RECLAMATION
Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Kaweah River Warren Act Agreements 2019-2023

FONSI-19-005

— BUREAU OF —
RECLAMATION

Interior Region 10 California-Great Basin
California*, Nevada*, Oregon*
***Partial**
South-Central California Area Office

February 2020

Mission Statements

The mission of the Department of the Interior is to conserve and manage the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provide scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honor the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

BUREAU OF RECLAMATION
South-Central California Area Office, Fresno, California

FONSI-19-005

Kaweah River Warren Act Agreements 2019-2023

Prepared By: Brian Lopez
Natural Resources Specialist — Date: 2/18/2020

Concurred by: Shauna McDonald
Wildlife Biologist — Date: 2/18/20

Concurred by: Rain L. Emerson
Environmental Compliance Branch Chief — Date: 02/27/2020

Approved by: Michael P. Jackson, P.E.
Area Manager — Date: 3/2/2020

Introduction

In accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Bureau of Reclamation (Reclamation) has released this Finding of No Significant Impact (FONSI) which is supported by Reclamation's attached Final Environmental Assessment (EA)-19-005, *Kaweah River Warren Act Agreements 2019-2023*, hereby incorporated by reference.

Background

As a result of the exceptional drought conditions following several dry years, as well as contributing environmental and regulatory restrictions, Friant Division Central Valley Project (CVP) water service contractors received unprecedented zero-percent water supply allocations in 2014. In order to continue to meet their customers' needs, affected contractors pursued a range of additional water supplies, such as transfers, pumped groundwater, and other surface water sources.

Seven contractors entered into agreements for Kaweah River water and were granted Warren Act agreements by Reclamation for conveyance of this water through federal facilities after analysis in EA-14-037, *Kaweah River Water Warren Act Agreements*. Based on the analysis and specific environmental commitments, Reclamation issued a FONSI on September 7, 2014.

Five of these contractors have entered into similar agreements for a total of 7,600 acre-feet (AF) of non-CVP Kaweah River water from the Wutchumna Mutual Water Company, which would be conveyed for agricultural use by way of the Friant-Kern Canal. Due to the expiration of the previous Warren Act agreements, Garfield Water District, Exeter Irrigation District, Hills Valley Irrigation District, Orange Cove Irrigation District, and Terra Bella Irrigation District (Participant Districts, collectively) have requested similar Warren Act agreements for conveyance of this non-CVP water in the Friant-Kern Canal for the years 2019 to 2023.

Alternatives Considered

No Action Alternative

Under the No Action alternative, the Participant Districts' non-CVP Kaweah River water for which they entered into agreements with the Wutchumna Mutual Water Company would not be conveyed in the FKC. They would have to find an alternate water supply or use another conveyance method to deliver this non-CVP water to their customers' lands. If no other source or conveyance mechanism were found, fallowing of cropland could be necessary, or permanent crops could possibly be lost.

Proposed Action

Reclamation proposes to issue Warren Act agreements to five Friant Division contractors (the Participant Districts) under Article 18 of their Repayment Contracts. Under the proposed agreements, Lindsay-Strathmore Irrigation District would convey a total of up to 7,600 AF of non-CVP Kaweah River water into the FKC by way of their turnout/Wutchumna Ditch Siphon at Milepost 69.13. The Participant Districts would then take delivery of the water at their respective turnouts shown in Table 1 of EA-19-005. Each Warren Act agreement would be individually issued effective through February 28, 2023.

Environmental Commitments

The Participant Districts shall implement the environmental protection measures listed in Table 2 of EA-19-005 to avoid environmental consequences associated with the Proposed Action. Environmental consequences for resource areas assume the measures specified would be fully implemented.

Comments on the EA

Reclamation provided the public with an opportunity to comment on EA-19-005 between October 30, 2019, and November 28, 2019. One comment letter was received. The comment letter and Reclamation's response to comments are included in Appendix A of Final EA-19-005.

Reclamation has considered every comment in the comment letter.

Findings

In accordance with NEPA, Reclamation has determined that the approval of the Proposed Action is not a major federal action that will significantly affect the quality of the human environment; consequently, an environmental impact statement is not required.

The following reasons are why the impacts from the proposed action are not significant:

- The proposed action will not significantly affect public health or safety (40 CFR 1508.27(b)(2)).

- The proposed action will not significantly affect natural resources and unique geographical characteristics such as proximity to historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order (EO) 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (40 CFR 1508.27(b)(3)).

- There is no potential for the effects to be considered highly controversial (40 CFR 1508.27(b)(4)).

- The proposed action will not have possible effects on the human environment that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).

- The proposed action will neither establish a precedent for future actions with significant effects nor represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)).

- The proposed action will not have cumulatively significant impacts (40 CFR 1508.27(b)(7)).

- The proposed action will not significantly affect historic properties (40 CFR 1508.27(b)(8)).

- The proposed action will not significantly affect listed or proposed threatened or endangered species, or its habitat that has been determined to be critical under the Endangered Species Act of 1973 (40 CFR 1508.27(b)(9)).

- The proposed action will not threaten a violation of Federal, State, tribal or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)).

- The proposed action will not affect any Indian Trust Assets (512 DM 2, Policy Memorandum dated December 15, 1993).

- Implementing the proposed action will not disproportionately affect minorities or low-income populations and communities (EO 12898).

- The proposed action will not limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 13007 and 512 DM 3).

RECLAMATION
Managing Water in the West

Final Environmental Assessment

Kaweah River Warren Act Agreements 2019-2023

EA-19-005

— BUREAU OF —
RECLAMATION

Interior Region 10 California-Great Basin
California*, Nevada*, Oregon*
***Partial**
South-Central California Area Office

February 2020

Mission Statements

The mission of the Department of the Interior is to conserve and manage the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provide scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honor the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Contents

Section 1 Introduction

The Bureau of Reclamation (Reclamation) provided the public with an opportunity to comment on the Draft Environmental Assessment (EA) between October 30, 2019, and November 28, 2019. One comment letter was received during this 30-day public review period. The comment letter and Reclamation's response are included as Appendix A. Changes between this Final EA and the Draft EA, which are not minor editorial changes, are indicated by vertical lines in the left margin of this document.

1.1. Background

As a result of the exceptional drought conditions following several dry years, as well as contributing environmental and regulatory restrictions, Friant Division Central Valley Project (CVP) water service contractors received unprecedented zero-percent water supply allocations in 2014. In order to continue to meet their customers' needs, affected contractors pursued a range of additional water supplies, such as transfers, pumped groundwater, and other surface water sources.

Seven contractors entered into agreements for Kaweah River water and were granted Warren Act agreements by Reclamation for conveyance of this water through federal facilities after analysis in EA-14-037, *Kaweah River Water Warren Act Agreements* (Reclamation 2014). Based on the analysis and specific environmental commitments, Reclamation issued a Finding of No Significant Impact (FONSI) on September 7, 2014.

EA-14-037 analyzed the previous Warren Act agreements' potential impacts on water and biological resources, while determining that land use, environmental justice, and socioeconomic resources, eliminating cultural resources, Indian sacred sites and Trust Assets, air quality and global climate change could be excluded from further review. The previous five-year agreements were anticipated to have no significant impacts on water resources and water infrastructure in the area. Compliance with the Environmental Protection Measures and Commitments from Section 2.2.3 of the EA (i.e. there would be no associated construction activities and no land conversions) ensured that there would be no effects to the biological environment and no changes in land use. The conveyance of the non-CVP water associated with these agreements was determined to have no adverse impacts to the area's economy or disproportionate effects upon any specific demographic, nor would there be any significant cumulative impacts. The analysis from EA/FONSI-14-037 is incorporated by reference.

