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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	**TESTIMONY OF DAVID STIRLING – REVISED** **LOCAL AGENCIES OF THE NORTH DELTA**

I. INTRODUCTION

My family and I have lived in the North Delta community of Walnut Grove for 31 years. Prior to living in Walnut Grove we lived in Sacramento, but we decided we wanted to live in a more rural setting. A friend who lived here suggested we take a drive to Walnut Grove along State Highway 160. As the levee road twisted and turned along the Sacramento River, the golden glow of the setting sun cast the river, levees and agricultural fields as a living scene from an early California painting. At the time both my wife and I had stressful jobs in Sacramento, but over the southbound drive we could feel the stress dissipating. It was like a different world, much more laid back and moving at a slower pace. Longer story shorter, we fell in love with the Delta, the community, and the home where our family resides.

Although born and raised in south Louisiana, I came to California after graduating from Principia College in Illinois and Tulane University Law School in New Orleans in 1965. After the Bar Exam I practiced law in Southern California for 10 years. I then ran for and was elected to serve as a member of the State Assembly, where I served for three terms. When I chose not to seek re-election, I was then appointed as General Counsel of the Agricultural Labor Relations Board ("ALRB"), one of the most challenging but stimulating positions I have held. After six years at the ALRB, I was appointed as a judge to the Sacramento County Superior Court. Later, I resigned from the court to be the Chief Deputy Attorney General at the California Department of Justice for eight years. I later became Vice President and then Of Counsel at Pacific Legal Foundation, where I spent 12 years. About five years ago I retired from ever working in an office again. Now I stay busy, among several diverse pursuits, trying to tell the story of how the Delta Tunnels project (a.k.a. "California WaterFix") would destroy the beautiful Delta region as we know it, and how it would harm the people who live, work and farm in this special place. (See LAND-210 [Delta Photos].)

II. IMPACTS FROM PETITIONED PROJECT WOULD BE CONTRARY TO THE PUBLIC INTEREST

The Delta Reform Act declares two co-equal goals for the Delta Tunnel project: (1) "providing a more reliable water supply for [Central and Southern] California," and (2) "protecting, restoring, and enhancing the Delta ecosystem." (Wat. Code, § 85054.)

Although not often recognized, the Act also contains a condition that is legally tantamount to a third co-equal goal—namely, that the two stated co-equal goals "shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resources, and agricultural values of the Delta as an evolving place." (Wat. Code, § 85054.) It is this statutory condition to the stated co-equal goals that I will address in my testimony.

I feel safe in stating that nearly every Delta resident, but particularly those of the North Delta Legacy communities along the Sacramento River (Freeport, Clarksburg, Hood, Courtland, Locke, Walnut Grove, and Ryde) justifiably believes that instead of "protect[ing] and enhance[ing] the unique cultural, recreational, natural resources, and agricultural values of the Delta as an evolving place," the Delta Tunnels project would, during the 18-year construction process (including the 13-year construction phase) and thereafter in operation, reduce this bucolic region to a "devolving place." My objective is to paint a picture showing why we oppose the construction and presence of the Delta Tunnels project—why we raise the signs declaring: "Stop the tunnels, Save the Delta."

A. Construction Timeline

Let me offer this realistic construction timeline for your consideration. The time needed to complete the Delta Tunnels project is a major factor in how its construction and operation would hover like an ever-threatening dark cloud over the people and property of the North Delta's Legacy communities. Due in no small part to the several years of pending and future anti-tunnel litigation in the state and federal trial and appellate courts, and the project's a-ways-off completion of preliminary planning and engineering, as of the date of this written testimony the Delta Tunnels project is many years from being construction-ready.

Further, in July, 2017, the Metropolitan Water District of Southern California ("Metropolitan"), the leading proponent of the Delta Tunnels project, issued a Program Schedule for the project from start to finish. The schedule shows that: permits and staffing for its construction would take 1.3 years; design would take 4 years; construction would take 13 years; followed by Commissioning that would take 1 year; for a total construction process of 18 years. (LAND-207 [Metropolitan's infrastructure project schedule].)

Assuming no significant delays due to unforeseen problems during the construction phase, which is unlikely considering the immensity, complexity, and duration of the project, it could easily be 2040 or later before the project would be completed and ready for operation. During this arduous timeline, the North Delta people who live, work and farm along the Sacramento River would be mentally, emotionally, and physically challenged.

