

AQUALLIANCE

DEFENDING NORTHERN CALIFORNIA WATERS

October 30, 2015

BDCP/WaterFix Comments
Ryan Wulff, NMFS
P.O. Box 1919
Sacramento, CA 95812
Via Email to: BDCPComments@icfi.com

Subject: Comments on the Supplemental Draft Environmental Impact Statement and Partially Recirculated Draft Environmental Impact Report (“SDEIS/RDEIR”)

Dear Mr. Wulff:

AquAlliance represents groundwater dependent communities, farms, and ecosystems in the northern Sacramento Valley and foothills and submits the following comments and questions regarding the Supplemental Draft Environmental Impact Statement and Partially Recirculated Draft Environmental Impact Report (“SDEIS/RDEIR”) for the Water Fix/Twin Tunnels Project (“Project”). The Project has eliminated the habitat conservation plan (“HCP”) pursuant to the federal Endangered Species Act (“ESA”) and the natural community conservation plan (“NCCP”) pursuant to the California Natural Community Conservation Planning Act for the Sacramento–San Joaquin River Delta that were requirements established in the 2009 Delta Reform Act and developed in the Delta Stewardship Council’s Plan.¹ The California Department of Water Resources (“DWR”), the US Bureau of Reclamation (“Bureau”) (“Agencies”) and many of their contractors² are the proponents of the Project. DWR acts as the lead agency for the purposes of the California Environmental Quality Act (“CEQA”) and the Bureau serves as the lead agency for the National Environmental Policy Act (“NEPA”).

Unfortunately, the Project purpose remains the same: drain as much water as possible from the Sacramento River Watershed and the Delta to continue some of the most destructive forms of desert agriculture, urban sprawl, and industrial extraction. The SDEIS/RDEIR attempts to disclose impacts as required by CEQA and NEPA, but simultaneously obfuscates many of the direct and indirect impacts. AquAlliance seeks to bring to light some of these hidden impacts and baseline information as we did with the DEIS/EIR and to underscore the absurdity of the Twin Tunnels

¹ Water Code Section 85320 et seq. <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&group=85001-86000&file=85320-85322>

² “ The BDCP proponents include the following state and federal water contractors under either the SWP or CVP: Alameda County Flood Control and Water Conservation District, Zone 7; Kern County Water Agency; Metropolitan Water District of Southern California; San Luis & Delta-Mendota Water Authority; Santa Clara Valley Water District; and Westlands Water District. Additional water contractors may become BDCP proponents in the future through the BDCP process.” (DEIR/EIS p. 1-1)

project, which creates the infrastructure to drain the Sacramento River Watershed and the Delta of essential fresh water.

We incorporate by reference as though fully stated herein, for which we expressly request that a response to each comment contained therein be provided, all comments submitted on both sets of draft BDCP and Water Fix/Twin Tunnels NEPA and CEQA documents by our coalition of C-WIN, CSPA, and AquAlliance the multiple comment letters submitted by the Environmental Water Caucus, and all of AquAlliance's past submissions including comments by Professor Kyran Mish. We also incorporate by reference as though fully stated herein, for which we expressly request that a response to each comment contained therein be provided, for AquAlliance's previous comments on the Bureau's Environmental Assessments for the 2010/2011 Water Transfer Program, the 2013 Water Transfer Program, the 2014 Water Transfer Program, the Bureau and San Luis Delta Mendota Water Authority's Ten-Year Water Transfer Plan, the Glenn Colusa Irrigation District ("GCID") 10-Wells Project DEIR, comments created by Kit Custis for AquAlliance on the Ten-Year Water Transfer Plan, and comments by Kit Custis on the GCID 10-Wells Project DEIR. These comment letters all pertain to water transfer programs and streamflow depletion that illustrate the history of Sacramento Valley water transfers to south of the Delta, contain valuable background and impact information for the area of origin, and present AquAlliance's opposition to the water transfers that will expand under the Water Fix/Twin Tunnels Project.

A. Hydrology

1. The SDEIS/RDEIR fails to adequately disclose the planned increase in water transfers from the Sacramento River Watershed to south of the Delta.

If the Twin Tunnels are built as planned with the capacity to take from 9,000 to 15,000 cubic feet per second ("cfs") from the Sacramento River, they will have the capacity to drain between 38% - 63% of the Sacramento River's average annual flow of 23,490 cfs at Freeport³ (north of the planned Twin Tunnels). As proposed, the Twin Tunnels will also increase water transfers when the infrastructure for the Project has capacity:

Alternative 4 provides a separate cross-Delta facility with additional capacity to move transfer water from areas upstream of the Delta to export service areas and provides a longer transfer window than allowed under current regulatory constraints. In addition, the facility provides conveyance that would not be restricted by Delta reverse flow concerns or south Delta water level concerns. As a result of avoiding those restrictions, transfer water could be moved at any time of the year that capacity exists in the combined cross-Delta channels, the new cross-Delta facility, and the export pumps, depending on operational and regulatory constraints, including BDCP permit terms as discussed in Alternative 1A.⁴ [This paragraph failed to remove "BDCP" from the SDEIS/RDEIR and should be corrected.]

With the obvious intention of increasing transfers under Alternative 4, it is unclear how the NEPA and CEQA effects conclusion are opposite from each other unless this is in error.

³ USGS 2009. <http://wdr.water.usgs.gov/wy2009/pdfs/11447650.2009.pdf>

⁴ SDEIS/RDEIR Appendix A, pp. 5-15, 5-16.

“NEPA Effects: Alternative 4 would decrease water transfer demand compared to existing conditions. Alternative 4 would decrease conveyance capacity, enabling additional cross-Delta water transfers that could lead to increases in Delta exports when compared to No Action Alternative.” (SDEIS/RDEIR 4.3.1-9) “CEQA Conclusion: Alternative 4 would increase water transfer demand compared to existing conditions. Alternative 4 would increase conveyance capacity, enabling additional cross-Delta water transfers that could lead to increases in Delta exports when compared to existing conditions.” (*Id.*) The Lead Agencies have thoroughly confused the issue and must either explicitly explain or correct the differing conclusions that under NEPA effects “Alternative 4 would *decrease* water transfer demand” and under CEQA “Alternative 4 would *increase* water transfer demand” when both agree that, “Alternative 4 would increase conveyance capacity, enabling additional cross-Delta water transfers that could lead to increases in Delta exports...” (*Id.*) (emphases added)

The Project’s DEIS/EIR stated that north-to-south water transfers will occur during dry years when State Water Project (“SWP”) contractor allocations drop to 50 percent of Table A amounts or below or when Central Valley Project (“CVP”) agricultural allocations are 40 percent or below, or when both projects’ allocations are at or below these levels (p. 5-52). However, recent patterns contradict this premise in Table 5-2, which illustrates that past water transfers have regularly occurred when SWP and CVP San Joaquin Ag allocation percentages have been much higher (p. 5-51) and the SDEIS/RDEIR does nothing to correct the false narrative.

The SDEIS/RDEIR also fails to illustrate the early history of water transfers and to provide more current information through 2014. AquAlliance expands upon our previous comments providing more context and history that should be presented in another recirculated SDEIS/RDEIR.

