

EXHIBIT SSWD-1

TESTIMONY OF ROBERT ROSCOE

1. I am the General Manager of Sacramento Suburban Water District (SSWD) and have been so continuously since March 2003. As SSWD's General Manager, I report to and receive direction from SSWD's Board of Directors. I have overall responsibility for supervising all SSWD employees, all aspects of SSWD operations and planning, including its water supplies.
2. **Exhibit SSWD-3** is a PowerPoint presentation that summarizes key points of this testimony. Exhibit SSWD-3 represents the "summary of testimony" requested by the SWRCB.
3. The District was formed as a result of the merger of Arcade and Northridge Water Districts in 2002. Those districts, particularly Northridge, depended on pumped groundwater as their primary water supply. **Exhibit SSWD-4** is a map of the District. Because the District was formed as a result of the merger, the District's facilities and water supplies are separated into a North Service Area (NSA) and a South Service Area (SSA) The NSA is the former Northridge Water District, including the former Air Force Base (now McClellan Business Park), plus the former Arcade Water District's North Highland Service Area. The SSA is the Former Arcade Water District Town and Country Service Area. Those service areas are depicted on **Exhibit SSWD-5**. These boundaries are important as they relate to the Place of Use for the District's various surface water supplies.
4. As explained in more detail below, the District has reduced its predecessors' reliance on pumped groundwater significantly by signing and implementing contracts for the use of surface water diverted from the American River system.
5. In 2013, the latest year before the District began implementing significant water conservation measures in response to the Governor's drought proclamations and the SWRCB's conservation regulations, the District delivered 38,145 acre-feet of water. The District's last 10 years of water deliveries are stated in Table A on page 2, below. As stated in the District's 2015 Urban Water Management Plan, the District projects that its water demand will be 41,304 acre-feet per year in 2040.

The District's Water Supplies

6. Supplied largely by the District's predecessor districts, much of the water that historically met demands in north central Sacramento County was groundwater. California-American Water Company also has relied on pumped groundwater in that area, as have several other local water purveyors.
7. As a result of that pumping, the groundwater within and near the District's boundaries was drawn down significantly, resulting in a significant groundwater

depression in the area. **Exhibit SSWD-6** shows the locations and hydrographs of two monitoring wells in the north-central portion of Sacramento County in and near the District. These exhibits show how groundwater elevations in the Sacramento region had declined between 1968 and 1996, and how groundwater elevations had been recovering from 1996 through 2011, after Sacramento Suburban and other agencies in the region joined together to address the problem, as discussed in more detail below.

8. In addition to the groundwater depression, groundwater in the area of the District has been affected by contamination plumes originating from EPA Superfund sites at the former McClelland Air Force Base and the Aerojet-Rocketdyne site in Rancho Cordova. **Exhibit SSWD-7** is a map that reflects my understanding of the recent extent of the Aerojet-Rocketdyne regional contamination, which is migrating northwest under the American River toward the District.
9. The District's primary water supply remains pumped groundwater, although the District's reliance on groundwater has been significantly reduced since 1995 because the District has expanded its use of surface water. The District's use of groundwater and surface water has been as follows in the last ten years:

Table A
Groundwater and Surface Water Production

Year	PCWA (AF)	COS (AF)	Groundwater Pumped (AF)
2015	0.0	0.0	27421.5
2014	0.0	0.0	32560.8
2013	409.0	0.0	38145.1
2012	4095.7	6463.0	27530.1
2011	12625.5	4083.6	19119.0
2010	15516.8	2289.3	20176.5
2009	8210.7	3872.1	23019.7
2008	12238.1	2742.5	23514.4
2007	3841.9	3701.2	37929.6
2006	13073.0	0.0	26629.6

PCWA = Placer County Water Agency

COS = City of Sacramento

10. Northridge and Arcade participated in the development of the 2000 Water Forum Agreement. After consolidation, the District signed the Water Forum Agreement. That agreement included the development of a sustainable yield standard for northern Sacramento County. That sustainable yield is 131,000 AFY. **Exhibit SSWD-8** is the 2000 Water Forum Agreement.
11. The Sacramento Groundwater Authority (SGA) has adopted a groundwater management plan for northern Sacramento County. SGA is a joint powers authority formed by a number of local agencies. The District is a member of SGA. The most

recent Groundwater Management Plan adopted by SGA assigns a sustainable pumping target of 35,035 acre-feet annually to the District.