B. The Intakes and State Highway 160

Early in the projects' construction phase would be the building of three large intake facilities on land abutting the east bank of the Sacramento River near the small North Delta Legacy communities of Clarksburg (Intake 2) and Courtland (Intake 5), and just north of the community of Hood (Intake 3). (LAND-3 [map of intakes and other project elements]; see also LAND-120.)

State Highway 160, which, for more than 100 years, has run atop the winding levee road along the river, is home to vineyards and wineries, old—some historic Victorian—homes, event and recreational venues, and farming operations with hundreds of acres of highly productive agricultural land. It is also a major travel route for vehicles of all types in the Delta, from Freeport just south of Sacramento, all the way over to Antioch where it joins major highways to the Bay area. Running along the river, the area is one of several quintessential images that depict "the unique cultural, recreational, natural resources, and agricultural values of the Delta." But with the construction of the three huge Intakes, Highway 160 would undergo drastic modification and re-routing because the coffer dams at each of the three Intakes would be installed precisely on top of the levee road that is State Highway 160. (DWR-212, p. 33

[according to the Conceptual Engineering Report, State Highway 160 would be moved 220 feet inland at intake locations].)

During the construction of the three Intakes, State Highway 160 would become unusable and its route altered when the coffer dams at each of the three Intakes were installed on top of the levee road. During this lengthy construction period, visitors and regular passers-by would be unable to enjoy the bucolic view of the riverscape and agricultural landscape because Highway 160's re-routed temporary roadway running between the intakes and the coffer dams would have walls on both side. Even when the coffer dams are removed and old State Highway 160 along the levee road is once again drivable, we simply cannot accept that the three huge unsightly concrete infrastructure facilities along the scenic land and waterscapes of State Highway160 can be considered "protect[ing] and enhance[ing] the Delta as an evolving place."

Some perspective of the size of these three intakes helps in conceptualizing the severely degrading impact their construction and presence would impose on the unique bucolic culture of the Delta. For comparison purposes, consider the East Bay Municipal Utility District's ("EBMUD") intake facility on the Sacramento River at Freeport. This intake facility, situated near a commercially developed area of south Sacramento, takes 285 cubic feet of water per second out of the river. (EBMUD-181 [according to the domestic supply permit, the Freeport intake is a 185 million gallon per day facility, which equates to approximately 285 cubic feet per second].)

The three Delta Tunnel intakes, on the other hand, would be situated in a rural area of Sacramento County near three small unincorporated Legacy communities. Each intake would occupy approximately 90 acres by themselves. (SWRCB-102, FEIR/S, p. 3-91 [Table 3-17 summary of physical characteristics of intake facilities].) Even worse, these three huge intakes facilities would all be situated along the east side of the Sacramento River within a 5-mile stretch. (SWRCB-102, FEIR/S, p. 3-15.)

Each of the three intakes would divert 3,000 cubic feet per second ("cfs") of water from the river and funnel it into three "north tunnels." (LAND-65, p. 6 [conceptual engineering

report's hydraulic profile].) The north tunnel that would begin at the southern end of Intake #2, would then turn horizontal 150-feet below ground, where a large tunnel boring machine ("TBM") would bore a 28-feet in diameter tunnel over to Intake #3. Another 28-feet in diameter tunnel would be bored in the same manner on the south side of Intake #5. (See LAND-3; see also LAND-65, p.9 [Conceptual engineering report's overall process flow diagram indicating tunnel sizes].) A 40-feet in diameter tunnel coming out of Intake #3, after being joined by the 28-feet in diameter tunnel coming from Intake #5, would then be bored down to the Intermediate Forebay.

The water collected in the Intermediate Forebay would be fed into the main "twin tunnels." The twin tunnels would consist of two side-by-side cylinder pipes each 40-feet-in-diameter on the inside (44-feet on the outside). Together they would transport 9,000 cfs of water south 30 miles to the Clifton Court Forebay. (See Land-120; see also LAND-65, p. 6 [Conceptual engineering report's overall process flow diagram indicating tunnel sizes] and p. 9 [conceptual engineering report's overall process flow diagram indicating tunnel sizes].)

