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The Twin Tunnels: *Ruinous to Ratepayers, Catastrophic for the Environment*

Water is California's most essential resource. It is limited in availability – in some years, extremely limited, forcing devastating delivery cut-backs to cities, farms and the environment. Unfortunately, climate change will only exacerbate the situation. A recent paper in *Frontiers in Ecology and the Environment* concludes that the average flow in the Sacramento River – the state's major source for developed surface water – could decrease by 20 percent by 2050. By that same year, California's population is expected to top 50 million, up from the current figure of 38 million. In other words, our water supplies will dwindle as our population burgeons.

Meanwhile, the state's water delivery policies are already demonstrably incapable of providing water to citizens, agriculture and commerce while simultaneously sustaining essential ecosystems. In response, Governor Jerry Brown and his allies in the state legislature and agribusiness are promoting the "Twin Tunnels" boondoggle: a massive conveyance system that will shunt water under the Sacramento/San Joaquin Delta to the south state.

This is a deeply misguided scheme. As proposed, the Twin Tunnels are a multi-billion dollar boondoggle that will burden ratepayers and taxpayers with ruinous debt, do nothing to assure water security for California's citizens and destroy the richest estuary on the west coast of the continental United States.

In a nutshell, here's what's wrong with the plan:

1. Twin Tunnels Won't Increase Water Supply

The Twin Tunnels will not increase water supplies by a single drop. Why? Remember, the project is only a *delivery* system – it will do nothing to *enhance* water supplies. California's developed water is mercilessly dictated by precipitation – much of it snowpack in the Sierra Nevada and the Klamath/Trinity mountains. And as noted, these sources will *decrease* in coming decades due to climate change.

2. We Can't Afford It

In an era of necessary belt-tightening, the Twin Tunnels stand out as an extravagant waste of public revenues. If it is built, water rates for South State urban users will skyrocket. The price tag for the Twin Tunnels has been estimated at \$24.5 billion. This is a staggering sum, but it is only the beginning; cost overruns are assured for any infrastructure project of this scope. Santa Barbara's Coastal Aqueduct is a prime example. Originally pegged at \$270 million, it ended up costing ratepayers \$1.76 billion.

3. It Is Not Equitable

While the Twin Tunnels will not deliver extra water to Southern California cities, it will lock in lavish deliveries of high-quality water to a handful of western San Joaquin Valley corporate farmers, including billionaires such as Stewart Resnick, the producer of POM Wonderful pomegranate juice and Fiji Water, and one of California's leading pistachio growers. In a typical year, California's cities consume 8.7 million acre feet of water. Agriculture uses 34 million acre feet. In the western San Joaquin Valley alone, about 600 corporate farms use a million acre feet. And agricultural water, it must be remembered, is heavily subsidized water. Consumers in San Diego and Los Angeles pay up to \$800 an acre foot for their water, while San Joaquin Valley farmers pay as little as \$20. This disparity has led to the phenomenon of "water farming," the practice of corporate agriculture barons and developers selling their cheap government-delivered water to parched south state cities and water districts at highly inflated rates. A deal engineered by San Jose real estate mogul John Vidovich is a classic illustration of this scam; he sold a portion of his contracted state water to the Mojave Water Agency for an extravagant profit of \$73.5 million. This is patently unfair, and constitutes a massive squandering of scant public resources. We mustn't compound the problem by constructing the Twin Tunnels for the express benefit of a small agribusiness elite.

4. It Is a Poor Investment

A University of the Pacific study found that the cost of increasing Delta exports is more than twice the value of any benefits that could be derived from the delivered water. This means every dollar of benefit will cost \$2.50. That independent analysis is a trenchant rebuttal to a widely-criticized state-sponsored benefit/cost analysis that is heavily skewed to promote the tunnels.

5. It Is Destructive to the Environment

The Sacramento/San Joaquin Delta is the richest, most productive estuary on the West Coast of the continental United States. This estuary already is severely stressed from excessive water diversions: there are legal claims to *five and a half times* the water that runs down the rivers of the Central Valley to the Delta. The State Water Resources Control Board has determined that no more than three million acre feet of water can be exported from the Delta without devastating its fisheries; current annual diversions can top six million acre feet. Exporting more water via the Twin Tunnels will only hasten the estuary's collapse, destroying an array of valuable commercial and sport fisheries, including Chinook salmon and Dungeness crab. This water grab also degrades the Trinity/Klamath River system because the Trinity River is plumbed to the Sacramento River and the Delta.

The Practical Alternative

We do not need the Twin Tunnels. There is a better way to guarantee water security for Southern California, an alternative that won't saddle California ratepayers and taxpayers with billions in debt, require the sacrifice of our richest estuary and provide no additional water. It is a supremely pragmatic and flexible approach that – unlike the Twin Tunnels --doesn't rely on a monolithic and astronomically expensive construction project better suited for a 1950s Soviet Five Year Plan than 21st Century California. Here are the major components:

1. Conservation

As confirmed by the 2009 State Water Plan, we can annually save two million acre feet of water (enough for 18 million people, or about half the state's population) simply through price structures that penalize excessive water use and programs that encourage the installation of low-flow toilets and showerheads and xeriscaping over traditional landscaping. From 900,000 to *five million* acre feet of water can be conserved by expanding agricultural drip and micro sprinkler irrigation programs, transitioning some operations to less water-intensive crops, reducing agricultural water subsidies and eliminating irrigation on toxic agricultural lands in the San Joaquin Valley.

