

## **EXHIBIT SVWU-400**

### **TESTIMONY OF WALTER BOUREZ, P.E.**

1. I am a registered civil engineer in the State of California and am employed by the firm of MBK Engineers (MBK). I hold Bachelor of Science and Master of Science degrees in Civil Engineering from California State University, Sacramento.
2. I have over 30 years of experience in water resources engineering and have worked on numerous projects involving the modeling of surface water systems, including many projects involving the operation of CalSim models of state and federal water systems in the Central Valley.
3. A sample of the projects in which I have been involved include: (a) revising CalSim II to better represent the physical characteristics of the Sacramento River, Colusa Basin Drain and Stony Creek; (b) working with the federal Bureau of Reclamation to document aspects of the CalSim II model hydrology; (c) serving as a key developer of the CalSim model's depiction of the San Joaquin River system, including the operations of numerous upstream reservoirs in that system and of all water districts in the San Joaquin River basin; and (d) performing hydrologic modeling analysis to determine potential impacts to river systems tributary to the Sacramento – San Joaquin River Delta and in the Delta from proposed actions and projects including: DWR's Franks Tract Project, San Joaquin River Restoration, Upper San Joaquin River Basin Storage Investigation, Delta-Mendota-Canal Recirculation Study, Sacramento Water Forum EIR, EIR/EIS for serving CVP contracts under Public Law 101-514, Hamilton City Pumping Plan Fish Screen Improvement Project EIR/EIS, DWR's Delta Risk Management Strategy, San Luis Low Point Improvement Project EIS, CVP M&I Water Shortage Policy, water transfers analysis, and numerous other projects.
4. A copy of my resume, which accurately describes my education and experience, is Exhibit SVWU-101.
5. For Part 2 of this hearing, I was asked to prepare exhibits and testimony on the following subjects:
  - a. Modeling issues identified in Part 1 that persist in the DWR/USBR CWF H3+ modeling that the proponents have submitted in Part 2 of this hearing as Exhibit DWR-1077
  - b. March Delta outflow criteria in the DWR/USBR CWF H3+ modeling
  - c. Spring Delta outflow criteria in Incidental Take Permit for CWF
  - d. Effects of SWRCB 2010 Delta Flow Criteria Report

My detailed analysis and conclusions concerning these issues are contained in Exhibits SVWU-402, 404 and 405. Exhibit SVWU-403 is a PowerPoint that summarizes my analysis.

### **Modeling Issues Identified in Part 1 Persist in DWR/USBR CWF H3+ Modeling**

6. Four of the five key conclusions from review of the DWR/USBR CWF BA modeling in Part 1, as documented in Exhibit SVWU-107, are still applicable to the DWR/USBR CWF H3+ modeling in

Part 2. Therefore, our key overall conclusions in Exhibit SVWU-107 are still applicable to the proponents' DWR/USBR CWF H3+ modeling, namely that: 1) the proponents' modeling does not realistically simulate Central Valley Project and State Water Project operations with CWF, and 2) system-wide effects of the CWF are not adequately represented.

#### **March Delta outflow criteria in DWR/USBR CWF H3+ Modeling**

7. DWR/USBR CWF H3+ modeling includes a new March Delta outflow criteria incorporated from Section 5.3.2.3.2 of the CWF Incidental Take Permit (ITP) application (Exhibit DWR-1036 page 5-28) and Table 6.1-4 from the United States Fish and Wildlife Service's (USFWS) Biological Opinion for the California WaterFix (Exhibit SWRCB-105). DWR/USBR CWF H3+ modeling fails to meet the new March Delta outflow criteria in 13 percent of the 82 years simulated. The annual volume of additional water needed to meet the new March Delta outflow criteria, above simulated Delta outflow in DWR/USBR CWF H3+, ranges from 24,000 acre-feet to 1,115,000 acre-feet with an annual average of 38,000 acre-feet.

#### **Spring Delta outflow criteria in Incidental Take Permit for CWF**

8. The CWF ITP issued by California Department of Fish and Wildlife (Exhibit SWRCB-107) includes new Delta outflow criteria for March, April, and May. CWF ITP Delta outflow criteria are different than those analyzed in proponents' DWR/USBR CWF H3+ modeling. DWR has taken the position that the ITP Delta outflow criteria are "targets to be met to the extent export cuts down to a minimum of 1,500 cfs can achieve them" (Exhibit SWRCB-107, Clarification Letter; March 2, 2018 transcript pages 152-172), but reductions in combined exports are not the only way spring Delta outflow targets in the ITP can be met. CVP and SWP operators may choose to increase releases from upstream reservoirs in order to meet the ITP spring Delta outflow targets without reductions in exports. Effects of Delta outflow criteria contained in the CWF ITP on CVP and SWP operations with CWF have not been analyzed, and therefore the effects are unknown.

#### **Effects of SWRCB 2010 Delta Flow Criteria Report**

9. The SWRCB will evaluate potential terms and conditions for the CWF project, including those proposed by other protestants to the CWF (see Exhibit NRDC-58 Errata, Exhibit PCFFA-130, Exhibit CSPA-200-Corrected, and Exhibit CSPA-202 Errata). Potential terms and conditions may include Delta outflow requirements including those analyzed in the SWRCB's 2010 Delta Flow Criteria Report. MBK previously reviewed the SWRCB's 2010 Delta Flow Criteria Report and concluded there would be significant impacts to water supply deliveries, reservoir storage conditions, and ability to comply with existing SWRCB requirements with implementation of a minimum Delta outflow requirement of 40 to 50 percent of unimpaired flow. These conclusions remain relevant for the SWRCB's consideration during evaluation of potential terms and conditions for CWF.