12. When surface water is fully available to the District under the applicable contracts, that water meets a majority of total District demands. The NSA supplies are from Placer County Water Agency’s Middle Fork Project, treated by San Juan Water District at the Peterson Treatment Plant. The SSA supplies are from the City of Sacramento, treated at the City’s Fairbairn Treatment Plant.

The District’s Surface Water Contract with Placer County Water Agency

13. In 2000, Northridge signed a contract for a surface water supply from PCWA's Middle Fork project. That contract superseded a 1995 contract between Northridge and PCWA. The 2000 contract was amended in 2008. The 2000 and 2008 contracts are **Exhibits SSWD-9 and SSWD-10**.
14. The NSA began receiving surface water from PCWA in 2000. The agreement currently provides up to 29,000 AFY. The contract includes a take-or-pay provision for 12,000 AFY, meaning that the District must pay for 12,000 AFY of water that PCWA makes available to the District, whether or not the District takes delivery of it. After 2010, water under the agreement has only been available to the District when projected March-November unimpaired inflow to Folsom Reservoir is greater than 1,600,000 acre-feet. I understand the SWRCB issued orders that incorporated this limit into PCWA's water-right permits per the Water Forum Agreement.
15. This water is delivered to the District through the municipal and industrial (“M&I”) intake in Folsom Reservoir and San Juan Water District's drinking-water treatment plant. The District has obtained Warren Act contracts to convey the PCWA water through the Folsom Reservoir intake.
16. In the last ten years, the District has used the following amounts under the PCWA contract:

<u>Year</u>	<u>Amount</u>
2006	13,073 AF
2007	3,841 AF
2008	12,238 AF
2009	8,210 AF
2010	15,516 AF
2011	12,625 AF
2012	4,095 AF
2013	0
2014	0
2015	0

The District's Surface Water Contract with the City of Sacramento

17. In 2004, the District and the City signed a contract for a supply of water diverted from the lower American River at the Sacramento's Fairbairn diversion near Howe Avenue and Sacramento State. **Exhibit SSWD-11** is a copy of that contract. **Exhibit SSWD-12** is a map showing the location of the Fairbairn diversion and the facilities that convey water diverted to the District by the City of Sacramento and San Juan Water District.
18. The City contract is for a supply of up to 20 million of gallons per day (mgd) with an option to purchase up to an additional 10 mgd. A continuous supply of 20 mgd equals 22,404 AFY.
19. Supplies under this contract, however, are constrained by terms inserted into the City of Sacramento's water-right permit pursuant to its agreement to the Water Forum Agreement.
20. Those limits reflect streamflows that Judge Richard Hodge identified in litigation concerning EBMUD's proposed diversions of American River water into the Folsom South Canal. Pages 203-205 and 345 of **Exhibit SSWD-8** (the 2000 Water Forum Agreement) reflect the City of Sacramento's agreement to amend its permits and explain the genesis of the Hodge flows. **Exhibit SSWD-13** is a copy of the SWRCB orders that amended the City of Sacramento's permits to reflect the Hodge limits.
21. When the lower American River streamflows are below the Hodge standards incorporated into the City of Sacramento's permit, the City's diversions at Fairbairn are constrained. The City of Sacramento then reduces the amount of water that can be conveyed to the District. If California WaterFix causes streamflows in the lower American River to be reduced below the Hodge limits more often, it will constrain the amount of water available to the District under its contract with Sacramento.

Impacts of California WaterFix on the District

22. The hydrologic modeling on which the Bay-Delta Conservation Plan draft environmental impact report/environmental impact statement (DEIR/EIS) and the California WaterFix recirculated draft EIR/supplemental draft EIS (RDEIR/SDEIS) are based indicate that, with operation of the proposed California WaterFix project under the one modeled climate change scenario and with demand growth, Folsom Reservoir would be drained to approximately 100,000 acre-feet at the end of September during 10% of all years in the future. These results are shown in, among other places, Figure 8 of the RDEIR/SDEIS's hydrologic modeling Appendix B. A copy of that figure is **Exhibit Folsom-25**. It is not clear if this is the lowest possible level to which Folsom Reservoir would be drawn with the California Water Fix project because 100,000 acre-feet appears to be the lowest level for the reservoir depicted in the modeling.
23. In spring 2016, in preparation for this hearing, Reclamation and DWR released new modeling of the project; this modeling had not previously been included in the RDEIR/SDEIS. DWR-514 summarizes the results of the Spring 2016 modeling.

