

July 26, 2018

Via electronic mail: LSJR-SD-Comments@waterboards.ca.gov

State Water Resources Control Board
Attn: Jeanine Townsend, Clerk to the Board
Joe Serna Jr. CalEPA Headquarters Building
1001 I Street, Second Floor
Sacramento, CA 95814

RE: Comment letter—Lower San Joaquin and Southern Delta, Bay-Delta Plan update

Dear Board Members:

We appreciate the opportunity to comment on the recently-released State Water Resources Control Board (SWRCB) Lower San Joaquin and Southern Delta update, Bay-Delta Plan (BDP, Plan). We welcome the Plan as a step toward restoring needed flows to an estuary in crisis. Please seek to maintain the strongest standards—50 to 60% of unimpaired flow, if possible, as recommended by other state agencies.

Delta waters and its ecosystem are not healthy because of years of over-diversions. This situation led to the Delta Reform Act of 2009, which enunciated the state's policy "to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency".¹

Yet, as the Natural Resources Defense Council and the Pacific Institute have estimated, each year California uses 6 maf more than the state's rivers and aquifers can sustainably provide. DWR planning in 1960 assumed that full demands for water could be met by the State Water Project and the Central Valley Project with the addition of hypothetical surplus water.² But that surplus water did not, in fact, appear. The National Research Council (NRC) has found that in some basins available supply is overallocated by more than 800 percent (measuring supply as average annual runoff).³ The NRC also noted "[w]ater scarcity has long existed in much of California.... The magnitude or intensity of scarcity has grown over time and it continues to grow."⁴ We now know that the wet 20th century will not be repeated in this century, and supplies once thought possible will not materialize.

Farm acreages and previously prohibited permanent crops (those harder to fallow in dry conditions) were allowed to increase during the 20th century—along with heavily subsidized

¹ California Water Code § 85021.

² http://wdl.water.ca.gov/waterdatalibrary/docs/historic/Bulletins/Bulletin_76/Bulletin_76_1960.pdf

³ Sustainable Water and Environmental Management in the California Bay-Delta, National Research Council, 2012, page 33

⁴ *Id.* at page 32

water to serve them—while the quality of those farm communities’ lives, health and education levels decreased.⁵ These problems continue today.

Native species have suffered (numbers of native salmon, a keystone species, have plummeted to levels that threaten their survival), pollutants are more concentrated, water temperatures are elevated, dissolved oxygen is low, migratory cues for returning anadromous fish are often lacking, and sizeable sections of the economy have suffered from the lack of sufficient flows to maintain a healthy Delta and estuary.

Clearly, the over-allocation of water from the Sacramento and San Joaquin River basins is unsustainable (five acre-feet of consumptive water rights granted for every acre-foot of unimpaired flow actually available). And on average, less than 50% of the freshwater flow from the Central Valley reaches the Bay; in some years it is less than 35%.

The SWRCB has done foundational work in using peer-reviewed science to establish these new Bay-Delta update standards that will help safeguard the health of the Bay-Delta. The Board’s actions are commendable in its diligent pursuit of its mission: to preserve, enhance, and restore the quality of California’s water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations. These new BDP objectives for flows through the Bay-Delta will begin to address the systemic problems that have plagued California’s water system for decades, and which, if left unaddressed, will bring ever more severe negative environmental and social consequences.

Water conservation, recycling, reuse to the rescue

It is clear from excellent research done at California’s universities, and by environmental groups, that water saved through conservation, reuse and recycling can make up for amounts that previously have been taken from the Delta—flows that should have been allowed to flow through the Delta, but which were instead exported for agriculture and M&I uses in areas to the south.

Indeed, the State Water Resources Control Board established a mandate in 2009 to increase the use of conserved/recycled/reused water in California:

We strongly encourage local and regional water agencies to move toward clean, abundant, local water for California by emphasizing appropriate water recycling, water conservation, and maintenance of supply infrastructure and the use of stormwater (including dry-weather urban runoff) in these plans; these sources of supply are drought-proof, reliable, and minimize our carbon footprint and can be sustained over the long-term.

⁵ N. Hundley, *The Great Thirst, Californians and Water: A History*, see especially chapter 7 and sub-chapter “Subsidized Agriculture and Social Inequity” (2001).

According to the NRDC and the Pacific Institute, agricultural efficiency alone could provide 6.6 mafy of water, important since agriculture uses 80% of California’s developed water supply. Urban efficiency could supply potential savings of 5.2 mafy, and water reuse another 1.2-1.8 mafy. Stormwater capture has similar potential for water supply increases. California could save up to 14 maf each year with these strategies, greatly lessening the need for water from the Delta.⁶ The Pacific Institute notes further that urban water conservation and efficiency measures are less expensive than most new water supply options and are thus the most cost-effective way to meet current and future water needs. In fact, many residential and non-residential measures have a “negative cost,” which means that they save the customer more money over their lifetime than they cost to implement.