- 1991. WY – Critical. Reported transfers amounted to 820,000 af.⁵
- 1992. WY – Critical. Reported transfers amounted to 193,000 af. (*Id.*)
- 1993. WY – Above Normal. No transfers appear to have occurred. (*Id.*)
- 1994. WY – Critical. Reported transfers amounted to 220,000 af. (*Id.*)⁶
- 2002. WY - Dry. Settlement Contractors in the Sacramento Valley received 100% of their allocation. Reported transfers amounted to 172,000 af.⁷

⁵ USBR, 2008. Draft Environmental Assessment for the *Option Agreement Between Glenn-Colusa Irrigation District, Bureau of Reclamation, and the San Luis & Delta-Mendota Water Authority for 2008 Operations*. (p.17)

⁶ In 1994, following seven years of low annual precipitation, the state continued a Drought Water Bank program, which allowed water districts to sell surface water and continue growing rice with ground water. Western Canal Water District and Richvale Irrigation District exported 105,000 af of river water to buyers outside of the area and substituted groundwater from the Tuscan aquifer to continue growing rice. This early experiment in the *conjunctive use* of the groundwater resources – conducted without the benefit of project specific environmental review – caused a significant and immediate adverse impact to orchards, residents, and the environment (Msangi 2006). Until the time of the 1994 water transfers, groundwater levels had dropped, but the Tuscan aquifer had sustained the normal demands of domestic and agricultural users. The water districts’ extractions, however, an abnormal demand on the groundwater, lowered groundwater levels throughout the Durham and Cherokee areas of eastern Butte County (Msangi 2006). The water level fell and the water quality deteriorated in the municipal wells serving the town of Durham (Scalmanini 1995) and even shallow residential wells dried up tens of miles away from the pumping. Irrigation wells failed on several orchards in the Durham area. One farm never recovered from the loss of its crop and later entered into bankruptcy.

- 2003. WY - Above Normal. Settlement Contractors in the Sacramento Valley received 100% of their allocation. Reported transfers amounted to 206,000 af. (*Id.*)
- 2004. WY - Below Normal. Settlement Contractors in the Sacramento Valley received 100% of their allocation. Reported transfers amounted to 120,500 af. (*Id.*)
- 2005. WY – Above Normal. Settlement Contractors in the Sacramento Valley received 100% of their allocation. Reported transfers amounted to 5 af. (*Id.*)
- 2006. WY – Wet. Settlement Contractors in the Sacramento Valley received 100% of their allocation. No transfers were reported. (*Id.*)
- 2007. WY – Dry. Settlement Contractors in the Sacramento Valley received 100% of their allocation. Reported transfers amounted to 147,000 af. (*Id.*)
- 2008. WY - Critical. Settlement Contractors in the Sacramento Valley received 100% of their allocation. GCID alone planned an 85,000 af transfer⁸ of an expected cumulative total from the Sacramento Valley of 360,000 af.⁹ Another source revealed that the actual transfers for that year were 233,000 af.¹⁰
- 2009. WY-Dry. Settlement Contractors in the Sacramento Valley received 100% of their allocation. The Bureau approved a 1 year water transfer program under which a number of transfers were made. Regarding NEPA, the Bureau issued a FONSI based on an EA. DWR opined that, “As the EWA’s exclusive mechanism in 2009 for securing replacement water for curtailed operations through transfers, the DWB is limited to the maximum 600,000 acre feet analyzed in the EIS/EIR for the program.”¹¹ Reported transfers amounted to 274,000 af.¹²
- 2010/2011. WYs – Below Normal, Wet. Settlement contractors in the Sacramento Valley received 100% of their allocation for both years. The Bureau approved a 2 year water transfer program through an Environmental Assessment/FONSI. The *2010-2011 Water Transfer Program* sought approval for 200,000 AF of CVP related water transfers and suggested there would be a cumulative total of 395,910 af of CVP and non-CVP water.¹³ The Bureau asserted in that no actual transfers were made under the *2010/2011 Water Transfer Program*, however, a Western Canal Water District Negative Declaration

⁷ Western Canal Water District, 2012. *Initial Study and Proposed Negative Declaration for Western Canal Water District 2012 Water Transfer Program*. (p. 25)

⁸ GCID, 2008. *Initial Study and Proposed Negative Declaration for Option Agreement Between Glenn-Colusa Irrigation District, San Luis & Delta-Mendota Water Authority and the United States Bureau of Reclamation for 2008 Operations, and Related Forbearance Program*.

⁹ USBR, 2008. *Draft Environmental Assessment for the Option Agreement Between Glenn-Colusa Irrigation District, Bureau of Reclamation, and the San Luis & Delta-Mendota Water Authority for 2008 Operations*. (pp. 4 and 17)

¹⁰ Western Canal Water District, 2015. *Initial Study and Proposed Negative Declaration for Western Canal Water District 2015 Water Transfer Program*. (p. 21)

¹¹ DWR, 2009. Addendum to the Environmental Water Account Environmental Impact Statement/Environmental Impact Report http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=107 Re: 2009 Drought Water Bank Transfers State Clearinghouse #1996032083. (p. 3)

¹² Western Canal Water District, 2012. *Initial Study and Proposed Negative Declaration for Western Canal Water District 2012 Water Transfer Program*. (p. 25)

¹³ AquAlliance, 2010. *Comments on the Draft Environmental Assessment and Findings of No Significant Impact for the 2010-2011 Water Transfer Program*. (pp. 1-2)

declared that 303,000 af were transferred from the Sacramento Valley and through the Delta in 2010.¹⁴

- 2012. Settlement contractors in the Sacramento Valley received 100% of their allocation. The Bureau planned 2012 water transfers of 76,000 AF of CVP water all through groundwater substitution, but it is unclear if CVP transfers occurred.¹⁵ SWP contractors and the Yuba County Water Agency (“YCWA”) did transfer water and the cumulative total transferred is stated to be 190,000 af.¹⁶
- 2013. WY – Dry. Settlement contractors in the Sacramento Valley received 100% of their allocation. The Bureau approved a 1 year water transfer program, again issuing a FONSI based on an EA. The EA incorporated by reference the environmental analysis in the 2010-2011 EA. The *2013 Water Transfer Program* proposed the direct extraction of up to 37,505 AF of groundwater (pp. 8, 9, 11, 28, 29, 35), the indirect extraction of 92,806 AF of groundwater (p. 31), and the cumulative total of 190,906 (p. 29).¹⁷ Reported transfers amounted to 210,000 af.¹⁸
- 2014. Federal Settlement Contractors in the Sacramento Valley received 75% and State Settlement Contractors received 100% of their allocations. Total maximum proposed north-to-south transfers were 378,733 af and total maximum proposed north-to-north transfers were 295,924 af.¹⁹ Reported north-to-south transfers amounted to 198,000 af.²⁰

The SDEIS/RDEIR acknowledges that less water will be available for delivery south of the Delta with the Project (SDEIS/RDEIR 4.3.1-9), preferred Alternative 4A “would increase water transfer demand compared to existing conditions,” (*Id.*) and past transfers have taken place in all water year types and when SWP and CVP south-of-Delta contractors receive allocations of all kinds (DEIS/DEIR p. 5-51). In violation of NEPA and CEQA, the analysis of the significant impacts that will accompany increased transfers due to the Project is nowhere to be found.

2. The SDEIS/RDEIR fails to correct the lack of disclosure of the Lead Agencies conjunctive use and water transfer plans, programs, projects, and funding.

