

# Brief summary of my Draft Report

Michael Hanemann

Presentation to the Ad Hoc Advisory Committee Meeting

October 4, 2021

- The report you have received (on 9/24 with an addition on 9/30) is a draft. I welcome your comments and suggestions.
- Please let me know if there are errors.
  - You can send emails through Adam Wilson.
  - I would also be happy to meet via zoom.
- I have specific documentation for every factual statement in my report – though not all of the documentation is cited. I can certainly share any uncited documentation.
- The report is incomplete. I'll briefly summarize here my findings in the sections not completed (Supply Reliability and Concluding Remarks).
- Adam Wilson will describe the process and timeline for revising my report.
- What I do here is just summarize the findings reported in the drafts that you have seen.
  - I am not adding anything new.

# Sections 1 and 2 of provide some context

- SDCWA's all-in melded rate for water was around \$500-600/AF from 1998 to about 2008. It then rose quite rapidly, reaching around \$1,000/AF in 2010 and \$1,653/AF in FY 2020. What caused the rate increase?
- The cost of MWD's water increased significantly after 2008.
- QSA water is about the same (or slightly higher) than MWD water – so not a causal factor.
- Desal water from Carlsbad arrived only in 2016. It is definitely more expensive, but so far is only ~10% of water delivered by SDCWA; so not a major causal factor.
- Between 2008 and 2017, there was a reduction of 40% in the amount of water requested of SDCWA by member agencies. That would have caused SDCWA's unit cost per AF to rise by at least 30%.

### 3. Financial impact of detachment

- FPU and RMWD account for ~ 6% (soon to be 5%) of the water delivered by SDCWA to member agencies, but only 1.7% of the population served.
- Their higher level of per capita water use reflects their heavy orientation towards agriculture compared to elsewhere in the SDCWA service area.
- The detachment of FPU and/or RMWD would reduce SDCWA's costs of operations to some limited degree, because so many of those costs are fixed costs. It would reduce SDCWA's revenues to a larger degree, and the net effect would be a loss of net revenue under the current SDCWA rate structure. SDCWA would therefore need to raise its rates for the remaining member agencies.

- As an estimate for a single year's impact, SDCWA calculated the financial impact of detachment as a reduction of \$16.4 million in net revenue, broken down into a net revenue impact of \$5.7 million for FPUD and \$10.7 million for RMWD. This estimate seems reasonable.
- However, conditions in the water business vary from one year to another. Therefore, a multi-year assessment of the financial impact of detachment provides a more realistic assessment than a one-year analysis.
- SDCWA also developed a decadal analysis of the financial impact of detachment. 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.
- Taking the range of \$16.4 million to \$33.9 million as the central estimate for the reduction in annual net revenue, this corresponds to a reduction ranging from 2.9% to 6.0% of SDCWA's annual operating revenue.

- The background for these estimates is an underlying fiscal imbalance facing SDCWA and other water supply organizations (including MWD).
- In SDCWA's case, I estimate 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.

## 4. Departure fee

- Since 1990, SDCWA has made major infrastructure investments and has taken on substantial contractual commitments to ensure 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.
- The existence of these commitments provides a sound economic justification for requiring FPUD and RMWD to assume some financial commitment to SDCWA for a fixed period of time after a detachment from SDCWA.
- In the water industry, 10 years would typically count as the short run for planning purposes. I suggest that the period of adjustment during which FPUD and RMWD be required to provide some form of compensation to SDCWA be ten years.

- There are two ways by which FPUD and RMWD could provide this compensation: (1) an annual departure fee, or (2) an annual water purchase commitment.
- If there is an annual departure fee, it should be keyed to the portion of SDCWA's outstanding obligations that relate specifically to QSA water. The CY 2021 cost of this components amounts to \$284.5 million.
- The FPUD/RMWD share of this annual obligation amounts to 3.1 % (based on their share of water delivered for M&I use) or 5% (based on the share for all uses).
- This would lead to an annual charge (in CY 2021) for FPUD and RMWD combined amounting to \$8.9 million or \$14.3 million.



