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COUNTY SANITATION DISTRICT

BEFORE THE
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

HEARING ON 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.

**TESTIMONY OF
PRABHAKAR SOMAVARAPU**

This testimony is offered on behalf of the Sacramento Regional County Sanitation District (Regional San).

I. INTRODUCTION

My name is Prabhakar Somavarapu. I am the District Engineer for the Sacramento Regional County Sanitation District (Regional San). Regional San owns and operates the Sacramento Regional Wastewater Treatment Plant (SRWTP). As the

1 District Engineer, I take direction from Regional San's Board of Directors and serve as
2 the executive manager with overall responsibility for all activities that Regional San
3 conducts, including the work of a staff of approximately 470 permanent employees.
4 Prior to becoming the District Engineer in 2013, I worked in a variety of positions in
5 various areas of Regional San. These have included other executive management
6 positions such as the Director of Policy and Planning, the Director of Operations, and the
7 manager for the Operations Support Group and Asset Management Group. Before I
8 began work with Regional San in 1996, I worked for the State of California Department
9 of Public Health for approximately four years as a regulatory engineer in the Drinking
10 Water Field Operations office, and I worked approximately three years as a design
11 engineer for a consulting firm in Montana, designing improvements to water and
12 wastewater systems. I hold a Master of Science degree in Civil Engineering from New
13 Mexico State University and a Bachelor of Technology degree in Civil Engineering from
14 India. I am also a registered civil engineer in the State of California. My testimony
15 addresses Regional San's history and operations, and development of the EchoWater
16 Project.

17 II. REGIONAL SAN'S ESTABLISHMENT AND HISTORICAL OPERATIONS

18 As District Engineer and based on my experience from my prior positions, I have
19 personal knowledge of Regional San's operations, maintenance, engineering,
20 administration, construction programs, laboratory services, long-range planning efforts,
21 rate and fee development, regulatory and legislative affairs, National Pollutant Discharge
22 Elimination System (NPDES) and recycled water permitting, scientific research,
23 wastewater source control, and policy development. In addition, during my tenure at
24 Regional San, I have investigated the history and circumstances of Regional San's
25 formation and the initiation of the SRWTP.

26 Regional San was formed in early 1970s, pursuant to California Health and Safety
27 Code section 4700, for the purpose of consolidating wastewater treatment and disposal
28 that had previously been provided by over 20 separate wastewater treatment plants

1 serving the Sacramento region. Most of these treatment plants, many discharging to the
2 American and Sacramento Rivers, were replaced by the SRWTP in 1982. The few that
3 remained in operation after the initial consolidation have since that time also been
4 replaced by the SRWTP.

5 Currently, Regional San provides wastewater conveyance, treatment, and
6 disposal for approximately 1.4 million people in the urbanized area of Sacramento
7 County and the City of West Sacramento in Yolo County. West Sacramento
8 discontinued its own wastewater treatment and joined Regional San in 2007. Regional
9 San is governed by a Board of Directors composed of the five members of the
10 Sacramento County Board of Supervisors, a member of the Yolo County Board of
11 Supervisors, five members from the Council of the City of Sacramento, two members
12 from the Council of the City of Elk Grove, and one Council member from each of the
13 cities of Citrus Heights, Folsom, Rancho Cordova, and West Sacramento.

14 The SRWTP receives wastewater from businesses and residences collected in
15 local wastewater collection systems operated by the City of Folsom, City of Sacramento,
16 City of West Sacramento, and the Sacramento Area Sewer District. The SRWTP itself is
17 located approximately 10 miles south of downtown Sacramento, at 8521 Laguna Station
18 Road in Elk Grove, California.