The SDEIS/RDEIR fails to reveal that the current Project is part of many more plans, programs, projects, and funding to develop groundwater in the Sacramento Valley, to develop a “conjunctive” system for the region, and to place water districts in a position to integrate the

¹⁴ Western Canal Water District, 2012. *Initial Study and Proposed Negative Declaration for Western Canal Water District 2012 Water Transfer Program*. (p. 25)

¹⁵ USBR 2012. Memo to the Deputy Assistant Supervisor, Endangered Species Division, Fish and Wildlife Office, Sacramento, California regarding Section 7 Consultation.

¹⁶ Western Canal Water District, 2015. *Initial Study and Proposed Negative Declaration for Western Canal Water District 2015 Water Transfer Program*. (p. 21)

¹⁷ USBR, 2013. Draft Environmental Assessment and Findings of No Significant Impact for the *2013 Water Transfers*. (p. 29)

¹⁸ Western Canal Water District, 2015. *Initial Study and Proposed Negative Declaration for Western Canal Water District 2015 Water Transfer Program*. (p. 21)

¹⁹ AquAlliance, 2014. *2014 Sacramento Valley Water Transfers*. (Data from: 1) USBR, 2014 EA for *2014 Tehama-Colusa Canal Authority Water Transfers*; 2) USBR and SLDMWA, 2014. EA/Negative Declaration, *2014 San Luis & Delta Mendota Water Authority Transfers*.)

²⁰ Western Canal Water District, 2015. *Initial Study and Proposed Negative Declaration for Western Canal Water District 2015 Water Transfer Program*. (p. 21)

groundwater into the state water supply. These are plans that the Bureau, together with DWR, water districts, and others have been pursuing and developing for many years.^{21 22}

An environmental impact statement should consider “[c]onnected actions.” 40 C.F.R. §1508.25(a)(1). Actions are connected where they “[a]re interdependent parts of a larger action and depend on the larger action for their justification.” *Id.* §1508.25(a)(1)(iii). Further, an environmental impact statement should consider “[s]imilar actions, which when viewed together with other *reasonably foreseeable or proposed agency actions*, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.” *Id.* §1508.25(a)(3). The Bureau’s participation in funding, planning, attempting to execute, and frequently executing the programs, plans and projects has circumvented the requirements of NEPA. DWR’s failure to conduct project or programmatic level CEQA review for water transfers and comprehensive environmental review for the *Sacramento Valley Water Management Agreement* has segmented a known, programmatic project for decades, which means that the Bureau is also failing to comply with state law as the CVPIA mandates. A list of connected actions and similar actions is found in the Cumulative Impacts section below.

3. The SDEIS/RDEIR fails to adequately disclose the existing geology that is the foundation of the Sacramento River’s hydrology and the Sacramento Valley’s groundwater basins.

The DEIS/EIR (p. 7-1) and the SDEIS/RDEIR both fail to note a significant geographic feature in the Sacramento River hydrologic region: the Cascade Range. The Cascade Range is the genesis of the Sacramento River and some of its most significant tributaries: the Pit and the McCloud Rivers. This serious omission continued throughout Chapter 7 of the DEIS/EIR and has not been corrected in the SDEIS/RDEIR. The enormous influence of the Cascade Mountain Range on not only the Sacramento River, but the geology, soils, and hydrology of the Sacramento Valley’s ground water basin is also completely missing. The California Department of Conservation describes the Range thusly: “The Cascade Range, a chain of volcanic cones, extends through Washington and Oregon into California. It is dominated by Mt. Shasta, a glacier-mantled volcanic cone, rising 14,162 feet above sea level. The southern termination is Lassen Peak, which last erupted in the early 1900s. The Cascade Range is transected by deep canyons of the Pit River. The river flows through the range between these two major volcanic cones, after winding across interior Modoc Plateau on its way to the Sacramento River.”²³ The Sacramento River Watershed Program provides another simple, adequate description of its namesake: “The Sacramento River is the largest river and watershed system in California (by discharge, it is the second largest U.S. river draining into the Pacific, after the Columbia River). This 27,000–square mile basin drains the eastern slopes of the Coast Range, Mount Shasta, the western slopes of the southernmost region of the Cascades, and the northern portion of the Sierra Nevada. The Sacramento River carries 31% of the state’s total surface water runoff.”²⁴

²¹ Hauge, Carl, 2011. Presentation to the State Water Commission, September 14, 2011. pp. 11,12,14.

²² McManus, Dan, 2014. Presentation to the State Water Commission, March 3, 2014. p. 2. “Future Water Supply Program (FWSP), Provides data collection and analysis to facilitate and support Sacramento Valley groundwater substitution transfers and conjunctive mgmt.”

²³ California Department of Conservation, California Geological Survey, 2002. *California Geomorphic Provinces*. [sic]

²⁴ <http://www.sacrriver.org/aboutwatershed/roadmap/sacramento-river-basin>

The failure of the SDEIS/RDEIR to correct the inadequacies of the DEIS/EIR of some of the most basic geologic, geographic and hydrologic information in the EIS/EIR on which the entire Project is dependent causes the reader to wonder what else has been ignored or purposely omitted in the document.

4. The SDEIS/RDEIR fails to disclose the over appropriation of water rights in the Sacramento River Watershed

AquAlliance brought the over appropriation of water to the Lead Agencies' attention in comments for the DEIS/EIR. It appears to have been ignored, so we raise it again here. The public is presented with inadequate baseline data with which to consider the consequences of the Project. The comparison of the average unimpaired flow of the Sacramento River Watershed stacked against the claims that have been made for water is but one example. The average annual unimpaired flow in the Sacramento River basin is 21.6 MAF, but the consumptive use claims are an extraordinary 120.6 MAF!²⁵

5. The SDEIS/RDEIR fails to present the existing conditions of Sacramento Valley groundwater that was omitted in the DEIS/EIR and to correct inaccuracies.

There remains an absence of accurate and detailed information that describes the Sacramento Valley groundwater conditions in the SDEIS/RDEIR. The DEIS/EIR stated, "A portion of this applied water, and the remaining 13.9 MAF of runoff, is potentially available to recharge the basin and replenish groundwater storage depleted by groundwater pumping. Therefore, except during drought, the Sacramento Valley groundwater basin is "full," and groundwater levels recover to pre-irrigation season levels each spring. Historical groundwater level hydrographs suggest that even after extended droughts, groundwater levels in this basin recovered to pre-drought levels within 1 or 2 years following the return of normal rainfall quantities." (p. 7-13)

AquAlliance brought the failures in these conclusory statements to light in our previous comments hoping the Lead Agencies would provide decision-makers and the public with important factual data. Sadly, the corrections were not made in the SDEIS/RDEIR. We remind the Lead Agencies that a summary of conditions in the Durham area of Butte County find that while water levels may recover after dry to drought periods with intense use, wells aren't returning to previous levels, but moving steadily in a downward trajectory.²⁶ Additionally, even the Yuba River area, often touted by state and federal agencies as a successful conjunctive use program, takes 3-4 years to recover from groundwater substitution in the south sub-basin²⁷ although the Yuba County Water Agency analysis fails to determine how much river water is sacrificed to achieve the multi-year recharge rate.