Benefits from these water reuse methods include:

- cleaning up discharges to the Bay from sewage treatment plants (POTWs);
- reducing algal/cyanobacteria blooms caused in part by nutrients in POTW discharges;
- enhancing local water supplies, including dramatically increasing local supplies from enhanced stormwater capture (regarding stormwater harvesting in San Jose, Dr. David Sedlak⁷, has noted that “if San Jose could just capture half of the water that fell within the city, they’d have enough water to get them through an entire year”⁸;
- providing open space and recreation facilities during dry seasons;
- providing local control over our water supply.

Further specific examples and projected benefits from water recycling, capture and reuse that can replace imported water include:

- **Landscape conversion** can save up to 2 mafy in California, and is one of the lowest-cost water supplies (The Cost of Alternative Water Supply and Efficiency Options in California, Pacific Institute, October 2016, page 17, Table 5, “Residential Water Efficiency Measures”)
- **Agricultural processes:** dry farming, deficit irrigation, micro- and drip-irrigation, crop density manipulation—along with better crop choices—can lessen the need for ag water.
 - Pajaro Valley, a mostly agricultural area on the Central Coast, receives no imported water; it is dependent on groundwater. Distributed stormwater recharge projects led by UCSC’s Dr. Andy Fisher will improve stormwater infiltration. Similar projects could help recharge other areas’ aquifers.
 - Water-efficient crops and water efficient irrigation practices can replace water-intensive crops and wasteful practices. Prickly pear, dragonfruit, pomegranates, and even grapes and avocados, can be grown with less water. As UC Davis economist Daniel Sumner reportedly said, “markets and weather have always driven what farmers plant. The context is that what we produce

⁶ <http://pacinst.org/wp-content/uploads/2014/06/ca-water-future.pdf>

⁷ UC Berkeley, Plato Malozemoff Professor, Co-Director of Berkeley Water Center, Deputy Director NSF Engineering Research Center for Reinventing the Nation’s Urban Water Infrastructure (ReNUWIt), Director of Institute for Environmental Science and Engineering (IESE)

⁸ https://www.ted.com/talks/david_sedlak_4_ways_we_can_avoid_a_catastrophic_drought

in California has been changing for two hundred years.... You go back 140 years ago California was the second biggest wheat state in the country. The Central Valley was dry land wheat farming. We were second to Kansas."⁹

- **Recycled/reused water:** As Dr. Michael Connor¹⁰ noted in a January 2015 address ("Short-Term and Long-Term Crises Facing Bay Area Water/Wastewater Managers): recycled wastewater can mean 47% less imported water and 65% less sewer discharge.
 - **Agency and voter approvals:** Recycled water has received approvals from numerous groups, including the California Medical Association; Santa Clara County voters (SCVWD/EMC April 2017 voter survey, 67% approval); Bay Area Council 2015 (88 percent of those surveyed favored expanding recycled water programs); NRC/National Academies.
 - **Various areas and agencies safely process and use large amounts of recycled water:**
 - OCWD is increasing its recycled water production from 103,000 to 130,000 afy;
 - LA County Sanitation Districts plan to recycle up to 168,000 afy wastewater. LADWP reported in May 2010 that its water recycling and replenishment will use "about 50% less energy than it takes to import water from Northern California and the Colorado River and it will lessen the strain on California's Bay Delta."
 - Los Angeles has proposed long-term stormwater capture of 179,000 to 258,000 afy by 2099. LA might even capture up to 300,000 afy stormwater according to Dr. Richard Luthy, a Stanford professor of civil and environmental engineering.
 - Del Puerto district (Stanislaus County) will receive 30,600 acre-feet of highly-treated recycled wastewater from Modesto that will supply one-third of the needs for Del Puerto farmers and give them a stable water source; ultimately 59,000 afy is anticipated.

Providing sufficient flows to and through the Bay-Delta will allow the system to function as it should: fish can avoid predators, pollution can be diluted, floods and floodplains can perform their necessary roles of pollution flushing, sediment transport and deposition. Bay-dependent economies can begin to recover. Thank you for your work to restore the ecosystems of the San Joaquin River and the whole Bay-Delta.

Respectfully,

Alan and Meg Giberson
Los Gatos, CA 95030

⁹ <http://www.capradio.org/articles/2015/06/11/california-drought-changes-what-farmers-grow/>

¹⁰ former General Manager, East Bay Dischargers Authority and Chair of Bay Area Clean Water Agencies

From: amgibr-md@yahoo.com
Sent: Friday, July 27, 2018 10:57 AM
To: LSJR-SD-Comments@waterboards.ca.gov; WQCP1Comments
Subject: Comment letter—Lower San Joaquin and Southern Delta, Bay-Delta Plan update
Attachments: comment ltr re Delta Plan SWRCB.pdf

Categories: Yellow Category

Please see that this comment letter re Lower San Joaquin and Southern Delta, Bay-Delta Plan update (attached) is distributed to the State Water Resources Control Board members.
Thank you.

Alan and Meg Giberson