To gain some perspective of what the inside of a 28-feet in diameter tunnel looks like, consider the 18' 10" in diameter tunnel recently constructed under downtown Los Angeles. (LAND-208 [cover photograph of a Los Angeles Time article on the underground tunnel].) The two 28-feet in diameter north tunnels from Intakes #2 and #5 would be roughly 10-feet in diameter larger than the tunnel in this photo. The 40-feet-in-diameter north tunnel coming from Intake #3, would be more than twice as large as the tunnel in the photo. The proponent's video exhibits also give an idea to the enormity of the tunnels. (See DWR-2B and DWR-2C [tunnel boring and segmentation simulations].)

The proponent's own evidence by itself shows the disruptive nature of the project. (See DWR-2A [video simulation of intake facility construction].) But the construction—and later the presence of the three Intake facilities—are only part of the oppressive everyday disruption the people of the area would suffer. Each of the three intakes would first require that coffer dams be installed at each site along the river's edge to remove and prevent water from encroaching into the levee bank where excavation must occur. To perform this function the construction of

the coffer dams (and intakes themselves) would utilize numerous pieces of heavy earth-moving equipment, including cranes, excavators, bulldozers, and large dirt-transporting trucks.

The pile-drivers, however, would impose the biggest headache. The pile drivers noise impact, recognized as an unavoidable and significant impact (SWRCB-110, Finding of Facts and Statement of Overriding Considerations, Exhibit A, pp.103-107), would hurt restaurants and other businesses in the area. Businesses would have difficulty conducting operations or even maintaining the presence of their employees because of the severe discomfort of incessant millions of nearby strikes. With the construction of the Project's multiple Intakes, coffer dams, barge landing structures, and other locations where pilings are called for, calculations suggest that the total number of pile-drive strikes during the construction phase could exceed 30-million. (SWRCB, FEIR/S, pp. 3C-12 to 3C-13 [for example, the construction of each cofferdam would require approximately 1,722,000 strikes over a 41-day period].)

While the proponents claim the pile-driving would occur only between dawn and sunset~~sunrise~~ (SWRCB-104, p.3-23~~24~~ [Biological Assessment description of intake construction activity), this time frame is none-the-less harmful. Delta High School, Clarksburg Middle School, Clarksburg Charter Elementary School, and Bates Elementary School in Courtland are near enough to the pile-driver sites that maintaining the students' focus in the classrooms and in other school activities would be seriously impaired.

The final blow is that, according to Metropolitan's Program Summary Schedule: the construction of the three intakes with coffer dams would take seven years to complete. (LAND-207.) This sheer amount of disruption over such a long period of time would harm Delta residents' day-to-day lives—day and night. Even getting a good night's sleep would be a challenge. (See SWRCB-104, p. 3-23~~24~~ [dewatering, borrow fill, spoil disposal, and barge operations could happen any time of day or night].)

C. Construction Materials and Labor

Construction-related employment for the Delta Tunnels project would peak at 8,673 workers. (SWRCB-102, FEIR/S, p. 16-277 [direct, indirect, and induced full-time employment in year 12 of construction; the direct full-time employment estimate is 2,427 workers in year 3

of construction].) DWR anticipates that many of the workers for these jobs would temporarily relocate to the five-county secondary zone, while a sizeable percentage would come from outside of the five counties. (SWRCB-102, FEIR/S, p. 16-278 [expected 30% of the year 3 peak of 2,427 direct employees would come from out of the Delta].) But, because there is so little available housing in the small Delta communities within the primary zone to accommodate these workers, most of the workers would travel to through and from the construction worksites through these communities over narrow, two-lane levee roads. The expected construction-related traffic increases throughout the Delta are drastic. (SWRCB-102, FEIR/S, 19-208 to 19-217 [Table 19-25, expected increases in traffic volume].) It doesn't take much imagination to recognize that these workers' constant, long-term presence in and through the rural Delta communities would have a deleterious impact on these communities.

Construction of the actual tunnels would entail the transport of large concrete slabs (SWRCB-102, FEIR/S, p. 3C-7962 [concrete slabs would be purchased from existing plants outside of project area]), muck (SWRCB-102, FEIR/S, p. 3C-76 [muck would be held in separate storage areas after removal]) and other materials. The heavily loaded trucks transporting such material would have to travel over the same two-lane Delta levee and rural roads and across small and vulnerable rural bridges as all regular everyday Delta traffic.

