real estate.** Studies include valuation, repositioning projects and portfolios, economic/real estate forecasts and valuation of partnerships. Often, the commercial studies include the valuation of businesses.
- **Estate Planning services** including valuation of portfolios, development of strategies for disposition or repositioning portfolios, succession planning and advisory services for high net worth individuals. We have also been involved in numerous marriage dissolution assignments where real estate is involved.
- **Fiscal Impact, Job Generation and Economic Multiplier Effect Reports,** traditionally prepared for larger commercial projects and in support of Environmental Impact Reports. We have been retained by both developers and municipalities for these reports. The studies typically relate to the tax revenues and employment impacts of new projects.

The London Group also draws upon the experience of professional relationships in the development, legal services, financial placement fields as well as its own staff. Clients who are actively investigating and investing in apartment projects, retail centers, commercial projects, mixed use developments and large master plans have regularly sought our advice and financial analysis capabilities.

San Diego: 825 10th Ave | San Diego, CA 92101 | (619) 269-4010
Carlsbad: 2792 Gateway Road #104 | Carlsbad, CA 92009 | (619) 269-4012