

1 scale experiments. Exhibit SCWA-41 contains a true and correct copy of my CV.

2 The California WaterFix Project (CWF) proposes to add points of diversion and  
3 re-diversion along the Sacramento River between approximately Courtland and  
4 Clarksburg to the water right permits of the California Department of Water Resources  
5 (DWR), and United States Bureau of Reclamation (Reclamation). The proposed  
6 operation of the CWF would decrease freshwater instream flows downstream of these  
7 diversions. Reduction of instream freshwater flows could have impacts on  
8 interconnected groundwater supplies in the South American Subbasin by altering the  
9 hydraulic connection with the Sacramento River.

10 In this testimony, I assess potential impacts of the CWF on the groundwater basin  
11 that SCWA relies on to serve customers throughout its Zone 40 service area – i.e., DWR  
12 Bulletin 118-03 Groundwater Basin 5-21.65 Sacramento Valley South American  
13 Subbasin. The South American Subbasin lies within the broader Sacramento Valley  
14 Basin. (DWR Bulletin 118-03 Groundwater Basin 5-21.65 Sacramento Valley South  
15 American Subbasin.) These potential impacts include groundwater elevation decreases  
16 and changes in stream/aquifer interactions.

17 This testimony considers the potential impacts of the CWF on the groundwater  
18 system, in terms of possible changes in stream/aquifer fluxes and/or in groundwater  
19 levels. I expect the long-term decrease in surface-water flow could have an impact on  
20 the hydraulic connection between the Sacramento River and groundwater in the South  
21 American Subbasin. Based on existing conditions and current groundwater pumping  
22 rates, additional decreases in surface flows could reduce current levels of natural  
23 recharge resulting in groundwater elevation decreases, groundwater quality degradation,  
24 and adversely affect stream/aquifer interactions. A thorough analysis of surface water-  
25 groundwater interaction in the reach of the Sacramento River upstream and downstream  
26 of the proposed CWF intakes is not provided by Petitioners, and is necessary to fully  
27 evaluate the impacts.

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