The levees that support these roads were built over 100 years ago and they and the bridges might not withstand the continuous heavy truck and equipment traffic that 13-years of construction would entail. (SWRCB-102, FEIR/S, pp. 19-17 to 19-24 [Table 19-5 Conditions of Delta roads].) The roads would require mitigation efforts to avoid significant damage. (SWRCB-102, FEIR/S, pp. 19-229 [discussion of transportation impacts].) The construction of the intakes would necessitate removing and rebuilding sections of State Highway 160 and the levees it lays on. (SWRCB-102, FEIR/S, p. 3C-70 [construction assumptions for Alternative 4A].)

Much of the multi-ton tunnel boring equipment would come through the San Francisco Bay on barges, and up the Sacramento River to barge unloading facilities at Snodgrass Slough, Little Potato Sough, Venice Island, Mandeville Island, Bacon Island, Victoria Island,

and the Old River junction with the West Canal. (~~DWR-212, p. 65~~SWRCB-104, p. 68 [Conceptual Engineering Report].) This is fraught with logistical hurdles, and it is not clear that the loaded barges could pass through or under the several draw- or swing-bridges that enable vehicular traffic to cross the river and other Delta channels. (See LAND-210 [photos].)

Additionally, as the tunnels' path lies in a north-south direction, beginning just below Sacramento and ending at the Clifton Court Forebay 40-miles to the south, the two side-by-side tunnel boring machines would have to bore under numerous sloughs and waterways, and several heavily-traveled east-west rural roads, such as the busy four-lane State Highway 12. (See LAND-120 [full project overlay map].) It is unknown how these borings would impact these roadways.

D. Negative Effects on the Character of the North Delta Communities

While all this geo-hydrological mayhem is going on, the tunnels' construction would impose major and long-term hardship on the everyday, often heavy, vehicular traffic of Delta residents and daily travelers who regularly pass through the Delta on their way to or from the Bay area or to and from Sacramento. On week days, school buses, commercial delivery trucks, garbage, green waste and recycling trucks, utility company trucks, and numerous commercial vehicles use the same rural roads and narrow bridges. These would be seriously impaired and obstructed in their everyday deliveries and services, diminishing the quality of life for residents and others in and around the North Delta communities

As the Delta's primary zone is a major agricultural area, slow-moving farm equipment and agricultural chemical vehicles frequently use the roadways. (See LAND-187 [testimony of David Robinson].) During harvest season (mostly June through September) large produce trucks haul tomatoes, wine grapes, pears, cherries and numerous other crops from the Delta fields to processing facilities in northern California. Tourism, the numerous wineries, restaurants, local businesses, boaters, fishermen—the entire Delta economy—would be severely impaired, by the estimated 13-year (or longer) construction period.

Also of great concern, each of the several Delta communities' have fire departments whose personnel use the same busy rural roads and bridges to provide first-responder

services for traffic accidents on Interstate 5, state and levee roads, boating accidents on the Sacramento River and other waterways, structure fires, and grass fires—day and night. Medical calls make up 70 percent of their work. County sheriff's deputies and California Highway Patrol officers that provide law enforcement for the North Delta communities would face the same difficulties. Human life and safety would be at significant risk when these responders are delayed due to detours, road blockages, or long traffic lines caused by the tunnels' construction. (See LAND-187 [testimony of David Robinson].)

While I have described the intake and tunneling construction process in general terms, I hope you are beginning to see the logistical enormity and complexity of the Delta Tunnels project. But I especially want you to have a feel for what the people who live in and around the Legacy communities of the North Delta along the Sacramento River would go through if the project goes forward. While much of this massive Intakes and tunnel-construction work would be taking place below ground, the lives of the people who reside, work and farm in and around the North Delta communities along the Sacramento River would be severely suffering in many undeserved ways above ground.

As these communities and the land in between become increasingly less desirable places to live, work, visit, recreate—think wine-tasting at some of the state's finest wineries, bicycling on picturesque country roads, boating or waterskiing on Delta waterways, fishing, hunting, hiking and bird-watching—property values would decline. In time, battered by the physical, mental and emotional strain of the tunnels' construction upheaval on one side, and being unable to sell their homes or property because there are no buyers desirous of living in the Delta under the conditions brought on by the project on the other, many Delta residents, farmers, and small businesses owners would sadly have no alternative but to abandon their property and communities. Some would be forced to default on their bank loans. Although the EIR/EIS, Chapter 16, speaks of "Abandonment of Property," it downplays or suggests mitigation measure to address the extent to which this would occur.