19 The SRWTP treats wastewater through a series of treatment steps or processes.
20 Primary treatment removes waste through physical and chemical processes. Secondary
21 treatment occurs in a pure oxygen activated sludge process, which uses aeration tanks
22 and secondary clarifiers to remove the organic matter from the wastewater with the
23 injection of pure oxygen into the wastewater to grow microorganisms capable of
24 removing the organic matter. Following the biological secondary treatment step,
25 gaseous chlorine is added to the wastewater for the purpose of disinfection to destroy
26 pathogenic organisms. Chlorine travels in a pipeline with the wastewater for
27 approximately two miles to a location where the chlorine is removed by a dechlorination
28 step before the water is discharged to the Sacramento River. The treated water is

1 discharged to the Sacramento River, just downstream of the Freeport Bridge, through a
2 high rate diffuser designed to rapidly mix the treated water with the Sacramento River.
3 The diffuser is basically a large pipe on the bottom of the Sacramento River, oriented
4 perpendicular to the direction of river flow with 74 exit "ports" (or holes) through which
5 the treated effluent is released, parallel to the river flow. The SRWTP has a permitted
6 capacity based on average dry weather flow of 181 million gallons per day (MGD), and
7 over the past decade, discharged, on average, 133 MGD. The current treatment
8 process is categorized as the secondary treatment process. Regional San participates
9 in and supports regional partnerships aimed at understanding and improving
10 environmental health and sustainability through funding regional monitoring programs,
11 research, resource recovery, and conservation.

12 **III. MAJOR IMPROVEMENTS TO SRWTP UNDER DEVELOPMENT**
13 **INCLUDING PRODUCTION OF TITLE 22 EFFLUENT**

14 Discharge from the SRWTP is authorized and regulated under NPDES permits
15 issued by the California Regional Water Quality Control Board, Central Valley Region
16 (Regional Water Board). Prior to 2010, these permits required that the SRWTP meet
17 effluent limitations based on secondary treatment. In December of 2010, the Regional
18 Water Board renewed the NPDES permit and imposed much more stringent
19 requirements relative to nutrient and pathogen removal. To meet these requirements,
20 Regional San is required to modify or replace current secondary treatment, construct
21 nitrification processes (for ammonia removal) and denitrification (for removal of nitrate
22 resulting from nitrification), and filtration and new disinfection facilities.

23 In April of 2016, the Regional Water Board again renewed the NPDES permit for
24 the SRWTP. Like the predecessor permit, the renewed permit, Regional Water Board
25 Order R5-2016-0020, requires ammonia and nitrogen removal and tertiary filtration and
26 disinfection. The deadlines for compliance are: May 11, 2021 for compliance with
27 ammonia limitations; and May 9, 2023 for compliance with tertiary filtration and
28

1 disinfection requirements. Exhibit SRCSD-3 is a true and correct copy of Regional
2 Water Board Order R5-2016-0020 without its attachments.

3 Since adoption of the NPDES permit in December 2010, Regional San has
4 engaged in a major effort directed toward design and construction of the capital facilities
5 required for compliance with permit requirements. This project, known as the
6 EchoWater Project, is currently estimated to cost between \$1.7 and \$2.1 billion. When
7 the EchoWater Project is complete, all of the SRWTP effluent during May-October will be
8 suitable for expanded reuse, and nearly all effluent will be suitable for expanded reuse
9 on a year-round basis.

10 The EchoWater Project is on schedule. Exhibit SRCSD-4 is a true and correct
11 copy of the most recent progress report submitted to the Regional Water Board by
12 Regional San.

13 In addition, Regional San adopted a goal in 2004 to increase recycling by 30 to
14 40 MGD by 2024. This goal is complementary to the State Water Resources Control
15 Board's goal to increase the use of recycled water over 2002 levels by at least 2 million
16 acre-feet by 2030. Christoph Dobson is discussing Regional San's water recycling
17 activities in more detail in his testimony.

18 I declare under penalty of perjury under the laws of the State of California that the
19 foregoing is true and correct.

20 Executed on this 29th day of August 2016 in Sacramento, California.

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22 Prabhakar Somavarapu
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