More examples that contradict long-term predictions of "full" and "recovered" groundwater basins are found in the most current DWR maps.²⁸ Presented below are tables that use the DWR maps to illustrate maximum and average groundwater elevation decreases for Butte, Colusa, Glenn, and

²⁵ California Water Impact Network, AquAlliance, and California Sportfishing Protection Alliance 2012. *Testimony on Water Availability Analysis for Trinity, Sacramento, and San Joaquin River Basins Tributary to the Bay-Delta Estuary.*

²⁶ Buck, Christina 2014. *Groundwater Conditions in Butte County.*

²⁷ 2012. *The Yuba Accord, GW Substitutions and the Yuba Basin.* Presentation to the Accord Technical Committee. (pp. 21, 22).

²⁸ http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/gw_level_monitoring.cfm

Tehama counties at three aquifer levels in the Sacramento Valley between the Fall of 2004 and 2014.

AquAlliance's Table 1 and Table 2 cover 11 years and illustrate what should have been shared with the public in the DEIS/EIR or the SDEIS/RDEIR. They demonstrate maximum and average groundwater elevation decreases for Butte, Colusa, Glenn, and Tehama counties, all the counties believed to overlie the Tuscan Aquifer, at three aquifer levels in the Sacramento Valley between the fall and spring of 2004 and 2014.²⁹ If the Bureau and DWR wanted to truly share significant shorter term data, they should disclose that maximum fall decreases for deep wells between 2013 and 2014 were 3.1 feet for Butte, 42.2 feet for Colusa, 26.9 feet for Glenn, and 15.1 feet for Tehama – three counties significantly over 10 feet! (*Id.*)

Table 1. Fall 2004-2014 DWR Monitoring Results

County Fall '04 - '14	Deep Wells (Max decrease gwe)	Deep Wells (Avg. decrease gwe)
Butte	-12.7 (-11.4)*	-10.5 (-8.8)*
Colusa	-59.5 (-31.2)*	-59.5 (-20.4)*
Glenn	-79.7 (-60.7)*	-44.3 (-37.7)*
Tehama	-34.6 (-19.5)*	-10.9 (-6.6)*

County Fall '04 - '14	Intermediate Wells (Max decrease gwe)	Intermediate Wells (Avg. decrease gwe)
Butte	-23.0 (-21.8)*	-9.4 (-6.5)*
Colusa	-40.6 (-39.1)*	-22.6 (-16.0)*
Glenn	-57.2 (-40.2)*	-25.0 (-14.5)*
Tehama	-30.2 (-20.1)*	-12.4 (-7.9)*

County Fall '04 - '14	Shallow Wells (Max decrease gwe)	Shallow Wells (Avg. decrease gwe)
Butte	-17.6 (-13.3)*	-5.9 (-3.2)*
Colusa	-36.7 (-20.9)*	-7.6 (-3.8)*
Glenn	-53.5 (-44.4)*	-15.1 (-8.1)*
Tehama	-30.2 (-15.7)*	-9.5 (-6.6)*

* 2004-2013 monitoring results are in parentheses for comparison.

Table 2. Spring 2004-2014 DWR Monitoring Results (Monitoring from spring 2015 is still not available.)

County Spring '04 - '14	Deep Wells (Max decrease gwe)	Deep Wells (Avg. decrease gwe)
Butte	-20.8 (-10.6)	-14.6 (-8.9)
Colusa	-26.9 (-10.5)	-12.6 (-7.1)
Glenn	-49.4 (-36.2)	-29.2 (-19.9)
Tehama	-6.1 (-4.7)	-5.3 (-4.2)

²⁹ *Id.*

County Spring '04 - '14	Intermediate Wells (Max decrease gwe)	Intermediate Wells (Avg. decrease gwe)
Butte	-25.6 (-27.9)	-12.8 (-8.1)
Colusa	-49.9 (-24.6)	-15.4 (-7.4)
Glenn	-54.5 (-44.9)	-21.7 (-13.8)
Tehama	-16.2 (-16.5)	-7.9 (-8.8)

County Spring '04 - '14	Shallow Wells (Max decrease gwe)	Shallow Wells (Avg. decrease gwe)
Butte	-23.8 (-12.7)	-7.6 (-4.1)
Colusa	-25.3 (-11.0)	-12.9 (-3.3)
Glenn	-46.5 (-23.9)	-12.6 (-8.3)
Tehama	-38.6 (-16.9)	-10.8 (-7.4)

* 2004-2013 monitoring results are in parentheses for comparison.

The DWR data clearly present a different picture of the condition of the Sacramento Valley groundwater basin over time than what is provided in the SDEIS/RDEIR. This must be corrected and considered in the NEPA and CEQA process.

6. The SDEIS/RDEIR fails to correct the lack of disclosure in the DEIS/EIR of direct and indirect groundwater impacts to the Sacramento Valley that would result from expanded north-to south, cross-Delta water transfers

AquAlliance commented previously about the internal BDCP communication from the Department of the Interior that indicates that the purchase of approximately 1.3 MAF of water is being planned as a means to make up for flows that would be removed from the Sacramento River by the BDCP tunnels.³⁰ As provided above, it is possible that the Twin Tunnels may extract almost two-thirds of the average annual flow from the Sacramento River, which is what creates the need for the 1.3 MAF. The source of the additional water that is integral to the Project was not disclosed or analyzed in the DEIS/EIR nor in the SDEIS/RDEIR. Furthermore, the Lead agencies improperly conclude that, “The analysis of any potential upstream impacts from transfers is not a part of this EIR/EIS and must be covered pursuant to separate laws and regulations once the specific transfer has been proposed.” (DEIS/EIR p. 5-77)

Neither CEQA nor NEPA permit this approach of segmenting and piecemealing review of the whole of a project. As noted above, water transfers are expected to increase and are an integral part of the Project and groundwater substitution transfers are a significant piece of water transfer practices, plans, and programs either directly or indirectly through reservoir reoperation. The deferral to disclose the amount of water that could be transferred, the source of the water, and the impacts from transferring water from the Sacramento Valley are absent. In addition, the SDEIS/RDEIR does not reveal that the current Project is part of multi-decade planning and implementation process to develop groundwater in the Sacramento Valley, to develop a “conjunctive” system for the Sacramento Valley, and to integrate Sacramento Valley groundwater into the state’s water supply.

With the Sacramento Valley groundwater an intended target, this must be disclosed and analyzed in another re-circulated Draft EIS/EIR.

³⁰ Belin, Lety Summary of Assurances Email, dated 2/25/13.