Five of these contractors have entered into similar agreements for a total of 7,600 acre-feet (AF) of non-CVP Kaweah River water from the Wutchumna Mutual Water Company (Wutchumna), which would be conveyed for agricultural use by way of the Friant-Kern Canal (Figure 1). Due to the expiration of the previous Warren Act agreements, Garfield Water District, Exeter Irrigation District, Hills Valley Irrigation District, Orange Cove Irrigation District, and Terra Bella Irrigation District (Participant Districts, collectively) have requested similar Warren Act

agreements for conveyance of this non-CVP water in the Friant-Kern Canal for the years 2019 to 2023.

1.2. Need for the Proposed Action

Reclamation needs to assess the potential impacts of approving Kaweah River water Warren Act agreements for the Participant Districts in order to maximize their available water supplies in fluctuating hydrologic conditions. The Participant Districts may not have adequate water supplies to meet the needs of their customers during years with lower CVP allocations. The purpose of the Proposed Action is to provide a conveyance mechanism to deliver supplemental supplies to support existing crops within the districts.

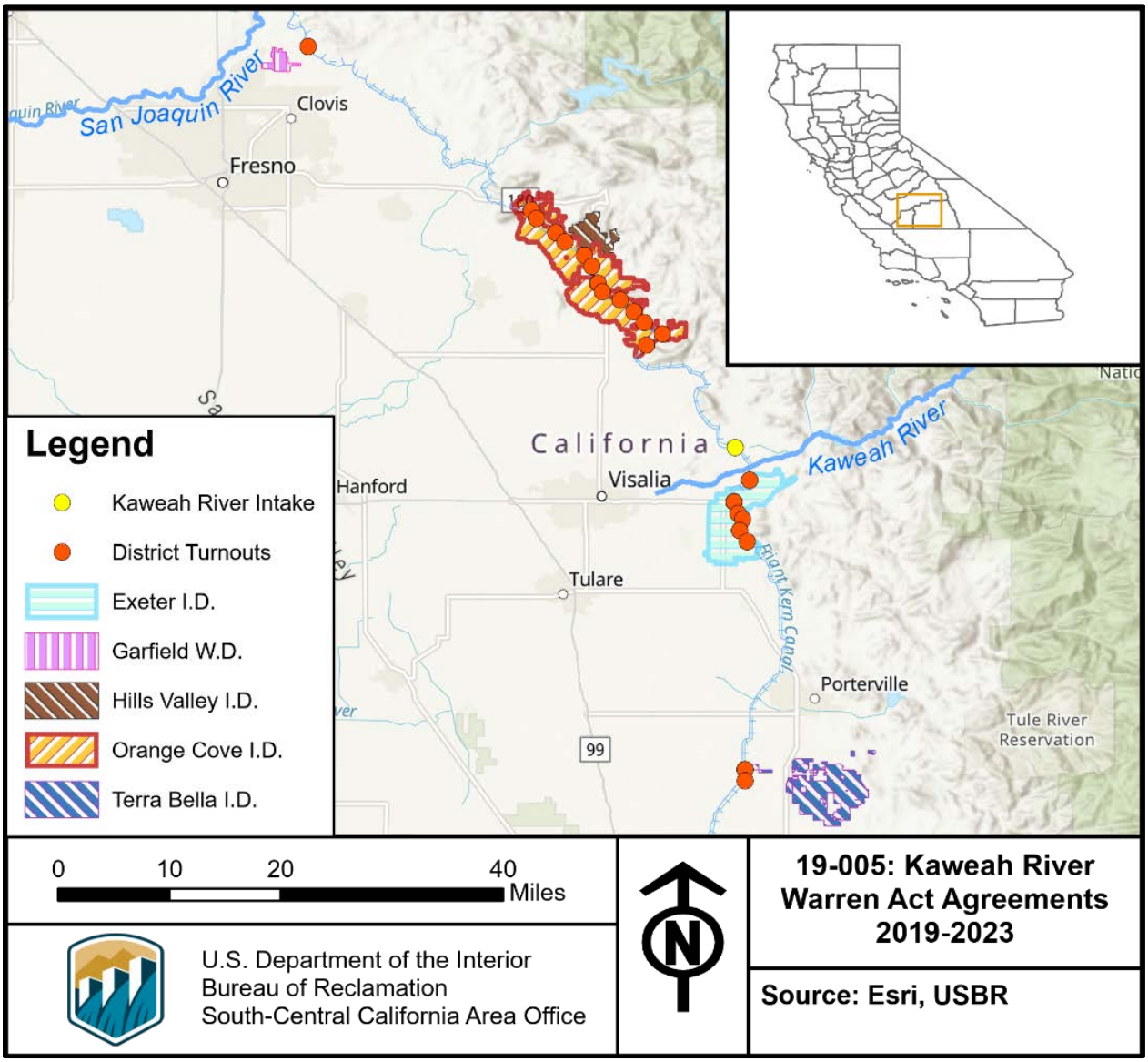


Figure 1. Proposed Action Area – Participant District Locations along the Friant-Kern Canal

Section 2 Alternatives Including the Proposed Action

This EA considers two possible actions: the No Action Alternative and the Proposed Action. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment.

2.1. No Action Alternative

Under the No Action Alternative, the Participant Districts' non-CVP Kaweah River water, for which they entered into agreements with Wutchumna, would not be conveyed in the Friant-Kern Canal. They would have to find an alternate water supply or use another conveyance method to deliver this non-CVP water to customers lands. For dry years with low CVP water allocations, if no other source or conveyance mechanism were found, fallowing of cropland could be necessary, or permanent crops could possibly be lost.

2.2. Proposed Action

Reclamation proposes to issue Warren Act agreements to the Participant Districts under Article 18 of their Repayment Contracts. Under the proposed agreements, Lindsay-Strathmore Irrigation District would convey a total of up to 7,600 AF of non-CVP Kaweah River water into the Friant-Kern Canal by way of their pumping facility at the Wutchumna Ditch Siphon at milepost (MP) 69.13. The Participant Districts would then divert the water at their respective turnouts either directly (for those located downstream of the introduction point) or via operational exchange (for those turnouts located upstream of the introduction point) (see Table 1). Each Warren Act agreement would be individually issued, effective through February 28, 2023.

Table 1. Participant Districts' Agreement Volumes and Turnout Locations

Contractor	Estimated Volume	Turnout(s) by Milepost
Garfield Water District*	300	7.57
Hills Valley Irrigation District*	1,600	41.15L
Orange Cove Irrigation District*	1,700	35.85L, 35.87L, 36.79R, 38.74R, 39.82R, 41.76R, 42.89L, 44.56R, 44.56L, 45.46R, 47.03R, 48.58R, 49.87R, 51.62L, 53.32R
Exeter Irrigation District	1,000	72.52L, 75.18L, 75.18R, 76.35R, 76.98R, 78.08R, 79.24R
Terra Bella Irrigation District	3,000	102.65L, 103.21, 103.64L

* Garfield Water District, Hills Valley Irrigation District, and Orange Cove Irrigation District have turnouts that are located upstream from the proposed introduction point at MP 69.13. An operational exchange would be needed to convey water to these locations.

2.2.1. Environmental Commitments

The Participant Districts shall implement the environmental protection measures included in Table 2.

Table 2. Environmental Protection Measures and Commitments.

Resource	Protection Measure
Various Resources	There will be no construction or modification of water conveyance facilities as a result of the Proposed Action.
Water Resources	All water associated with the Proposed Action that is introduced into federal water conveyance facilities must meet Reclamation's then-current water quality standards and monitoring requirements to conform with federal and state drinking water standards.
Biological Resources	No native lands or untilled lands that have been fallow for three consecutive years or more may be cultivated with the waters described in the Proposed Action.
Biological Resources	The Proposed Action cannot alter the flow regime of natural waterways or natural watercourses such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as to have a detrimental effect on fish or wildlife or their habitats.
Biological Resources	The Proposed Action shall not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the Migratory Bird Treaty Act.