2. Recycling

Reusing treated wastewater and storm water could annually save two million acre feet of water by 2030.

3. Better Management of Groundwater Basins

By recharging aquifers with recycled water, the demands on surface water sources can be significantly reduced. Orange County sets a sterling example in this regard. The county treats wastewater to a level that exceeds both federal and state drinking water standards, then uses the purified water to recharge local groundwater basins. Ultimately, up to 100 million gallons of water daily will be reclaimed through this process.

4. Storm Water Capture

The 2008 Scoping Plan for California's Global Warming Solutions Act determined that 333,000 acre feet of storm water could be captured in urban southern California each year. The Los Angeles and San Gabriel Watershed Council found that if 80 percent of the precipitation that falls on 25 percent of its jurisdiction were captured, it would yield 132,000 acre feet annually – enough for 800,000 people.

5. Making Water a True Public Trust

The disparity in water prices between favored recipients and the public at large is profound. Vast public subsidies are used to irrigate impaired lands in the western San Joaquin Valley for the sole benefit of a few hundred corporate farmers. Kern County Water Agency, with a fraction of one percent of the state's population, receives the same quantity of Delta water as Southern California's cities, which support fifty percent of California's citizens. The Kern Water Bank, a vast underground reservoir in the upper San Joaquin Valley, was improperly transferred from state control for public urban uses to agribusiness mogul Stewart Resnick in a 1995 sweetheart deal between Kern County water contractors and the state Department of Water Resources. We must determine the true costs and benefits of California's developed water, and distribute our water accordingly.

6. Reinforcing Delta Levees

A primary argument by proponents of the Twin Tunnels is seismic safety: proponents claim that the Delta's levees would fail in a major earthquake, imperiling the operation of the massive government pumps that now send water south. The solution, however, isn't a behemoth conveyance project. Rather, we should strengthen core delta levees to the level stipulated by the Delta Protection Commission's recommendation. The cost: \$2 to \$4 billion, compared to the Twin Tunnels lowball price tag of \$24 to \$64 billion. Indeed, from the standpoint of seismic safety alone, the more we can do to minimize reliance on California's main water conveyance system, the better. The California Aqueduct, which currently delivers most of Southern California's water, runs parallel to -- and sometimes crosses -- the San Andreas Fault and other major faults. One major shake on the San Andreas would deprive millions of southern Californians of this critical source of water.

7. Establishing Realistic Limits for a Finite Resource

As noted, the Delta's water is heavily overdrawn, with the estuary and its signature fisheries suffering as a result. Studies by the U.S. Fish and Wildlife Service, the California Fish and Wildlife Department and the National Marine Fisheries Service have all concluded that water exports are a primary cause for the decline of Delta ecosystem health. Indeed, the Delta is suffering biological collapse because it is now deprived of more than half its flow. Numerous scientific studies have determined that estuaries cannot be maintained as viable ecosystems if more than half their freshwater flows are diverted. It's simple, really: if we want to save the Delta -- and its salmon, Dungeness crab, sturgeon and herring -- we have to allow more fresh water to flow through the estuary. There is no alternative.

8. Improving Fish Screens at Existing Delta Pumps.

New fish screens are imperative for the Delta pumps. The screens now in place are five decades old, and they killed more than a billion fish between 2000 and 2011. Few Delta researchers doubt that improved screening could dramatically reduce fish mortality. The CALFED Record of Decision called for new screens to replace the antiquated devices that are causing these massive losses, but state contractors refused to pay for them; the carnage thus continues. We recommend new barrier screens at all major diversion points, including the huge state and federal pumps in the south Delta.

Again, the cost of implementing these measures is dramatically less than a new conveyance system: CALFED studies peg fish screen retrofitting costs for the state's Delta pumps at around \$1.7 billion.

9. Rethinking Water Sourcing

We must become more adept at moving water around the state, but we don't need the Twin Tunnels to do it. San Joaquin Valley irrigators could be incentivized to transfer water from the valley's east side – where it is relatively abundant – to the arid west side. This would require some new interties with existing canals, but costs would be comparatively modest. Up to 500,000 acre feet of water could be supplied to the western valley this way.

The Metropolitan Water District and other large Southern California water providers must actively work to reclaim the Kern Water Bank. As noted, the Water Bank was transferred to private interests in a secret 1995 deal, depriving Southern California ratepayers of a critical public resource.

10. Acknowledging Reality

Ultimately, we must come to grips with a stark fact: we live in a semi-arid state, and the climate changes now bearing down on us will only make matters worse. We cannot throw ratepayer money – and gigantic conveyance systems – at this problem and expect it to go away. True, we must guarantee water security to our growing population. But the hideously expensive and environmentally destructive Twin Tunnels scheme is not an appropriate course to follow. It is predicated on outdated concepts and technology and the immoral notion that a few powerful and immensely wealthy people are entitled to seize and hoard our water resources. With proper management, there's enough water to go around.

First and foremost, however, we must reclaim our water from the powerful plutocratic interests who hold it and dictate water policy in Sacramento. From there, it won't necessarily be easy to save the Delta and distribute California's water equitably – but at least it will be possible.

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For more information on practical alternatives to the Twin Tunnels, go to:

<http://www.ewccalifornia.org/reports/REDUCEEXPORTSPLAN.pdf>