Figure 14 of DWR-514 shows Simulated End of September Folsom Storage under the Spring 2016 modeling. According to Figure 14, with the proposed project, in 5% of the years, Folsom Reservoir storage will be drawn down to 90,000 acre-feet or less at the end of September. Again, it is not clear whether the actual lake level would be less than 90,000 acre-feet because 90,000 acre-feet is the lowest value that can be obtained under the Spring 2016 version of the model.

24. At 90,000 acre-feet of storage, as projected by DWR-514, the lake level elevation of Folsom Reservoir is about 330 feet above msl – which I believe is at the level where the M&I intake becomes inoperable. Even if the more generous lake level projection of the RDEIR/SDEIS modeling is accepted, the end-of-September storage for Folsom Reservoir with the project would be 100,000 acre-feet (or less) in 10% of the years. At this level, Folsom Reservoir would be only 10,000 acre-feet away from potentially encountering the vortex – and this level is more than 11,000 acre-feet below the margin of safety established in 2015 when Reclamation announced it would implement emergency measures if the lake dropped below 111,945 acre-feet (or 340 feet above msl).
25. The DEIR/EIS, the RDEIR/SDEIS, the draft and final Biological Assessments, and the evidence submitted at this hearing do not contain any CVP/SWP operations plan that demonstrates how the CVP and SWP would operate with the proposed Delta tunnels in place. It therefore is possible that, with the tunnels in operation, Folsom Reservoir could be drawn down at least as far as stated in Figure 14 of DWR-514, that is, to 90,000 acre-feet of storage, or less, at the end-of-September. While Reclamation and DWR's operators, Ron Milligan and John Leahigh, testified that the projects would not actually be operated as depicted in the modeling, without an operations plan or other enforceable criteria in place, the District and the other agencies that rely upon water supplies delivered through the M&I intake at Folsom Reservoir do not have any assurance that the operations shown in the modeling will not be carried out.
26. If Folsom Reservoir were drawn down as far and as often as projected in either the RDEIR/SDEIS modeling or the Spring 2016 modeling, these drawdowns could interfere with the District's ability to access its surface water supplies.
27. Furthermore, agencies that currently obtain much of their water supplies from Folsom Reservoir may be forced to pump more groundwater as the reservoir supplies become less reliable. This effect may occur not only in years when the reservoir is projected to be drained to 100,000 acre-feet or lower. This effect would occur because, as reservoir supplies become less reliable, water agencies would be less likely to invest in the facilities necessary to use them and instead would be more likely to invest in more reliable groundwater supplies.
28. For example, the City of Roseville, Citrus Heights Water District, Orangevale Water Company, and Fair Oaks Water District all are located north of the American River in close proximity to the District. They all rely on water from Folsom Reservoir as their primary water supply. If they were to begin pumping more groundwater, then the resulting increased demand would draw down the aquifer in the area of the District.

29. As history already has demonstrated, having significantly more demand on the groundwater in the area of the District has resulted in depressed groundwater levels, which would affect the District's water supplies.
30. The DEIR/EIS and the RDEIR/SDEIS indicate that, in projected future conditions with the project, lower American River streamflows would be materially lower in many months in many years. **Exhibit SSWD-14** consists of DEIR/EIS excerpts showing the lower American River flows. To the extent that implementation of the project causes lower American River flows to be reduced, there is a significant risk that the lower flows would further constrain the availability of water to the District under its contract with the City of Sacramento.
31. The DEIR/EIS and RDEIR/SDEIS do not attempt to analyze what effect these different streamflows would have on the availability of water for diversion at Fairbairn under the City of Sacramento's water-right permit. The DEIR/EIS and RDEIR/SDEIS do not analyze how project implementation would affect the rate of lower American River flows relative to the Hodge limits in the City of Sacramento's water-right permit. The DEIR/EIS and RDEIR/SDEIS therefore provide no information to determine how implementation of the project would ensure that it was not injuring the City of Sacramento and the District as legal users of water under the City's water-right permit.
32. As noted above, the District's PCWA contract water is only available in wetter years when inflows to Folsom Reservoir exceed 1,600,000 AF. However, because there is no CVP/SWP operations plan for the California WaterFix, it is unclear whether, even in wet years, Folsom Reservoir would be operated to allow the M&I intake to deliver the District's PCWA contract water. If, as a result of Cal WaterFix project, Folsom Reservoir will be drawn down to less than 100,000 acre-feet of storage on a more frequent basis even in wetter years, similar to what occurred in 2015, then Cal WaterFix will interfere with the District's ability to access its water supplies under its PCWA contract and injure the District as a legal user of water under that contract.