7. The Project Description does Not Include all Project Components.

i. The Bureau Fails to Disclose Significant Past, Present, and Future Streamflow Depletion

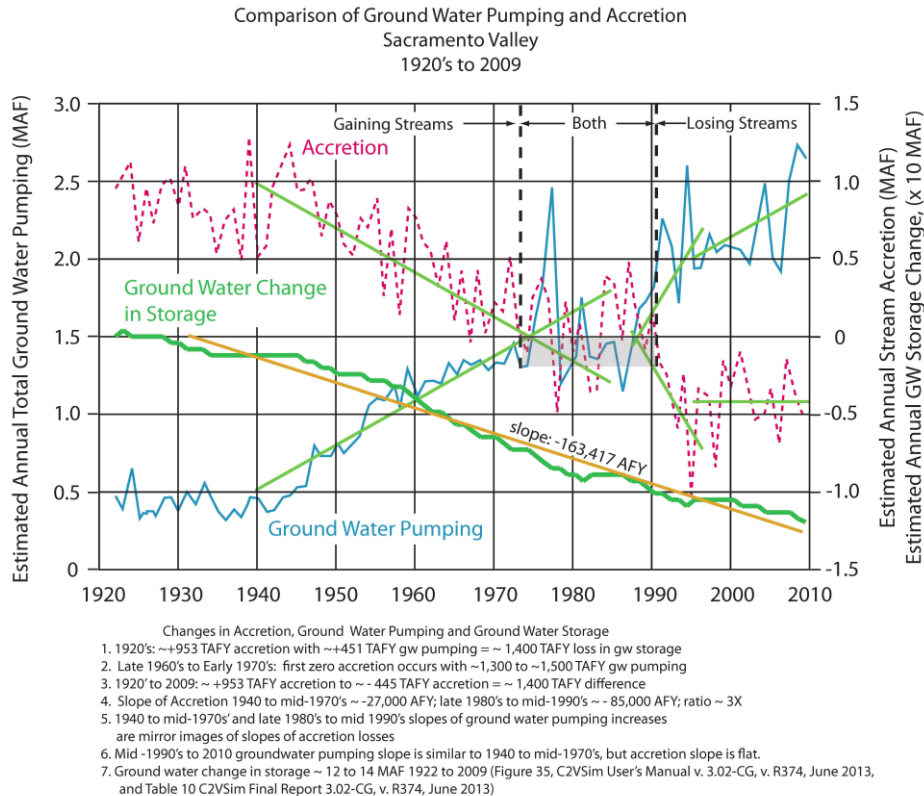
Streamflow depletion is not mentioned at all in the SDEIS/REDIR and it is mentioned sparingly in the DEIS/EIR:

- 1) A citation on page 7-120.
- 2) The same citation on page 34-16.
- 3) A description of groundwater substitution transfers on page 1E-3.
 - a) “The quantity of surface water available is based on the quantity of groundwater actually pumped less any streamflow depletion losses.”
 - b) “Additional groundwater pumping will, to some extent, have an effect on the surface water supply, referred to as streamflow depletion. The impacts of the transfer on streamflow can continue to occur long after the transfer has been completed. If the additional streamflow depletion occurs at a time when excess flow is available, downstream users are not affected. However, if the depletion occurs at a time when other downstream users could divert that water, the transfer could have an impact on other legal users.”
 - c) “Accounting for the impact of the transfer on streamflow is essential to determining the amount of real water available for transfer and to avoid injury to downstream water users. The amount and timing of the impacts, however, cannot be directly measured but can be estimated through the use of mathematical models. Although the work required to accurately assess the appropriate streamflow depletion factor for a particular transfer can be time-consuming and costly, the assessment of an appropriate streamflow depletion factor is necessary to protect other legal users of water.”
- 4) A more in-depth discussion of groundwater substitution transfers on page 1E-8.
 - a) “Precipitation and streamflow are the source of recharge for groundwater basins. A change in the amount of groundwater pumping affects both the groundwater and surface water resources. The timing and magnitude of the impacts to the surface water supply varies from place to place depending on a number of factors, including geology, hydrology, regional groundwater use, and depth and construction of the wells among others. Groundwater pumping will result in some level of streamflow depletion, the effect of which may extend well beyond the area from which transfer is made, depending on the specifics of the transfer. It is important that the impacts to streamflow from increased groundwater pumping are accounted for in the transfer to prevent injury to other legal users of water. Streamflow depletion cannot be directly measured and must be estimated using a technical analysis including groundwater modeling considering the specific conditions of the transfer and hydrogeology.”
- 5) A description of groundwater substitution transfers on page 1E-10. “The amount of water available for transfer is determined by metering the quantity of water pumped and applying a streamflow depletion factor based on an analysis of the specific wells and geology of the groundwater basin.”
- 6) In section “Potential Quantities of Upstream-of-Delta Water for Transfer” in Appendix 5C, the following is found:

- a) “Groundwater substitution transfers could approach as much as 400,000 acre-feet in any given year prior to allowance for impacts on streamflows. Groundwater substitution supplies are generally subject to a correction factor to adjust for streamflow depletion effects of water transfers in the current year. As the groundwater basins of the Sacramento Valley are pumped, there will be gradual effects on streamflow as the basins recharge over time. In the past few years, an allowance of 12 percent has been assumed as the amount of impact on Delta inflow in the current year.” (p. 5C-23)

The absence of any meaningful disclosure of past, present, and future groundwater and streamflow depletion in either the DEIS/EIR or the SDEIS/RDEIR underscores once again the completely vacuous attempts by the Lead Agencies to meet NEPA and CEQA requirements. AquAlliance presents a figure that is a comprehensive picture of the destructive past and present impacts to the groundwater and streams of the Sacramento River that should have been revealed in the NEPA and CEQA documents for this project. It encapsulates all that the Lead Agencies seek to obfuscate from the public and policy makers.

Exhibit 10.7



The figure was created for AquAlliance for comments on the DEIS/EIR for the 10-Year Water Transfer Program in 2014 by Kit Custis who explains:

Two recent reports on the condition of groundwater in the Sacramento Valley are provided by the Northern California Water Association (NCWA, 2014a and 2014b). Tables 3-6, 3-7, and 3-8 in the NCWA technical supplement report (2014b; Exhibits 10.5a to 10.5c) provide water balance information for the Sacramento Valley for the same three decades as Brush and others (2013a). The NCWA tables separate the water balance elements into three types, land uses (Table 3-6), streams and rivers (Table 3-7), and groundwater (Table 3-8). The values of the change in groundwater storage given in Table 3-8 are similar to those given by

Brush and others (2013a). The NCWA technical supplement report (2014b) also provides additional information on the 1922 to 2009 water balance through the use of graphs and bar charts. Figures 3-22 and 3-24 (Exhibits 10.6c and 10.6d) provide graphs of simulated estimates of annual groundwater pumping in the Sacramento Valley and the annual stream accretion. Positive stream accretion occurs when groundwater discharges to surface water, negative when groundwater is recharged. Other graphs include simulated deep percolation, Figures 3-26 and 3-27 (Exhibits 10.6e and 10.6f), annual diversions, Figures 3-19 and 3-20 (Exhibits 10.6a and 10.6b), and relative percentages of surface water to groundwater supplies, Figure 3-29 (10.6g).

The NCWA technical supplement report (2014b) notes in Sections 3.8 and 3.8.4 that negative changes in groundwater storage

... suggest that the groundwater basin is under stress and experiencing overdraft in some locations. Review of the Sacramento Valley water balance, as characterized based on C2VSim R374 and summarized in Tables 3-6 through 3-8 reveals substantial changes in water balance parameters over time that affect overall groundwater conditions. ... Over time, it appears that losses from surface streams have increased as a result of declining groundwater levels. The declining levels result from increased demand for groundwater as a source of supply without corresponding increases in groundwater recharge. (page 41) A contributing factor to the decrease in accretions to rivers and streams over the last 90 years is that deep percolation of surface water supplies (and other forms of recharge) has not increased in a manner that offsets increased groundwater pumping. (page 48)

The simulated groundwater pumping graph in NCWA Figure 3-22 and stream accretion graph in NCWA Figure 3-24 were combined into one graph by scaling and adjusting their axes (Exhibits 10.7). The vertical scales of these two graphs were adjusted so that a zero value of stream accretion aligned with 1.5 million acre-feet (MAF) of annual groundwater pumping. This alignment was done to reflect the fact that in the early 1920s, groundwater pumping was approximately 0.5 MAF per year (MAFY) while stream accretion was approximately 1.0 MAFY. As shown in the combined graph, stream accretion generally decreases at approximately the same rate as groundwater pumping increases. Thus, at a point of no appreciable groundwater pumping, pre-1920s, the total long-term average annual stream accretion was likely 1.5 MAF, based on the C2VSim simulations.