Environmental consequences for resource areas assume the measures specified would be fully implemented.

Section 3 Affected Environment and Environmental Consequences

This section identifies the potentially affected environment and the environmental consequences involved with the Proposed Action and the No Action Alternative, in addition to environmental trends and conditions that currently exist.

3.1. Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action did not have the potential to cause direct, indirect, or cumulative adverse effects to the resources listed in Table 3.

Table 3. Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Air Quality	The Proposed Action does not include construction of new facilities or modification to existing facilities. Any pumping required to convey the Kaweah River water to the Participant Districts would make use of existing equipment operating within typical ranges. As there would be no change from existing conditions, a conformity analysis is not required and there would be no impact to air quality because of the Proposed Action.
Cultural Resources	There would be no impacts to cultural resources due to implementing the Proposed Action, as the Proposed Action would facilitate the flow of water through existing facilities to the Participant Districts, who are current federal water supply users. No new construction or ground disturbing activities would occur as part of the Proposed Action. Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1). See Appendix B for Reclamation's determination.
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease, nor would it disproportionately impact economically disadvantaged or minority populations.
Global Climate Change	The Proposed Action does not include construction of new facilities or modification to existing facilities. As such, there would be no additional impacts to global climate change. Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. It is anticipated that climate change would result in more short-duration high-rainfall events and less snowpack runoff in the winter and early spring months by 2030 compared to recent historical conditions (Reclamation 2016, pg 16-26). However, the effects of this are long-term and are not expected to impact CVP operations within the 5 years of the agreements, which is the duration of this Proposed Action. Further, CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operational flexibility.
Indian Sacred Sites	The Proposed Action would not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or affect the physical integrity of such sacred sites. There would be no impacts to Indian sacred sites because of the Proposed Action.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area.
Land Use	The conveyance of Kaweah River water or associated water transfers under the Proposed Action would be accomplished using existing facilities and would be for irrigation on existing permanent crops. The water would not be used to place untilled or new croplands into production, or to convert undeveloped land to other uses. Therefore, there would be no change in land use under the Proposed Action.
Recreation	The Proposed Action would not impact recreational resources, as none exist within the facilities being utilized under the Proposed Action.
Socioeconomic Resources	The Proposed Action would have beneficial impacts on the socioeconomic resources, as the Kaweah River water would be used to help sustain existing crops and maintain farming during drought conditions or periods of low CVP allocations.

3.2. Biological Resources

3.2.1. Affected Environment

The Proposed Action area includes Garfield Water District, Hills Valley Irrigation District, Orange Cove Irrigation District, Exeter Irrigation District, and Terra Bella Irrigation District, located in Fresno and Tulare Counties. These lands are primarily cultivated agricultural lands and include field crops, vineyards, and orchards. These areas are associated with irrigation water delivery systems and drainage canals. There is some urban development, although limited, and much of the non-agricultural vegetation includes weedy, non-native annual and biennial plants.

A list of federally listed threatened and endangered species and critical habitat that occur within the Proposed Action area was obtained on February 7, 2019, by accessing the U.S. Fish and Wildlife Service database (U.S. Fish and Wildlife Service 2019): https://ecos.fws.gov/ipac/. A list of species administered by the National Marine Fisheries Service was also obtained from https://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html on February 1, 2019. The lists are summarized in Table 4 below. Reclamation further queried the California Department of Fish and Wildlife, California Natural Diversity Database for records of protected species within 10 miles of the project location (California Natural Diversity Database 2019). The San Joaquin kit fox (*Vulpes macrotis mutica*) can use actively farmed lands for foraging (but not for denning) if they are near more suitable land (Warrick et al. 2007). The Western Burrowing Owl and the Swainson's Hawk (not federally listed but protected by the Migratory Bird Treaty Act) can also use some agricultural lands, although they are less common on the eastern side of the San Joaquin Valley than further west.

There is a slight overlap of critical habitat for Hoover's spurge (*Chamaecye hooveri*) with Orange Cove Irrigation District, and some overlap of California tiger salamander (*Ambystoma californiense*) critical habitat with both Hills Valley Irrigation District, and Orange Cove Irrigation District, but agricultural lands would not contain primary constituent elements of critical habitat (there are no vernal pools or similar areas that pond water, and the watersheds surrounding them in agricultural lands, nor is there surrounding grassland habitat). Only lands not subject to regular disturbance from farming would have the primary constituent elements.

Table 4. Federally Listed Threatened and Endangered Species

Species	**Status[1]**	**Effects[2]**	**Potential to occur and summary basis for ESA determination[3]**
Amphibians			
California red-legged frog (*Rana draytonii*)	T, X	NE	Absent: No longer occurs in this part of its historical range.
California tiger salamander (*Ambystoma californiense*)	T, X	NE	Present: Known from parts of Garfield Water District, Hill's Valley and Orange Cove Irrigation Districts, but vernal pool and other seasonal wetland and adjacent upland habitat with California ground squirrels is only present outside of actively farmed lands and would not be affected by the Proposed Action.
Birds			
California Condor (*Gymnogyps californianus*)	E, X	NE	Possible: Condors could occasionally fly over the southwestern part of the Proposed Action Area, but cliff habitat needed for roosting is absent, and grasslands and woodlands with deer or cattle are needed for foraging, which are absent in crop lands.

Species	Status[1]	Effects[2]	Potential to occur and summary basis for ESA determination[3]
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	E, X	NE	Absent: Riparian habitat needed by this species is lacking in the Proposed Action Area.
Yellow-billed Cuckoo (*Coccyzus americanus*)	T, X	NE	Absent: Requires extensive cottonwood-willow riparian habitat, which does not occur in the Proposed Action Area.
Fish			
Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha*)	T, X	NE	Absent: The Proposed Action does not include the Sacramento-San Joaquin Delta, nor would it change pumping and conveyance in the Sacramento-San Joaquin Delta or affect any natural streams.
Central Valley steelhead (*Oncorhynchus mykiss*)	T, X	NE	Absent: The Proposed Action does not include the Sacramento-San Joaquin Delta, nor would it change pumping and conveyance in the Sacramento-San Joaquin Delta or affect any natural streams.
delta smelt (*Hypomesus transpacificus*)	T, X	NE	Absent: The Proposed Action does not include the Sacramento-San Joaquin Delta, nor would it change pumping and conveyance in the Sacramento-San Joaquin Delta or affect any natural streams.
eulachon (*Thaleichthys pacificus*)	T, X	NE	Absent: Occurs in the Mad River and further north. Does not occur in the Proposed Action Area.
North American green sturgeon, southern DPS (*Acipenser medirostris*)	T, X	NE	Absent: The Proposed Action does not include the Sacramento-San Joaquin Delta, nor would it change pumping and conveyance in the Sacramento-San Joaquin Delta or affect any natural streams.
Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*)	E, X	NE	Absent: The Proposed Action does not include the Sacramento-San Joaquin Delta, nor would it change pumping and conveyance in the Sacramento-San Joaquin Delta or affect any natural streams.
Invertebrates			
Conservancy fairy shrimp (*Branchinecta conservatio*)	E, X	NE	Possible: Could occur in parts of Hill's Valley and Orange Cove Irrigation Districts, but vernal pool habitat and adjacent upland habitat is only present outside of actively farmed lands and would not be affected by the Proposed Action.
vernal pool fairy shrimp (*Branchinecta lynchi*)	T, X	NE	Possible: Could occur in parts of Hill's Valley and Orange Cove Irrigation Districts, but vernal pool/other seasonal wetland habitat and adjacent upland habitat is only present outside of actively farmed lands and would not be affected by the Proposed Action.
vernal pool tadpole shrimp (*Lepidurus packardi*)	E, X	NE	Present: Found in parts of Hill's Valley and Orange Cove Irrigation Districts, but vernal pool habitat and adjacent upland habitat is only present outside of actively farmed lands which and not be affected by the Proposed Action.
Mammals			
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	E, X	NE	Absent: The Proposed Action Area is outside of the species' range.
San Joaquin kit fox (*Vulpes macrotis mutica*)	E	NE	Possible: May use Proposed Action Area for foraging and possibly denning (mainly in the southern portion of the Proposed Action Area).
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	E	NE	Absent: The southern part of the Proposed Action Area is within the species' range, but it does not occur in agricultural lands.
Plants			
California jewelflower (*Caulanthus californicus*)	E	NE	Possible: May occur along the western edges of the southern part of the Proposed Action Area (particularly Terra Bella Irrigation District), but untilled lands and lands fallowed and untilled for three or more years cannot be brought into production as part of the Proposed Action.