The Delta, as a place of scenic beauty and rural charm, would suffer greatly from the project's construction and operation. Over the estimated 13-year duration of the actual

construction—and considering the scope, complexity, and potential mishaps that could occur, construction could go on much longer, the substantial increase in noise (SWRCB-102, FEIR/S, pp. 23-193 to 23-198 [unavoidable and significant noise impacts]), traffic (SWRCB-102, FEIR/S, pp. 19-208 to 19-217 [increases in traffic volume]), air pollution (SWRCB-102, FEIR/S, pp. 22-508 to 22-508 [significant impacts on air quality]), visual degradation, and other physical and emotional pressures would erode the spirit and economies of the small Delta communities. The important quality-of-life activities in Delta neighborhoods, at its schools, within its churches, libraries, community centers, businesses, and civic-minded organizations would be irreparably degraded. The public interest would, in all, suffer.

E. Taking of Private Property and Prime Agricultural Land

The first step in the tunnels' project, once it is authorized, would be about four years of land acquisition needed for the large North Delta intakes and north tunnels, and the 35-mile path of the tunnels. Speaking before the Metropolitan Water District of Southern California's Special Committee on the Bay Delta, Metropolitan's Program Manager stated: 'We have planned out a very aggressive right of way acquisition program that would be implemented in the very early stages of staffing the office." (See LAND-209 [online article recounting Metropolitan's Special Committee on the Delta Tunnels January 2017 meeting]; see also LAND-69 [property acquisition plan].) So privately held agricultural land would be taken, likely by eminent domain, over the objection of the landowners.

Close to 80% of Delta farmland is designated "Prime," the highest rating for agricultural suitability. (RTD-301, p. 107~~121~~ [Delta Economic Sustainability Plan agricultural overview].) Nearly 4,000 of these privately-owned Prime agricultural acres would be permanently taken for physical structures associated with the construction of 40 miles of tunnels. (SWRCB-102, FEIR/S, pp. 14-36 [Table 14-8, 3,909 acres of locally important, statewide important, prime, and unique farmland would be permanently converted for project use].) The destruction of a natural and economic resource that is so valuable to our community and state would be in direct conflict of the public interest.

Still other productive agricultural acres would be taken for staging areas for construction equipment, as well as such tunneling materials as the 700,000 pieces of curved concrete (tunnel segments) that would become the tunnel walls when joined together underground, and the like. DWR says these would be taken for "temporary and short-term construction use." (SWRCB-102, FEIR/S, p. 14-36 [5,404 acres of locally important, statewide important, prime, and unique farmland would be subject to temporary use].) However, it is not likely that any career farmer whose land is converted for over a decade to such abusive temporary construction uses would be inclined or even still around to resume farming on such land when the project is completed. Realistically, "temporary use" likely means permanent conversion. (See LAND-130 [testimony of Russel van Loben Sels]; see also LAND-132 [testimony of Daniel Wilson].)

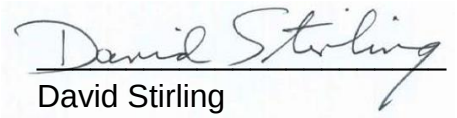
III. CONCLUSION

In the space and time permitted, I have only scratched the surface in describing some of the negative impacts the twin tunnels project would impose on the lives of the people who reside, work, commute, and farm in and around the North Delta Legacy communities. These hearings are meant to answer the question of whether this project would harm the public interest. I believe my testimony shows just some of the harms this project would cause, but they are serious none-the-less. Our communities are being asked to shoulder a heavy burden, one I believe we cannot bear.

We are being asked to endure an invasive infrastructure project; loud noises degrading our schools, businesses, restaurants, and home life; degradation of the aesthetic quality of our home; loss of recreation opportunities; disruption of our roads and waterways; and the frustration of our agricultural industry. The Delta should not be burdened with these circumstances. To do so would harm the public interest.

Thank you for your consideration, and your board member service.

Executed on the 30th day of November, 2017, at Sacramento, California.



David Stirling

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Metropolitan Water District of Southern California Infrastructure Fact Sheet (2017). [LAND-207]

Project Overview Figure: Tunnels/WaterFix Impacts Sacramento-San Joaquin Delta. [LAND-120]

Delta Photos. [LAND-210]