Drawn on top of the stream depletion and groundwater pumping graphs are several visually fit, straight trend lines. These lines, which run from 1940 to the mid-1970s and the late 1980s to mid-1990s, are mirror images reflected around the horizontal 0 accretion axis. Information provided at the bottom of the composite graph was taken from NCWA Tables 3-7 and 3-8 (Exhibits 10.5b and 10.5c). The slope of the trend line from 1940 to the mid- 1970s is approximately (+-)27,000 AFY, and (+-)85,000 AFY in the late 1980s to the mid- 1990s; a 3-fold increase in slope. After the mid-1990s the slope of groundwater pumping flattens to be similar to that of the 1940s–mid-1970s, while the stream depletion line became almost flat, ie., no change in rate of accretion. The reason for the stream depletion rate being flat is unknown, but there are several factors that could contribute to a fixed rate of stream accretion.

First, after depleting 1.5 MAFY from the Sacramento Valley streams, the surface waters may not be able to provide much more, at least no increase to match the pumping. Second, this may also be a consequence of the model design because the number of streams simulated was limited. Third, the model's grid may not extend out far enough to encompass all of the streams that contribute to groundwater recharge. More information on the areas of where streams gain and lose in the Sacramento Valley is needed to determine if there are any sections of stream, gaining or losing, that might still have the ability to interact at a variable rate in the future, ie., during and after the 10-year groundwater substitution transfer project.

A third graph is drawn on the composite accretion-pumping graph in Exhibit 10.7 that shows the C2VSim simulated cumulative change in groundwater storage for the Sacramento Valley from 1922 to 2009. This graph was taken from Figure 35 of Brush and others, 2013b (Exhibit 10.4). A straight trend line with a negative slope of approximately -163,417 AFY is drawn on top of the third graph, which is the value for average annual change in storage from 1922 to 2009 given in Table 10 of Brush and others (2013a; Exhibit 6.3a) for the seven subregions of the Sacramento Valley. The selected graph of the cumulative change in groundwater storage is one of three available.

The graph of cumulative change in groundwater storage for the Sacramento Valley in Figure 35 differs from the graph in Figure 83 in Brush and others (2013a; Exhibit 10.3) and in Figure B9 of Faunt (ed., 2009; Exhibit 10.2a). Both of Figure 83 and Figure B9 show a gain in groundwater storage with their Sacramento Valley graphs lying generally above the horizontal line of zero change in storage. The cumulative change in groundwater storage graph from Figure 35 (Exhibit 10.4) was selected because:

- *its slope is a close match for the average annual change in storage from 1922 to 2009 of -163,417 AFY given in Table 10,*
- *the values for change in groundwater storage in the three selected decades are all negative (Table 3-8, NCWA, 2014b), which the other two graphs don't clearly indicate,*
- *the calculation of average annual change in groundwater storage from 1962 to 2003 shown in Table B3 and Figures B10-A and B10-B of Faunt (ed., 2009) are negative, which conflicts with Figures B9 and 83, and*
- *change in DWR groundwater elevation maps from spring 2004 to spring 2014 (Exhibit 3.1, 3.2 and 3.3) suggest that there are significant regions of the Sacramento Valley that have lost groundwater storage, which suggests that the current condition is one of a loss in storage rather than a gain.*

Additional review and analysis of the changes in groundwater storage in the Sacramento Valley is needed. Any additional review of changes in groundwater storage in the Sacramento Valley should consider the recent changes in groundwater elevations such as those shown in DWR (2014b) for WYs 2004 to 2014, and Figures 2-4 and 2-5 of NCWA, 2014b (Exhibit 10.8 and 10.9), as well as other studies such as the support documents for the regional IRWMPs. [Supporting material found in AquAlliance's Tables 1 and 2 above.]

The deficiencies in the SDEIS/RDEIR and DEIS/EIR strike at the core of our critique, which views the CVP and the SWP as once-upon-a-time operating within the law, albeit with more water on paper than could ever be available, until the limits of hydrology caused the Agencies and some

of their contractors to look for tools to exploit the law – and the hydrology - of California. The CVP and SWP have extended water far from the areas of origin for agricultural, urban, and industrial uses. In so doing, particularly with paper water,³¹ the state and federal governments have facilitated a destructively unrealistic demand for water. Ever willing to destroy natural systems to meet demand for profit, the San Joaquin River dried up and subsidence caused by groundwater depletion in the San Joaquin Valley is even cracking water conveyance facilities.³² Added to this are conjunctive use water sales and programs where the Agencies facilitate and their contractors implement river water sales and pump groundwater to continue crop production. The continual, long-term groundwater overdraft in the San Joaquin Valley, the expansion of new permanent crops in both the San Joaquin and Sacramento valleys, and groundwater substitution transfers by CVP and SWP contractors *all* cause streamflow depletion (also see Groundwater Section below). Failing to disclose how the CVP and SWP have historically caused streamflow depletion is a major omission that must be corrected and included in a recirculated DEIS/EIR.

8. The SDIE/RDEIR fails to correct deficiencies in the DEIS/EIR that vastly understated the extent of groundwater depletion in the San Joaquin Valley.

In regards to the San Joaquin groundwater basin, the DEIS/DEIR stated that, “Long-term groundwater production throughout this basin has lowered groundwater levels beyond what natural recharge can replenish.” (p. 7-4) It is no surprise that the relentless extraction of groundwater in the San Joaquin Valley has halted natural recharge, but this mild under-statement of fact masks the tremendous devastation that has occurred there. “Mining” would provide a more accurate depiction of what has transpired over 80+ years instead of “production.” The USGS exposes this form of groundwater exploitation in the San Joaquin and Santa Clara Valleys (1999) in Circular 1182 entitled Part I, “Mining Ground Water.” Current research by Michelle Sneed expands on the impacts from groundwater mining in the San Joaquin by disclosing the extent of historic and current subsidence levels³³ as does work by Devin Galloway and Francis S. Riley.³⁴

Without explanation or apology, the DEIS/EIR omitted current and historic analysis, mentioned “overall subsidence” in the Mendota area of 28 feet (without a citation or timeframe), and then recounted older research: “Most San Joaquin Valley subsidence is thought to have been caused primarily by deep aquifer system pumping during the 1950s and 1960s, but is considered to have largely abated since 1974 because of the development of more reliable agricultural surface water supplies from the Delta-Mendota Canal and Friant-Kern Canal (U.S. Geological Survey 1999).”

³¹ C-WIN, et al, 2012. Testimony on Water Availability Analysis for Trinity, Sacramento, and San Joaquin River Basins Tributary to the Bay--Delta Estuary.