Species	Status[1]	Effects[2]	Potential to occur and summary basis for ESA determination[3]
Fleshy owl's-clover (*Castilleja campestris* ssp. *succulenta*	T, X	NE	Present: Known from northern Garfield Water District, but vernal pool habitat and adjacent upland habitat is only present outside of actively farmed lands and would not be affected by the Proposed Action.
Greene's tuctoria (*Tuctoria greenei*)	E, X	NE	Possible: May occur along the edges of the Proposed Action Area north of Terra Bella Irrigation District, but vernal pool habitat and adjacent upland habitat is only present outside of actively farmed lands and would not be affected by the Proposed Action.
Hoover's spurge (*Chamaesyce hooveri*)	T, X	NE	Possible: May occur along the southern edge of Orange Cove Irrigation District, but vernal pool habitat and adjacent upland habitat is only present outside of actively farmed lands and would not be affected by the Proposed Action.
Keck's checker-mallow (*Sidalcea keckii*)	E, X	NE	Absent: Generally found on serpentine soils in grasslands or openings in blue oak woodlands, to the east of the Proposed Action Area.
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	T	NE	Possible: May occur along the southern edge of Orange Cove Irrigation District and the eastern edge of Exeter Irrigation District, but untilled lands and lands fallowed and untilled for three or more years cannot be brought into production as part of the Proposed Action.
San Joaquin orcutt grass (*Orcuttia inaequalis*)	T, X	NE	Possible: May occur along the edges of the Proposed Action Area north of Terra Bella Irrigation District, but vernal pool habitat and adjacent upland habitat is only present outside of actively farmed lands and would not be affected by the Proposed Action.
Springville clarkia (*Clarkia springvillensis*)	T	NE	Absent: Occurs in blue oak woodland habitat on decomposing granitic soil in Tulare County, which is to the east of the Proposed Action Area.
Reptiles			
blunt-nosed leopard lizard (*Gambelia silus*)	E	NE	Absent: Blunt-nosed leopard lizards may have historically occurred in the southern part of the Proposed Action Area (particularly Terra Bella Irrigation District) in - now removed - arid grassland and saltbush scrub habitat.
giant garter snake (*Thamnophis gigas*)	T	NE	Absent: No longer occurs in this part of its historical range.

[1] Status = Status of federally protected species protected under the ESA.
E: Listed as Endangered; T: Listed as Threatened; X: Critical Habitat designated for this species

[2] Effects = ESA Effect determination
NE: No Effect anticipated from the Proposed Action to federally listed species or designated critical habitat

[3] Definition of Occurrence Indicators
Present: Species recorded in area and suitable habitat present.
Possible: Species recorded in area but habitat suboptimal, or suitable habitat is present and the species is documented nearby.
Absent: Species not recorded in area and suitable habitat absent.

3.2.2. Environmental Consequences

No Action

Under the No Action Alternative, fallowing of cropland could be necessary, or permanent crops could possibly be lost. However, these lands would likely be disced regularly, and would therefore have little or no value to most species. The San Joaquin kit fox could continue to use the lands for foraging, in areas such as Terra Bella Irrigation District.

Proposed Action

Under the Proposed Action, no new construction would occur in order for the Kaweah River water to be conveyed. No untilled lands or lands fallowed and untilled for three or more years

would be converted as part of the Proposed Action. Natural streams would be unaffected. Therefore, there would be no impact to Federally listed species, critical habitat, or migratory birds. As a result, Reclamation has determined that, under the Proposed Action, there would be No Effect to proposed or listed species or Critical Habitat under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et seq.), and there would be no take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cumulative Impacts

As the Proposed Action would not have any direct effect or indirect effect on Federally listed or proposed species or critical habitat or migratory birds, it would not contribute cumulatively to impacts to these resources.

3.3. Water Resources

3.3.1. Affected Environment

Friant-Kern Canal

Land subsidence has caused portions of the Friant-Kern Canal to sink significantly in recent years, which has decreased the capacity of the canal to carry and deliver water. Land subsidence is caused by subsurface movement of earth materials. Principal causes of subsidence within San Joaquin Valley include: aquifer compaction due to groundwater pumping, hydrocompaction caused by application of water to dry soils, and oil extraction operations. Subsidence in the area specifically linked to withdrawal of groundwater resources has been studied extensively by the California Department of Water Resources (DWR 2014). Within the area of the Proposed Action, the Participating Districts and the Friant-Kern Canal overlie the following San Joaquin Valley subbasins: Kings, Kaweah, and Tule. Both the Tule and Kaweah subbasins are designated as high priority critically-overdrafted subbasins according to the current DWR Bulletin 118, and it is likely that the critically-overdrafted Kings subbasin will be high or medium priority as well. Groundwater management under California's Sustainable Groundwater Management Act (SGMA) is required for medium and high priority basins by January 31, 2020.

In those dry years that surface water supplies have reduced availability, groundwater pumping increases in order to make up for deficits and to reduce the potential of causing damages to permanent crops. Allocations for Class 1 water supplies[1] for Friant Division CVP contractors (including the Participant Districts) over the course of the previous five-year agreements (from 2014 until the end of March 2019) are shown in Table 5.

Table 5. Water Supply Allocations for Participating Districts during Previous Agreements

Contract Year	2014	2015	2016	2017	2018
Class 1 Allocations	0%	0%	75%	100%	88%

[1] Friant Division Class 1 water is considered as the first 800,000 AF supply of CVP water stored in Millerton Lake, which would be available for delivery from the Friant-Kern Canal and/or Madera Canals as a dependable water supply during each Contract Year. Class 2 water is considered as the next approximately 1,400,000 AF supply of non-storable CVP water which becomes available in addition to the Class 1 supply and, due to the uncertainty of its availability, is considered to be undependable in character and is furnished only if and when it can be made available as determined by Reclamation per Contract Year.

Areas along the Friant-Kern Canal that may be susceptible to increased subsidence include those that are near or downstream of the Lindsay-Strathmore Irrigation District, especially those near Terra Bella Irrigation District's turnouts (Figure 2) (Farr et al. 2017). This particular stretch of canal – between MP103 and MP 107 – has been the most affected by subsidence and has a currently-estimated reduction in conveyance capacity greater than 50 percent compared to design capacity, which impacts water deliveries to downstream Friant Division long-term contractors.

