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On behalf of Central Delta Water Agency, South Delta Water Agency, Lafayette Ranch, Heritage Lands, Mark Bachetti Farms and Rudy Mussi Investments L.P.

#### STATE OF CALIFORNIA

### STATE WATER RESOURCES CONTROL BOARD

Hearing in the Matter of California Department of Water Resources and United States Department of the Interior, Bureau of Reclamation Request for a Change in Point of Diversion for California Water Fix THOMAS K BURKE'S WRITTEN
SUMMARY OF TESTIMONY IN
SUPPORT OF THE SOUTH DELTA
WATER AGENCY PARTIES' REBUTTAL
FOR PART 1 OF THE CALIFORNIA
WATERFIX CHANGE PETITION

1. I, Thomas Burke, submit this written testimony at the request of Protestants South Delta Agency, Central Delta Water Agency, Lafayette Ranch, Heritage Land Company, Mark Bachetti Farms and Rudy Mussi Investments L.P., the ("South Delta Parties/Protestants.") The matters contained herein are true and correct and based upon my personal knowledge. If called upon to testify to them, I would and could do so.

#### **Background and Qualifications**

- 2. I am a hydrologist and water resources engineer with over 35 years of experience in surface water and groundwater hydrologic modeling. Prior to starting Hydrologic Systems Inc., I held the position of Senior Associate with PWA, Western Regional Director of Water Resources for EA Engineering Science and Technology, and Hydraulic Engineer with the US Army Corps of Engineers. My experience ranges from development of two and three dimensional river and reservoir flow and circulation models to local and regional groundwater and transport models for basin-wide hydrologic analyses. My experience also includes the analysis of one and two-dimensional flow in river and wetland systems.
- 3. I hold a Master of Science in Civil Engineering from Colorado State University, Fort Collins (1992) and hold a Bachelor of Science in Civil Engineering from The University of Florida, Gainesville (1980). My Statement of Qualifications is marked as SDWA 75.

# **Previous Analysis**

4. With respect to Part 1B of the CWF proceedings I was retained by the South Delta Parties to analyze the potential impacts on the members of the South and Central Delta from the possible implementation of the Change Petition being requested by the Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (BOR), (Petitioners) as part of the California Water Fix (CWF) project. More specifically, I was asked to: 1) determine if there would be any change in salinity in the central and south Delta from the four potential operational scenarios that have been proposed by the Petitioners. 2) Determine if there would be any change to the water levels in the Delta that would result from implementing any of the four operational scenarios that have been proposed by the Petitioners. 3) Evaluate any change in residence time of waters in the central and south Delta from the four operational scenarios that have been proposed as part of the CWF project.

## **Rebuttal Testimony**

5. At the request of the SDWA Parties I have prepared a technical report entitled Evaluation of Impacts of the HORB Modifications Proposed for the CWF. This report is identified as SDWA – 257 and is in support of the SDWA Parties' Part 1 rebuttal case. As part of their case in chief Petitioners attempted to show there would be no meaningful impacts on stage or salinity to diverters in the south delta from the operation of the proposed permanent HORB. My technical report analyzes these two issues and finds that diverters in the south delta would in fact be negatively impacted. As more specifically set forth in my technical report (SDWA – 257) I compared the impacts on stage, flow and, by implication, water quality from the HORB by comparing the No Action Alternative and the Preferred Alternative analyzed in the Biological Assessment which was prepared for the CWF. I hereby incorporate SDWA – 257 as part of my written testimony.

6. I also prepared a power point presentation which will be used to facilitate my oral testimony at the hearing. The power point is identified as SDWA – 258. It is based on the information provided in my technical report which is incorporated herein. Consequently, the inclusion of additional information in this written summary of testimony would be repetitive.

Executed this 23<sup>rd</sup> day of March in Novato, California.

Thomas K. Burke

THOMAS K BURKE, P.E.