³² Sneed, et al., 2012. Abstract: *Renewed Rapid Subsidence in the San Joaquin Valley, California*.

“The location and magnitude of land subsidence during 2006–10 in parts of the SJV were determined by using an integration of Interferometric Synthetic Aperture Radar (InSAR), Global Positioning System (GPS), and borehole extensometer techniques. Results of the InSAR measurements indicate that a 3,200-km² area was affected by at least 20 mm of subsidence during 2008–10, with a localized maximum subsidence of at least 540 mm. Furthermore, InSAR results indicate subsidence rates doubled during 2008. Results of a comparison of GPS, extensometer, and groundwater-level data suggest that most of the compaction occurred in the deep aquifer system, that the critical head in some parts of the deep system was exceeded in 2008, and that the subsidence measured during 2008–10 was largely permanent.” Conference presentation at *Water for Seven Generations: Will California Prepare For It?*, Chico, CA.

³³ Sneed, Michelle et al. 2013. *Land Subsidence along the Delta-Mendota Canal in the Northern Part of the San Joaquin Valley, California*. <http://pubs.usgs.gov/sir/2013/5142/>

³⁴ Galloway, Devin and Francis S. Riley, unknown date. *San Joaquin Valley: Largest human alteration of the Earth’s surface*.

The absence of current scientific research regarding groundwater mining and subsidence in the DEIS/EIR and the failure to correct it in the SDEIS/RDEIR leaves the documents exceedingly deficient under CEQA and NEPA and the agencies exposed to charges of incompetence.

B. Cumulative Impacts

The Ninth Circuit Court makes clear that NEPA mandates “a useful analysis of the cumulative impacts of past, present and future projects.” *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 810 (9th Cir. 1999). “Detail is required in describing the cumulative effects of a proposed action with other proposed actions.” *Id.* CEQA further states that assessment of the project’s incremental effects must be “viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.” (CEQA Guidelines § 15065(a)(3).) “[A] cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” (CEQA Guidelines § 15065(a)(3).)

An EIR must discuss significant cumulative impacts. CEQA Guidelines §15130(a). Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. CEQA Guidelines § 15355(a). “[I]ndividual effects may be changes resulting from a single project or a number of separate projects. CEQA Guidelines § 15355(a). A legally adequate cumulative impacts analysis views a particular project over time and in conjunction with other related past, present, and reasonably foreseeable future projects whose impacts might compound or interrelate with those of the project at hand. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. CEQA Guidelines § 15355(b). The cumulative impacts concept recognizes that “[t]he full environmental impact of a proposed . . . action cannot be gauged in a vacuum.” *Whitman v. Board of Supervisors* (1979) 88 Cal. App. 3d 397, 408 (internal quotation omitted).

In assessing the significance of a project’s impact, the Bureau must consider “[c]umulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.” 40 C.F.R. §1508.25(a)(2). A “cumulative impact” includes “the impact on the environment which results from the incremental impact of the action when added to *other past, present and reasonably foreseeable future actions* regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* §1508.7. The regulations warn that “[s]ignificance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” *Id.* §1508.27(b)(7).

An environmental impact statement should also consider “[c]onnected actions.” *Id.* §1508.25(a)(1). Actions are connected where they “[a]re interdependent parts of a larger action and depend on the larger action for their justification.” *Id.* §1508.25(a)(1)(iii). Further, an environmental impact statement should consider “[s]imilar actions, which when viewed together with other *reasonably foreseeable or proposed agency actions*, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.” *Id.* §1508.25(a)(3) (emphasis added).

As discussed above, the Project is dependent on the hydrology of the Delta watershed to implement the Draft Plan. We pointed out in comments on the DEIS/EIR and again here because

the issue hasn't been corrected in the SDEIS/RDEIR, that the cumulative impact analysis is abysmal as it fails to consider other past, present and reasonably foreseeable future actions in the Delta watersheds by deferring analysis to a future day.

AquAlliance again submits a partial list of Sacramento River Watershed programs, plans, and projects in which the agencies have participated or funded, that, at a minimum, should have been presented in the DEIS/EIR or corrected in the SDEIS/RDEIR for cumulative impact discussion, and better yet, analyzed to comply with CEQA and NEPA:

- In 2009, the Bureau approved a 1 year water transfer program under which a number of transfers were made. Regarding NEPA, the Bureau issued a FONSI based on an EA.
- In 2010, the Bureau approved a 2 year water transfer program (for 2010 and 2011). No actual transfers were made under this approval. Regarding NEPA, the Bureau again issued a FONSI based on an EA.
- The Bureau planned 2012 water transfers of 76,000 AF of CVP water all through groundwater substitution.³⁵
- In 2013, the Bureau approved a 1 year water transfer program, again issuing a FONSI based on an EA. The EA incorporated by reference the environmental analysis in the 2010-2011 EA.
- The Bureau and SLDMWA's 2014 Water Transfer Program proposed transferring up to 91,313 AF under current hydrologic conditions and up to 195,126 under improved conditions. This was straight forward, however, when attempting to determine how much water may come from fallowing or groundwater substitution during two different time periods, April-June and July-September, the reader was left to guess.³⁶

These closely related projects impact the same resources, are not accounted for in the environmental baseline, and must be considered as cumulative impacts.

Yuba Accord

The relationship between the Projects and the Lower Yuba River Accord is not found in the DEIS, but is illuminated in a 2013 Environmental Assessment. "The Lower Yuba River Accord (Yuba Accord) provides supplemental dry year water supplies to state and Federal water contractors under a Water Purchase Agreement between the Yuba County Water Agency and the California Department of Water Resources (DWR). Subsequent to the execution of the Yuba Accord Water Purchase Agreement, DWR and The San Luis & Delta- Mendota Water Authority (Authority) entered into an agreement for the supply and conveyance of Yuba Accord water, to benefit nine of

³⁵ USBR 2012. Memo to the Deputy Assistant Supervisor, Endangered Species Division, Fish and Wildlife Office, Sacramento, California regarding Section 7 Consultation.

³⁶ The 2014 Water Transfer Program's EA/MND was deficient in presenting accurate transfer numbers and types of transfers. The numbers in the "totals" row of Table 2-2 presumably should add up to 91,313. Instead, they add up to 110, 789. The numbers in the "totals" row of Table 2-3 presumably should add up to 195,126. Instead, they add up to 249,997. Both Tables 2-2 and 2-3 have a footnote stating: "These totals cannot be added together. Agencies could make water available through groundwater substitution, cropland idling, or a combination of the two; however, they will not make the full quantity available through both methods. Table 2-1 reflects the total upper limit for each agency."

the Authority's member districts (Member Districts) that are SOD [south of Delta] CVP water service contractors.”³⁷

In a Fact Sheet produced by the Bureau, it provides some numerical context and more of DWR's involvement by stating, “Under the Lower Yuba River Accord, up to 70,000 acre-feet can be purchased by SLDMWA members annually from DWR. This water must be conveyed through the federal and/or state pumping plants in coordination with Reclamation and DWR. Because of conveyance losses, the amount of Yuba Accord water delivered to SLDMWA members is reduced by approximately 25 percent to approximately 52,500 acre-feet. Although Reclamation is not a signatory to the Yuba Accord, water conveyed to CVP contractors is treated as if it were Project water.”³⁸ However, the Yuba County Water Agency (“YCWA”) may transfer up to 200,000 under Corrected Order WR 2008-0014 for Long-Term Transfer and, “In any year, up to 120,000 af of the potential 200,000 af transfer total may consist of groundwater substitution. (YCWA-1, Appendix B, p. B-97).”³⁹

Potential cumulative impacts from the Project and the YCWA Long-Term Transfer Program from 2008 - 2025 are not disclosed or analyzed in the SDEIS/RDEIR or the DEIS/EIR. Moreover, the *2015-2024 Water Transfer Program* could transfer up to 600,000 AF per year through the same period that the YCWA Long-Term Transfers are potentially sending 200,000 AF into and south of the Delta. How these two projects operate simultaneously could have a very significant impact on the environment and economy of the Feather River and Yuba River's watersheds and counties as well as the Delta. The involvement of Browns Valley Irrigation District and Cordua Irrigation District in both long-term programs must also be considered. This must be analyzed and presented to the public in a revised DEIS/EIR.