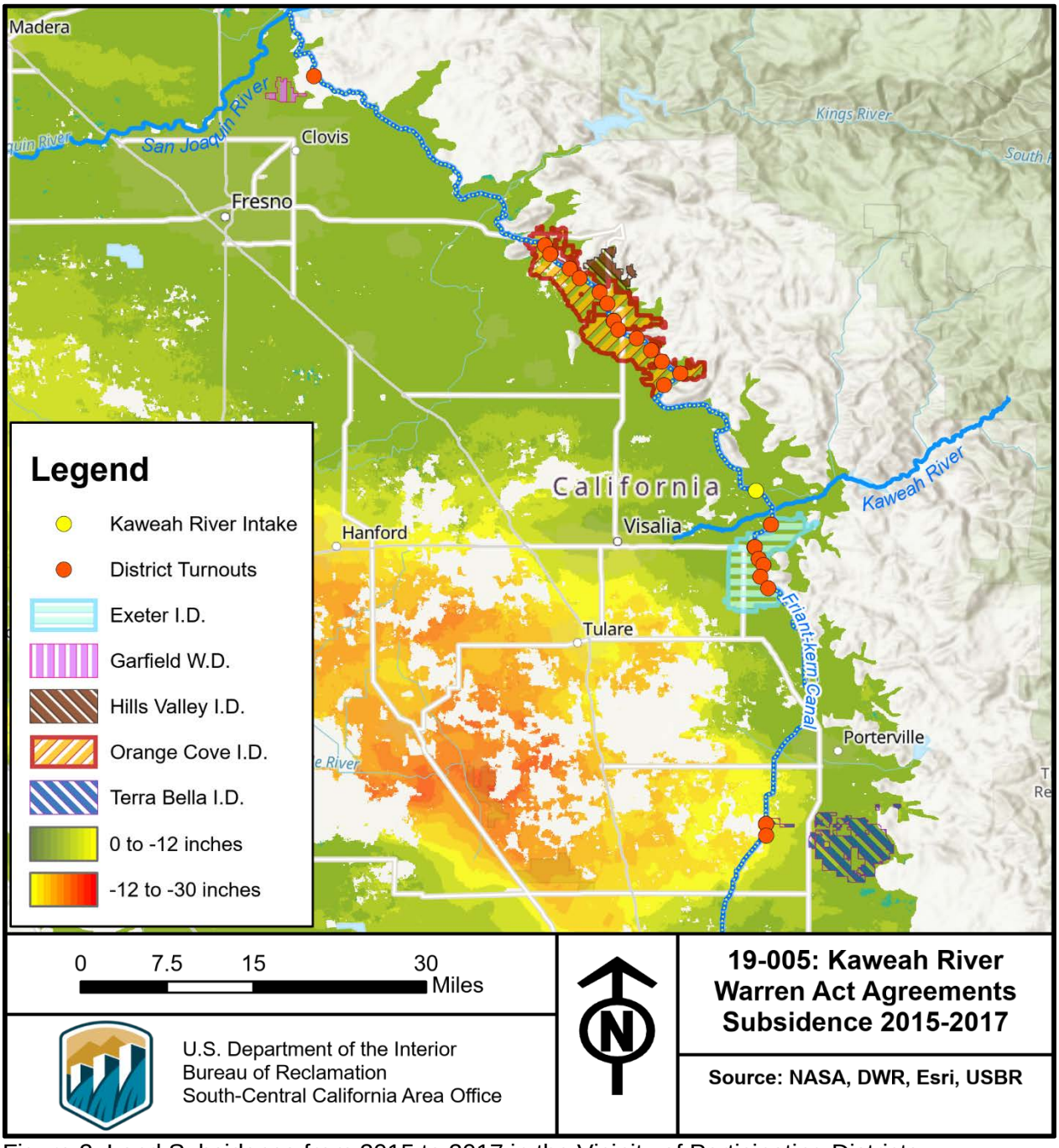


Figure 2. Land Subsidence from 2015 to 2017 in the Vicinity of Participating Districts

Kaweah River

The Kaweah River originates in the Sequoia National Park. From the park it flows southwest to Lake Kaweah – impounded by Terminus Dam – and then into the San Joaquin Valley. Wutchumna withdraws this water from the Kaweah River for delivery into Bravo Lake. From Bravo Lake it is delivered to the Wutchumna Ditch where it flows to MP 69.13 and is conveyed into the Friant-Kern Canal by pumping.

Water deliveries from the Kaweah River during the previous agreements with the Participating Districts are shown in Table 6. Of the 37,250 AF authorized to be introduced into the Friant-Kern Canal over a 5-year period under the prior Warren Act agreements (7,450 AF authorized annually for the Participant Districts), 9,214 AF (24.7%) was actually introduced and conveyed.

Table 6. Kaweah River Water Deliveries to the Participating Districts (2014 - 2018)

District Name	2014	2015	2016	2017	2018	Total Deliveries	Authorized Annual Amount
Exeter Irrigation District	1,000	870	0	0	0	1,870	1,000
Garfield Water District	29	258	0	0	0	287	150
Hills Valley Irrigation District	1,247	1,600	675	0	1,190	4,712	1,600
Orange Cove Irrigation District	1,231	81	0	0	0	1,312	1,700
Terra-Bella Irrigation District	409	624	0	0	0	1,033	3,000

With regards to agricultural suitability, water quality data for Kaweah River water introductions in 2016, 2017, and 2018 are included in Table 7. These analytical results show that the introduced water has historically been well below the concentration levels of various chemical constituents that may limit suitability of a water supply for agricultural irrigation uses (Ayers & Wescot 1985). Various constituents had nondetectable (ND) concentrations. Boron was not analyzed (NA) in 2018's water quality testing, but boron concentrations have not historically been a concern in surface water supplies originating from the Sierra Nevada Mountains and boron was nondetectable in both the 2016 and 2017 testing of the Kaweah River water.

Table 7. Water Quality Analysis Results for Kaweah River Introductions (2016-2018) – Constituents that May Limit Suitability for Agricultural Irrigation

Parameter	2016	2017	2018	Restriction for Use
Electrical Conductivity (micromhos/cm @ 25°C)	67	100	60	>700
Total Dissolved Solids (mg/L)	40	60	50	>450
Sodium Adsorption Ratio	0.3	0.4	1.6	>3
Sodium (mg/L)	3	5	3.2	>69
Chloride (mg/L)	2	4	1.2	>107 Sprinkler Irrigation >142 Surface Irrigation
Boron (mg/L)	ND	ND	NA	>0.5
Bicarbonate (mg/L)	30	50	25	>92
Nitrate - Nitrogen (mg/L)	ND	1.2	ND	>22
pH	7.3	7.12	7.4	Below 6.5 / Above 8.4

Reclamation's 2008 criteria for introductions of non-CVP water into the Friant-Kern Canal constituted the applicable guidelines for water quality of water introduced during these prior years. The criteria required testing under California Title 22 Drinking Water Quality and Monitoring Regulations to be conducted every year that water was pumped. If constituents of concern did not meet Maximum Contaminant Level (MCL) concentration requirements, the

Kaweah River water would not be allowed to be introduced until additional testing showed acceptable water quality. The test results (Table 8) showed an elevated concentration of mercury for the introduced water in 2016, but concentrations were back down to acceptable, non-detectable levels in subsequent testing. Mercury concentrations have been a concern in the Friant Division facilities and within the Sierra Nevada mountains within this region. Millerton Lake was placed on the Required Total Maximum Daily Load (TMDL) List of 303(d) impaired waters due to exceedances in mercury concentration (SWRCB 2012), indicating that the potential sources of mercury contamination are not exclusive to the Kaweah River. No regulated organic contaminants were detected in these water quality tests.

