DOWNEY BRAND LLP
KEVIN M. O'BRIEN (Bar No. 122713)
MEREDITH E. NIKKEL (Bar No. 254818)
621 Capitol Mall, 18th Floor
Sacramento, CA 95814-4731
Telephone: 916.444.1000
Facsimile: 916.444.2100
kobrien@downeybrand.com
mnikkel@downeybrand.com

Attorneys for North Delta Water Agency

BEFORE THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the matter of 2016 SWRCB Hearing re CalWaterFix Petition for Change	**TESTIMONY OF GOMATHISHANKAR PARVATHINATHAN, MBK ENGINEERS**

PROFESSIONAL BACKGROUND AND QUALIFICATIONS

1. I am a registered civil engineer in the State of California. I specialize in hydrologic modeling. I am an engineer at MBK Engineers, located at 455 University Avenue, Suite 100, Sacramento, CA 95825. MBK Engineers specializes in water resources engineering and performs these engineering services for local public agencies and private clients principally in the Delta and the Sacramento Valley. MBK Engineers was formed in 1967 (then known as Murray, Burns and Kienlen) and currently employs approximately 21 engineers. Exhibit NDWA-6 is a true and correct copy of my professional qualifications.

2. Delta Simulation Model ("DSM2") was the primary tool utilized by the California Department of Water Resources ("DWR") and the U.S. Bureau of Reclamation ("Reclamation") to evaluate changes in the water quality and water levels associated with the "California WaterFix" Project ("WaterFix"). DSM2 is a one-dimensional hydrodynamic and water quality simulation model used to simulate hydrodynamics and water quality in the Sacramento-San Joaquin Delta. I am familiar with and have used DSM2.

3. I have reviewed the Testimony of Parviz Nader-Tehrani (Exhibit DWR-66) and the Testimony of Armin Munevar (Exhibit DWR-71) submitted in this proceeding, including the DSM2 modeling results as shown in Exhibit DWR-513. In addition, I have reviewed the DSM2 modeling files made available by DWR in connection with the California WaterFix Biological Assessment and detailed my findings in a memorandum, a true and correct copy of which is attached as Exhibit NDWA-32.

4. It is my understanding that the DSM2 modeling performed by DWR and Reclamation, as described by Mr. Nader-Tehrani, utilizes the same operational assumptions regarding how WaterFix would be operated if built as the operational assumptions utilized for the CalSim II modeling performed by Mr. Munevar, as described in his testimony. As detailed in the Testimony of Walter Bourez submitted in this proceeding (Exhibit SVWU-100), there are serious questions about the validity of the operational assumptions for WaterFix that are embedded in the CalSim II modeling. Since the DSM2 modeling, in effect, tiers off the CalSim II modeling with

respect to assumed CVP/SWP operations, any flaws in the CalSim II modeling will be carried forward into the DSM2 modeling.