Also not available in the DEIS/EIR or corrected in the SDEIS/RDEIR is disclosure of any issues associated with the YCWA transfers that have usually been touted as a model of success. The YCWA transfers have encountered troubling trends for over a decade that, according to the draft Environmental Water Account (“EWA”) EIS/EIR, are mitigated by deepening domestic wells (2003 p. 6-81). While digging deeper wells is at least a response to an impact, it hardly serves as a proactive measure to avoid impacts. Additional information finds that it may take 3-4 years to recover from groundwater substitution in the south sub-basin⁴⁰ although YCWA's own analysis fails to determine how much river water is sacrificed to achieve the multi-year recharge rate. None of this is found in the EWA EIS/EIR. What is found in the EWA EIS/EIR is that even the inadequate SACFEM2013 modeling reveals that it could take more than six years in the Cordua ID area to recover from multi-year transfer events, although recovery is not defined (pp, 3.3-69 to 3.3-70). This is a very significant impact that isn't addressed individually or cumulatively.

1. The Lead Agencies Have Failed to Consider the Cumulative Impacts of Other Groundwater Development and Surface Water Diversions Affecting the Sacramento Valley

³⁷ Bureau of Reclamation, 2013. *Storage, Conveyance, or Exchange of Yuba Accord Water in Federal Facilities for South of Delta Central Valley Project Contractors*.

³⁸ Bureau of Reclamation, 2013. *Central Valley Project (CVP) Water Transfer Program Fact Sheet*.

³⁹ State Water Resources Control Board, 2008. ORDER WR 2008 - 0025

⁴⁰ 2012. *The Yuba Accord, GW Substitutions and the Yuba Basin*. Presentation to the Accord Technical Committee. (pp. 21, 22).

In addition to the improper segmentation evident in the DEIS/EIR and continuing through the SDEIS/RDEIR, the assessment of environmental impacts is further deficient because the Bureau has failed to consider the cumulative impacts of area of origin extraction when taken in conjunction with other projects proposed for the development of groundwater and surface water.

i. General Plans

The General Plans of the counties and cities in the Sacramento Valley must be considered as well as the agricultural crop and land use changes that have taken and are taking place. Lastly, we must emphasize again that existing conditions in the Sacramento River Watershed, that is so crucial to California's population, economy, and environment, and therefore the Project, must be more accurately understood and described, so that impacts may be more accurately assessed from the Project.

The DEIS/EIR and SDEIS/RDEIR also fail to reveal many more programs, plans and projects to develop water transfers in the Sacramento Valley, to develop a "conjunctive" system for the region, and to place water districts in a position to integrate the groundwater into the state water supply. BDCP, now the Water Fix or Twin Tunnels Project, is one of those plans that the Lead Agencies, water districts, and others have been pursuing and developing for many years.

ii. Biggs-West Gridley

The *Biggs-West Gridley Water District Gray Lodge Wildlife Area Water Supply* Project, a Bureau project, is not mentioned anywhere in the Vegetation and Wildlife or Cumulative Impacts sections.⁴¹ This water supply project is located in southern Butte County where Western Canal WD, Richvale ID, Biggs-West Gridley WD, and Butte Water District actively sell water on a regular basis, yet impacts to GGS from this project are not disclosed. This is a serious omission that must be remedied in a recirculated DEISEIR.

iii. Other Projects

a) Court settlement discussions between the Bureau and Westlands Water District over provisions of drainage service. Case # CV-F-88-634-LJO/DLB will further strain the already over allocated Central Valley Project with the following conditions:

- A permanent CVP contract for 890,000 acre-feet of water a year exempt from acreage limitations.
- Minimal land retirement consisting of 100,000 acres; the amount of land Westlands claims it has already retired (115,000 acres) will be credited to this final figure. Worse, the Obama administration has stated it will be satisfied with 100,000 acres of "permanent" land retirement.
- Forgiveness of nearly \$400 million owed by Westlands to the federal government for capital repayment of Central Valley Project debt.

b) Five-Year Warren Act Contracts for Conveyance of Groundwater in the Tehama-Colusa and Corning Canals – Contract Years 2013 through 2017 (March 1, 2013, through February 28, 2018).

⁴¹ http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=15381

c) Additional past, current, and future projects with cumulative impacts upon groundwater and surface water resources affected by the Project:

- The DWR Dry Year Purchase Agreement for Yuba County Water Agency water transfers from 2015-2025 to SLDMWA.⁴²
- GCID's *Stony Creek Fan Aquifer Performance Testing Plan* to install seven production wells in 2009 to extract 26,530 AF of groundwater as an experiment that was subject to litigation due to GCID's use of CEQAs exemption for research.
- Installation of numerous production wells that are used to facilitate water transfers in the area of origin, many with the use of public funds such as Butte Water District,⁴³ GCID, Anderson Cottonwood Irrigation District,⁴⁴ and Yuba County Water Authority⁴⁵ among others.
- GCID's 10-Wells Project proposes to install five new production wells and continue operating five additional production wells during dry and critically dry years for 8.5 months from approximately February 15-March 15 and April 1-November 15. The annual, maximum, cumulative total pumping is 28,500 af and is more water than the annual use of the Chico district of California Water Service Company that serves over 100,000 people.⁴⁶

C. Conclusion

The SDEIS/RDEIR and DEIS/EIR are seriously deficient as noted here, in the coalition comments of C-WIN, CSPA, and AquAlliance, CSPA comments, and EWC comments. AquAlliance requests that you incorporate these comments into another re-circulated DEIS/EIR.

Sincerely,



Barbara Vlamis
AquAlliance's Executive Director

⁴² SLDMWA Resolution # 2014 386

http://www.sldmwa.org/OHTDocs/pdf_documents/Meetings/Board/Prepacket/2014_1106_Board_PrePacket.pdf

⁴³ Prop 13. Ground water storage program: 2003-2004 Develop two production wells and a monitoring program to track changes in ground.

⁴⁴ "The ACID Groundwater Production Element Project includes the installation of two groundwater wells to supplement existing district surface water and groundwater supplies."

http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=8081

⁴⁵ Prop 13. Ground water storage program 2000-2001: Install eight wells in the Yuba-South Basin to improve water supply reliability for in-basin needs and provide greater flexibility in the operation of the surface water management facilities. \$1,500,00;

⁴⁶ California Water Service Company *2010 Urban Water Management Plan Chico-Hamilton City District*, p. 32.