Table 8. Drinking Water Quality Analysis Results for Kaweah River Introductions (2016-2018) – Primary Inorganic and Secondary Chemical Constituents

Constituent	2016	2017	2018	MCL (mg/L)
Primary Concern				
Aluminum	0.07	0.07	0.12	1.0
Antimony	ND	ND	ND	0.006
Arsenic	ND	ND	ND	0.010
Asbestos	NA	NA	NA	7*
Barium	0.0774	0.0229	ND	1.0
Beryllium	ND	ND	ND	0.004
Cadmium	ND	ND	ND	0.005
Chromium	ND	ND	ND	0.05
Cyanide	NA	NA	ND	0.15
Fluoride	ND	ND	ND	2.0
Mercury	0.0053	ND	ND	0.002
Nickel	ND	ND	ND	0.1
Nitrate (as Nitrogen)	ND	0.3	ND	10.0
Nitrate+Nitrite (sum as Nitrogen)	ND	0.3	ND	10.0
Nitrite	ND	ND	ND	1.0
Perchlorate	NA	NA	NA	0.006
Selenium	ND	ND	ND	0.05
Thallium	ND	ND	ND	0.002
Secondary				
Aluminum	0.07	0.07	0.12	0.2
Color	ND	30	30	15[†]
Copper	ND	ND	ND	1.0
Foaming Agents (MBAS)	ND	ND	ND	0.5
Iron	0.07	0.14	0.14	0.3
Manganese	ND	0.01	0.015	0.05
Methyl-*tert*-butyl ether (MBTE)	ND	ND	ND	0.005
Odor - Threshold	ND	8	ND	3[‡]
Silver	ND	ND	ND	0.1
Thiobencarb	ND	ND	ND	0.001
Turbidity	1.2	10.8	2	5[§]
Zinc	NA	ND	ND	5.0

*Asbestos MCL expressed in millions of fibers per liter for fibers exceeding 10µm in length.
[†] Visual comparison to reference platinum-cobalt standard solutions.
[‡] Threshold Odor Number units.
[§] Nephelometric turbidity units.

3.3.2. Environmental Consequences

No Action

Under the No Action Alternative, the Participant Districts' non-CVP Kaweah River water, for which they entered into agreements with Wutchumna, would not be conveyed in the Friant-Kern

Canal. They would have to find an alternate water supply, pump more from groundwater sources, or use another conveyance method to deliver this non-CVP water to their customers' lands. If no alternative conveyance method could be found, the Participant Districts would likely have to find a way to exchange it for other usable water supplies, or crops may be fallowed in years with especially low allocations. In drier years, water users in the Participant Districts may need to rely more heavily on local water supplies (including purchasing water on the open market or pumped groundwater) to supplement water supply shortfalls, which could impact agricultural operations. These impacts could become more likely with potential regulations under SMGA that may limit groundwater pumping during dry years.

Proposed Action

The Proposed Action would allow non-CVP Kaweah River water purchased by the Participant Districts from pre-1914 water rights holders made available through Wutchumna to be conveyed in CVP facilities when excess capacity is available. This would allow the water to be diverted to the Participant Districts' service areas for agricultural use. For those upstream of MP 69.13, operational exchanges would be necessary to deliver water. There would be no modification of the Friant-Kern Canal, introductions would be coordinated with Reclamation and the Friant Water Authority, and the capacity of the facility would remain the same. Therefore, the Proposed Action will not cause adverse impacts to water delivery operations.

The Kaweah River water that is being contracted through Wutchumna is already allocated for use and has, since the development of the original agreements in 2014, historically been made available through a combination of land fallowing and groundwater substitution. The Proposed Action does not represent a new diversion of the water, or a new water right, but a continued alternate use for existing supply. The transfer or direct delivery of these Kaweah River water supplies would provide supplementary water to users in the Participant Districts that may be crucial in drier years when groundwater pumping would be necessary to meet demands. In the future, such groundwater pumping may be limited or prohibited by regulations under SGMA, which would make the available Kaweah River supplies potentially necessary to avoid fallowing or damage to permanent crops. Under the Proposed Action, there will be beneficial impacts to water supply within the Participant Districts.

Non-CVP water introduced into the Friant-Kern Canal must meet Reclamation's then-current water quality requirements for acceptance into the Friant-Kern Canal prior to approval. If testing shows that the water does not meet then-current standards, the contractors would not be allowed to discharge into the Friant-Kern Canal until water quality concerns are addressed. This testing program is anticipated to adequately protect the quality of water and limit degradation of other users' supplies, as it did during the last 5 years. The source of water proposed for introduction into the Friant-Kern Canal is Kaweah River water originating from the Sierra Nevada mountains, which is the same mountain range as the CVP water that flows in the Friant-Kern Canal from Millerton Lake. As the sources of water are similar (i.e. snowmelt from the Sierra Nevada mountains), no degradation of water supplies or adverse impacts are anticipated. It is likely that the introduced water supplies originating from the Kaweah River will continue to meet the criteria for introduction into the Friant-Kern Canal and for suitability for agricultural irrigation as shown in Table 7 and Table 8, making the Proposed Action unlikely to cause significant adverse impacts to water quality within the Action Area, including the Friant-Kern Canal.

Uncontrolled Season water supplies originating from Millerton Lake that traveled along the Friant-Kern Canal to the Arvin-Edison Water Storage District turnout near its terminus were tested in 2019. These water supplies were shown to have Electrical Conductivity of 27 micromhos/cm and a Total Dissolved Solids concentration of 18 mg/L. Although the Kaweah River water supplies water quality testing results shown in Table 7 had greater conductivity and Total Dissolved Solids concentrations, these values were still well below the thresholds determined by Ayers and Wescot for restrictions on use in agricultural irrigation. The CVP and non-CVP water supplies that are transported within the Friant-Kern Canal are used for agricultural irrigation as well as for other Municipal & Industrial purposes, which may be considered its beneficial uses. Considering agricultural use as the beneficial use of this water conveyed within the Friant-Kern Canal, it has been shown that the non-CVP Kaweah River water is of sufficient water quality to not cause degradation as to limit its beneficial use.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate cumulatively significant impacts are anticipated from the proposed action or the No Action Alternative, the incremental effects. To determine whether cumulatively significant impacts are anticipated from the Proposed Action or the No Action Alternative, the incremental effect of both alternatives were examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area.

Although capacity in the Friant-Kern Canal is limited, the Friant Water Authority and Reclamation actively manage operations to balance the competing demands. In this regard, non-CVP water such as the water which would be conveyed under the Proposed Action has a lower priority than CVP water. Reclamation and CVP contractors have been working on various water management projects, including this one, in order to better manage limited water supplies due to changing hydrologic conditions and regulatory requirements. This efficiency improvement is necessary to normalize water supplies in a very volatile water supply market.

The Proposed Action would allow for better water management by helping to alleviate the need to pump additional groundwater, especially in years with low federal water supply allocations. This could benefit those areas where there are subsidence issues, as well as assisting the Participating Districts in achieving and maintaining compliance with the groundwater sustainability plans that are required under SGMA by 2020. The Proposed Action, as well as similar projects that allow for alternate sources of surface water, would have a cumulative beneficial effect on water supply during dry years.

Cumulative Impacts to Water Quality along the Friant-Kern Canal

The Friant-Kern Canal has many turnouts and delivery-points along its length. A number of existing and foreseeable programs and projects allow for return of banked water or introduction of non-CVP water into these facilities. Reclamation has reviewed these projects and programs that could affect-, or could be affected by-, the Proposed Action. These include various projects (transfers, exchanges, groundwater pumping programs, etc.) such as, but not limited to, the following:

- Recirculation and Recapture of San Joaquin River Restoration Flows
- Poso Creek Integrated Regional Water Management Plan: 25-Year Groundwater Banking, Transfer, and Exchange Program
- Shafter-Wasco Irrigation District Kimberlina Groundwater Recharge Basin and Banking Project
- Southern San Joaquin Municipal Utility District-Poso Creek Integrated Regional Water Management Plan
- Shafter-Wasco Irrigation District 5-year Warren Act Agreement for Kern River Water
- Fresno Irrigation District's Friant-Kern Canal & Gould Canal Intertie Project
- Friant-Kern Canal Groundwater Pump-in Program
- Madera Irrigation District Storage and Conveyance of Non-Project Water in Friant Division and Hidden Unit Facilities, 2013-2043
- Flyin' J 5-Year Warren Act Contract for Conveyance and Storage of Groundwater within Friant Division Facilities
- Table Mountain Rancheria 25-year Warren Act Contract
- Kaweah River Warren Act Agreements 2014-2018
- Ivanhoe Irrigation District 5-Year Warren Act Agreement for up to 6,500 Acre-Feet of Kaweah River Water in the Friant-Kern Canal
- Tule River Water 5-Year Warren Act Agreement
- Lower Tule Irrigation District Warren Act Contract for Kings River Water in the Friant-Kern Canal for Contract Year 2020
- Warren Act Contract for Kern-Tulare Water District and Lindsay-Strathmore Irrigation District
- Warren Act Contract(s) for Delta Lands Reclamation District No. 770 Floodwaters from the Kings, St. Johns (Kaweah), and Tule Rivers
- Kern-Tulare Water District/West Kern Water District Groundwater Banking Project
- Madera Irrigation District Long-Term Banking and Return Project with North Kern Water Storage District and/or Semitropic Water Storage District
- Long-term Warren Act Contract with Cawelo Water District
- Delano-Earlimart and Rosedale-Rio Bravo Water Storage District Banking Program 2010-2026
- Kern-Tulare and Rag Gulch Water Districts 25-Year Conjunctive Use Groundwater Storage and Extraction Project with North Kern Water Storage District
- Kern-Tulare Water District and Rag Gulch Water District Groundwater Banking Project in Rosedale-Rio Bravo Water Storage District
- Reclamation Approvals Associated with Harris Farms' and Shows Family Farms' Multiyear Banking and Transfer Program
- Westside Mutual Water Company Multiyear Banking and Transfer Program

The Friant-Kern Canal is used to convey water for a variety of users from a variety of sources. For the projects described above, the quality of water being introduced is tested regularly in order to limit the potential for degradation of mixed water supplies. These testing programs are anticipated to adequately protect the quality of water in the Friant-Kern Canal from the cumulative effects of this and other water conveyance actions. Many of these types of operations have occurred since the 1980's and the "mixing" of various sources of water within these

conveyance facilities can be considered to be part of baseline conditions of water quality and water resources within the Friant-Kern Canal.

With SGMA requiring plans for groundwater sustainability for critically-overdrafted basins by 2020, which aim to achieve sustainability by 2040, it is anticipated that water districts and water users along the Friant-Kern Canal specifically, and within the CVP place-of-use generally, will pursue more actions similar to the Proposed Action. Increased requests for Warren Act contracts or agreements to convey non-CVP surface water within federal facilities and transfer and banking programs for using or storing water when it is available are likely to result in a more heterogenous water supply.

Similar to the requirements of the projects described above, any introduction of Kaweah River water under the Proposed Action will be required to meet the then-current water quality criteria for acceptance into the Friant-Kern Canal. Because the water would be tested to ensure water quality criteria compliance along with the various other projects described here and, as shown in Table 7 and Table 8, the Kaweah River water has historically been of good quality, the Proposed Action would not result in any additional violations of existing water quality standards or substantial water quality changes that would adversely affect beneficial uses of water conveyed through the Friant-Kern Canal. The established water quality requirements will continue to ensure that the introduction of non-CVP water, including water associated with the Proposed Action, would not cause any significant adverse cumulative impacts to water quality within the Project Area.

Section 4 Consultation and Coordination

4.1. Public Review Period

Reclamation provided the public with an opportunity to comment on the Draft EA between October 30, 2019, and November 28, 2019. One comment letter was received. The comment letter and specific responses are included as Appendix A.

4.2. List of Agencies and Persons Consulted

Reclamation is coordinating with the following regarding the Proposed Action:

- Friant Water Authority
- Exeter Irrigation District
- Garfield Water District
- Hills Valley Irrigation District
- Lindsay-Strathmore Irrigation District
- Orange Cove Irrigation District
- Terra Bella Irrigation District

THIS PAGE LEFT INTENTIONALLY BLANK

Section 5 References

Ayers, R.S., and D.W. Wescot. 1985. Water quality for agriculture. FAO [Food and Agriculture Organization] *Irrigation and Drainage Paper - 29 Rev. 1*. Website: https://www.waterboards.ca.gov/water_issues/programs/tmdl/records/state_board/1985/ref2648.pdf. Accessed June 2019.

California Natural Diversity Database. 2019. Updated January 2019. Accessed: February 2019.

DWR (California Department of Water Resources). 2014. Summary of Recent, Historical, and Estimated Potential for Future Land Subsidence in California. Website: http://www.water.ca.gov/groundwater/docs/Summary_of_Recent_Historical_Potential_Subsidence_in_CA_Final_with_Appendix.pdf. Accessed: December 2018.

Farr, T.G., C.E. Jones, and Z. Liu. 2017. Progress Report: Subsidence in California, March 2015 – September 2016. Prepared for DWR. Website: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Data-and-Tools/Files/Statewide-Reports/NASA-Progress-Report-Subsidence-in-California-March-2015-to-September-2016.pdf. Accessed: December 2018.

National Marine Fisheries Service. 2019. California Species Lists Tool. Website: https://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html. Accessed: February 2019.

Reclamation (Bureau of Reclamation). 2014. Kaweah River Warren Act Agreements (EA/FONSI 14-037). Mid-Pacific Region. South-Central California Area Office.

Reclamation (Bureau of Reclamation). 2016. Chapter 15: Air Quality and Greenhouse Gas Emissions. Final Environmental Impact Statement and Record of Decision for the Coordinated Long-Term Operation of the Central Valley Project and State Water Project, pg 16-26. Mid-Pacific Region, Bay-Delta Office.

SWRCB (California State Water Resources Control Board). 2012. Final 2012 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report). Website: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml. Accessed: July 2019.

Sneed, M., Brandt, J.T., and Solt, M. 2018. Land subsidence along the California Aqueduct in west-central San Joaquin Valley, California, 2003–10: U.S. Geological Survey Scientific Investigations Report 2018–5144, 67 p., https://doi.org/10.3133/sir20185144.

U.S. Fish and Wildlife Service. 2019. Federal Species List. Website: https://ecos.fws.gov/ipac/.

Warrick, G. D., H. O. Clark, Ir., P. A. Kelly, D. F. Williams, and B. L. Cypher . 2007. Use of agricultural lands by San Joaquin kit foxes. *Western North American Naturalist 67*, pg 270- 277.

Appendix A: Comment Letter Received on the Draft Environmental Assessment and Reclamation's Response

ARVIN-EDISON WATER STORAGE DISTRICT

November 26, 2019

Via Electronic Mail (blopez@usbr.gov) & Fax (559) 487-5927

Brian Lopez
United States Department of the Interior
BUREAU OF RECLAMATION
1243 N. Street
Fresno, CA 93721

Re: Kaweah River *Warren Act Agreements 2019-2023 for Non-Project Kaweah River Water into the Friant-Kern Canal (Draft EA-19-005)*

Dear Mr. Lopez:

Following are Arvin-Edison Water Storage District's (AEWSD) comments on the subject Draft EA and the proposed action described therein (Program):

AE-1 AEWSD's primary concerns about the Program relate to the discharge of Kaweah River water into the Friant-Kern Canal (FKC) that is of different quality of FKC water, and has the potential of degradation and causing significant water quality impacts to AEWSD's surface water and groundwater supplies, water management programs, and the associated negative impacts on soils and crops in the District among other things.

Our comments focus on both Reclamation's Water Quality Policy/Guidelines, which we believe to be deficient, as well as potential water quality impacts to AEWSD from the Program. Approval of this Program is a "major federal action" subject to NEPA. (40 CFR 1508.18(b)(4) ["major federal action" includes "management activities located in a defined geographic area"].), and the likelihood of a significant effect on the environment is apparent from the very nature of the Program. The Draft EA does not analyze the Program implications and such an analysis is required. There is no study of the Program's direct, indirect, secondary or cumulative impacts on water quality. The recent water quality data supplied in the Draft EA highlights that Kaweah River water is NOT the same as Millerton Lake water, and therefore, there is a NEPA requirement to study direct, indirect, and cumulative impacts or support a conclusion that there will be no direct, indirect or cumulative degradation from the Program.