- An alternative approach is some sort of commitment by FPUD and RMWD to purchase QSA water from SDCWA during the 10-year period of adjustment, subject to a cap, and triggered by the occurrence of certain conditions.
- The trigger could be a shortfall in SDCWA deliveries to other member agencies below some specific level.
- The cap could be something like no more water than FPUD or RMWD had purchased in FY 2021 or some other specific period.
- There are operational factors which might constrain this approach.
- There would need to be a decision on the rate FPUD or RMWD would pay for the contingent committed purchases – for example, that year's SDCWA all-in melded rate per AF, or something else.

## 5. Water supply reliability: SDCWA vs EMWD/MWD

- There are conceptually two distinct kinds of threat: (1) the wholesale agency lacks sufficient water; (2) the wholesale agency (temporarily) lacks sufficient connectivity.
- Difference between SDCWA vs EMWD with regard to the sufficiency of the water supply available to FPUD/RMWD arises because (1) SDCWA and EMWD have access to different supplies of water, and also (2) the member agency status currently proposed for FPUD and RMWD within EMWD will be different from the status they currently have within SDCWA.
- EMWD has a supply of water that it owns but, as currently proposed, this will not be made available to FPUD and RMWD.
- The water that EMWD will supply to FPUD/RMWD is supplemental water that it purchases from MWD. Therefore, the reliability of the water to be supplied by EMWD to FPUD/RMWD depends on the reliability of MWD's water supply.

- Through EMWD, FPUD/RMWD will depend 100% on MWD's water.
- SDCWA depended on MWD for 24% of its water in FY 2020, and this is projected to decline to 14% in 2030 and 4% in 2035.
  - The rest is SDCWA's QSA water and its Carlsbad Desal water.
- Since 2000, MWD has relied on SWP supplies for an average of 61% of its total imported.
  - The rest is from MWD's own right to Colorado River water.
- SWP water from the Sacramento River Basin is less reliable than QSA water from the Colorado River.
- MWD's water from the Colorado River is less reliable than QSA water.
- California overall (including both IID and MWD) have senior rights to Colorado River water than Arizona and Nevada, which are now under a requirement to reduce their Colorado River diversions.

- California's use of Colorado River will have to be reduced if the elevation of Lake Mead falls below 1,025 feet.
- The US Bureau of Reclamation is now projecting that there is a 44% chance by 2024 and a 66% chance by 2025 that Lake Meade falls below 1,025 feet.
- The small amount of water stored in Lake Mead (and Lake Powell) is unprecedented in the history of the Colorado River Storage Project.
- For ~20 years scientists have been predicting that droughts in the Colorado River and the Central Valley River systems river systems will become more frequent and more severe.
- There is dawning awareness of a new source of uncertainty in managing diversions from both these river systems: droughts will become harder to predict on a seasonal basis because forecast models used in the past are becoming less reliable and too optimistic.

- My overall conclusion: the wholesale water supply for FPUD and RMWD will be less reliable if they detach from SDCWA.
  - Because the Colorado River supply is less unreliable than the SWP supply.
  - Because IID (which supplies SDCWA) has a more senior right to Colorado River water compared to MWD.
- There is great future uncertainty. I cannot quantify the difference in supply reliability.
- With regard to the issue of detachment, it is not clear to me that the difference in supply reliability is material.
  - Supply reliability may become an issue of the cost of water acquired.

## 6. Other conclusions

- The underlying fiscal imbalance between high fixed costs and low fixed revenue will also have significant fiscal implications for when member agencies “fall off” from the SDCWA system.
- From a fiscal perspective, there is not much difference between a detachment and a falling off.
- SDCWA member agencies should start to plan for the future finances of the SDCWA delivery system, rather than waiting to react ex-post after changes in deliveries occur.