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**BEFORE THE
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD**

HEARING IN THE MATTER OF
CALIFORNIA DEPARTMENT OF
WATER RESOURCES AND UNITED
STATES BUREAU OF RECLAMATION
REQUEST FOR A CHANGE IN POINT
OF DIVERSION FOR CALIFORNIA
WATER FIX

PART 2 TESTIMONY OF DAVE S.
FRIES, Ph.D.

I Dave S. Fries do hereby declare:

My name is Dave Fries. I am Emeritus Professor of Medicinal Chemistry, University of the Pacific. I have been Visiting Research Professor at numerous universities around the world. My family and I have been sailing boats on the Delta since the late 1970's. First in a 17-foot wooden boat, then in 1988 we purchased a 27-foot keel boat (Cal 27) and at that time joined the Stockton Sailing Club. Since then we have owned the Cal 39 Coracle and now the Cape North 43 Kievit. We have sailed each of the boats extensively in the San Joaquin Delta and San Francisco Bay. We have participated in sail boat regattas and have anchored, for days, in Little Potato Slough, Mildred Island, Three Mile Reach and numerous other sites in the Delta. All of my boating activity will be adversely affected by WaterFix.

I have taken numerous University of the Pacific students and Stockton residents for day sailing excursions into the Delta. I am currently guiding bird-watching field (sailing) trips into the Delta for members of the San Joaquin Audubon society. I was a member of the original Committee to save the Mokelumne. I have served on the Board of the Bay/Deltakeeper. I presently serve as Conservation Chair for San Joaquin Audubon and a member of the Advisory Board for CSPA. I have come to know and to love the Delta for its beauty and the unique recreational opportunities and other beneficial uses that it provides. During the 30 years that I have been boating in the Delta, I have witnessed continual degradation of water quality and wildlife habitat. I provide testimony here on the detrimental effects that the WaterFix Project will have on boating, recreational activities and other beneficial uses on the Sacramento/San Joaquin Delta.

If the WaterFix Project were to be funded and built, it would have a devastating effect on boating in the Delta. First, the tunnels would take, at times, one-third of the fresh water flow from the Sacramento River and divert it to Southern California. I am aware that the State Legislature directed the Water Board and the Department of Fish and Game to establish flow rates for a sustainable Delta. In 2010, an expert scientific panel was assembled and charged with determining the Delta flow criteria pursuant to the Delta Reform Act (2010 State Water Resources Control Board Resolution NO. 2010-0039). The basic charge to the panel was to determine minimal flow rates for a healthy Delta. The flow requirements recommended by the expert panel (Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, August 2010), pursuant to the Board's charge, have been completely ignored in the WaterFix Petition and no sustainable flow

rates have been implemented for a healthy Delta. In November 2010, the California Department of Fish and Game published the study “Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta.” Recommendations made in this study are not met in the WaterFix EIR.

In addition, WaterFix has not adequately analyzed the effects of climate change and sea level rise on flows in the Delta. Projections are made only to the year 2030. If stated today, WaterFix would not even be operative until after the year 2030. How can anyone call the use of “best science” in planning applicable to this Petition? I have attended meetings of the Delta Stewardship Council and its Independent Science Board. A constant critic by the scientists’ reviews is that there is too much uncertainty in the Stewardship’s guidelines and the WaterFix Project. Recommendations are that analysis of effects of sea level rise be made to at least to 2050, if not beyond.

The diversion of large amounts of the Sacramento River’s flow beneath the Delta will decrease flushing of the Delta. We all know that the water from the Sacramento River is the best quality water that flows into the Delta. Decreased flow from the Sacramento into the central Delta results in increased residence time of waters in the Delta. Decreased fresh water flow also will result in increased salt water intrusion into the Delta. As a chemist it is clear to me that decreased flow and increased residence time of waters contaminated with materials such as selenium, mercury, herbicides, pesticides and additional agricultural and industrial runoff pollutants will result in increased exposure of these toxins to flora and fauna in the Delta. Any toxicologist will verify that increased concentration of toxins combined with increased exposure time will result in

increased harmful effects to the exposed organisms. Waters will stagnate, invasive aquatic plants (such as the water hyacinths) will not be flushed, aquatic and terrestrial life forms are harmed, swimming and on-water activities become dangerously unhealthy, and agriculture in the Delta will be harmed. A myriad of beneficial uses of the Delta would be harmed. In August 2015, a time of decreased flow and increased residence time, it was virtually impossible to boat in the Delta due to dense overlays of water hyacinths and toxic alga blooms which made fishing and swimming prohibitive.

Second, the construction project is proposed to take 13 years and would probably take longer. The main construction staging area is the south end of Bouldin Island. This area is just at the north side of the Little Potato Slough Anchorage, a favored anchorage for recreational boaters. Large docks would be built on the water ways to land the large pieces of construction equipment, including the 40' diameter tunneling machines. There would be blockage of waterways, increased barge traffic and much dust and noise. On site construction is to be allowed day and night. Pile driving for the 27 massive shafts would be allowed dawn to sunset. Building the tunnels requires over 700,000 concrete liners, 40 ft in diameter, which would be manufactured off site and brought in by barge. The aesthetic quality of the Delta would be disrupted throughout the construction period and possibly beyond.

Third, the barge and boat traffic associated with the construction would greatly increase dangers to boating safety. Sailboat races on the Estuary would become dangerous if not prohibitive. Boat groundings would surely increase due to avoidance of ship collisions. The wakes generated by extensive increase of barge and tug boat activity

would erode levies and in-stream islands. Chances of levee breaks would be increased, especially in times of king tides and spring runoff. Periods of banned or highly restricted boating activity are likely to be mandated, as did occur in the Spring of 2016.


Forth, there is the potential loss of the beauty of the Delta. The fish, bird and other wildlife species that are struggling to exist in the Delta would be harmed to the extent of extinction in some cases. Large areas of wetland would be filled with muck (materials excavated in tunnel construction) from the tunnel boring machines. The EIR states that the muck will be stored and reused, but there are no details of where the material will be cleaned and stored, nor how it might be reused.

Recreational uses of the waters of the Delta are protected by the California Public Trust Doctrine (California State Lands Commission, (<http://www.slc.ca.gov/PublicTrust/PublicTrust.html>)).

*“The common law **Public Trust Doctrine** protects sovereign lands, such as tide and submerged lands and the beds of navigable waterways, for the benefit, use and enjoyment of the **public**. These lands are held in **trust** by the State of **California** for the statewide **public** and for uses that further the purposes of the **trust**.”*

WaterFix’s primary benefit would be to water users in Southern California and of net detriment to the ecological preservation and other public trust beneficial uses of the Delta. California law requires that the Delta be protected for my enjoyment and recreational uses. It cannot be in the public interest. Therefore, the WaterFix Petition must be rejected.

Executed on this 29th day of November 2017 in Stockton, California.


Dave S. Fries