Water Quality Guidelines

AE-2 AEWSD has extensively commented on the referenced outdated Bureau of Reclamation (Reclamation) Water Quality (WQ) Policy/Guidelines in the past, which comments are hereby incorporated by reference. As you may be aware, Reclamation has stated in previous responses to AEWSD that the WQ Policy/Guidelines will be "…updated…along a separate track." AEWSD looks forward to working with Reclamation in the near future on revisions to the archaic and deficient 2008 Water Quality Policy/Guidelines. **Among other deficiencies, the WQ Policy/Guidelines which are based on Title 22 drinking water standards fail to include standards designed to protect irrigation uses.** Many significant projects proposing to introduce water in the FKC have been noticed (released for comment) as well as many others that have been approved, and it seems prudent for Reclamation to engage in such WQ Policy/Guideline revisions NOW, and therefore, provide project proponents, and those impacted by degraded water supplies, with the most probable outcome of such revisions.

AEWSD's primary concerns with the March 2008 WQ Policy/Guidelines remain as follows:

- Guidelines address only "non-project water" but should clarify they apply to all sources of introduced water supplies that are NOT chemically the same as water from Millerton Lake whether someone considers them non-project supplies or not; and

- Title 22 standards generally are not protective of the water quality for irrigation uses, specifically because they do not regulate constituents and factors of concern for irrigation such as boron, sodium, bicarbonate, pH, and Sodium Absorption Ration and because they allow for higher levels of constituents such as chloride, nitrate, and salinity (EC/TDS) than are acceptable for irrigation use; and

- Guidelines do not adequately protect downstream users from significant water quality impacts as there are no in-canal standards; and

- Type B water has to "generally" comply with Title 22, but may exceed Title 22 for certain constituents of concern as determined by Reclamation and Friant Water Authority on a case-by-case basis; and

AE-2 Cont.

- Type C water is not required to meet any water quality requirements as it is erroneously stated to be "physically the same as Project water." However, this is a misstatement because State Water Project water or CVP water that is conveyed from the Delta and introduced into the CVC and ultimately into the FKC does not originate from Millerton Lake and is not chemically the same as FKC water. The same is true of the groundwater introduced into the CVC from various banking programs that use the CVC for conveyance. Subsequently, the provisions of the Policy are woefully deficient.

- Inconsistency with all applicable authorities, laws, statutes, contracts, state and regional water quality standards, polices, objectives, regulations, court decisions, and Basin Plans (including the recently approved CV-Salts revisions).

Reclamation has stated previously that it understands that the "Friant Water Authority and Friant Division contractors are currently engaged in a forum to develop a science-based understanding of potential water quality impacts of introducing water into the FKC and means for addressing said impacts," and that it intends to use the outcome of this forum to "inform revision of the water quality standards and guidelines for introduction of water into the FKC." While these discussions are on-going and progressing on potential resolution of matters, Reclamation is still obligated to determine if the Program complies with federal and state water quality standards to protect beneficial uses of water in the FKC as part of the Draft EA, and Reclamation is still required to study water quality impacts as part of its environmental review of the Program.

Limits of Degradation

AEWSD understands the Program is to introduce Kaweah River water into the FKC. No analysis between Program water that is returned into the FKC to baseline FKC water was made, and there is no analysis of the downstream water quality or associated adverse impacts from the Program. **Based on recent water quality information supplied in the Draft EA, the introduction of Kaweah River water into the FKC at MP 69.13 would degrade AEWSD's water supplies based on the anti-degradation policy's definition of "degrade".**

AE-3

After review of water quality information with respect to TDS and EC, the differences are clearly illustrated between the 2016 Kaweah River water quality (40 mg/L and 67 uS/cm), 2017 Kaweah River water quality (60 mg/L and 100 uS/cm), 2018 Kaweah River water quality (50 mg/L and 60 uS/cm), and 2019 Friant-Kern Canal water quality at AEWSD Turnout during Uncontrolled Season or Millerton Lake supplies (18 mg/L and 27 uS/cm).

Reclamation is required to (among other things) evaluate if the Program adheres to the state anti-degradation policy and applicable Basin Plan(s), but no such evaluation is included in the Draft EA. In addition, the EA fails to include information that will be needed by the Regional Water Quality Control Board in assessing whether a discharge permit should be issued and whether the discharge can be made consistent with the anti-degradation policy and Basin Plan requirements.

AE-3 Cont.

AEWSD's request to avoid degradation of its water supplies isn't new, unique, or unreasonable. Reclamation has imposed anti-degradation conditions on other CVP facilities including, for example, the Delta-Mendota Canal and associated selenium and Total Dissolved Solids requirements. While Reclamation's requirements for protection of CVP water quality should be even-handed, that does not appear to be the case for the FKC.

Reference to AEWSD's Contract

While the United States does not warrant the quality of water delivered to a contractor, the United States is obligated to operate and maintain project facilities in the most practical manner to maintain the quality of the water at the highest level possible. As Reclamation has noted in prior responses to AEWSD comments on this topic, it is understood this contract language includes the phrase "as determined by the Contracting Officer", however, the contract also provides that "said terms shall not be construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable opinions or determinations." Furthermore, "[e]ach opinion or determination [required under the contract] by either party shall be provided in a timely manner," and to our knowledge neither Reclamation nor the Contracting Officer has yet made a determination regarding FKC quality and as such AEWSD expects the FKC should maintain the historical pristine quality of that delivered from Millerton Lake.

AE-4

Furthermore, the water supplied to AEWSD pursuant to its repayment contract is Central Valley Project Water stored or flowing through Millerton Lake. Indeed, the definition of Class 1 water is defined as *"that supply of water stored in or flowing through Millerton Lake…"*

Water that is stored in or flowing through Millerton Lake is pristine Sierra Nevada snowmelt and, as such, relied upon by AEWSD to maintain its water quality. Little information about the Program's anticipated degradation was made available. AEWSD wishes to continue to utilize its Friant Division supplies, un-degraded, to benefit AEWSD landowners and its water management programs. This is particularly important considering that AEWSD landowners produce crops, including citrus, grapes, and almonds, that are particularly sensitive to water quality issues affecting the FKC such as salinity and boron.

With regards to the Draft EA, the statement (page 11) about boron "…historically been a concern in the western San Joaquin Valley" is inaccurate as AEWSD, located on the eastern San Joaquin Valley, has experienced high levels of boron that have been problematic for certain crops.

Lack of Cumulative Impacts Analysis and Additional Deficiencies

AE-5

In determining the scope of the required NEPA analysis, an agency must consider the proposed action as well as "connected actions," "similar actions," and "cumulative actions." (40 C.F.R. §1508.25(a); see *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1075 (9th Cir. 2002).) While the Draft EA includes a list of other projects, there is a lack of any analysis of water quality impacts. The Draft EA states "Non-CVP water introduced into the Friant-Kern Canal must meet Reclamation's then-current Policy for Accepting Non-Project Water..." However, the Reclamation Policy is not sufficient to confirm that beneficial uses of water in the FKC are being protected and adherence to the anti-degradation policy is being achieved (it shall be

AE-5 Cont.

noted the Policy was referenced and not attached to the EA). Reclamation's March 2008 WQ Guidelines do not specify testing of all constituents or parameters, nor contain enforceable in-canal criteria that ensure compliance with federal and state water quality standards including the anti-degradation policy.

AE-6

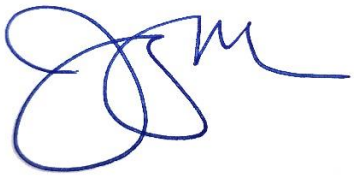
The deficiencies that AEWSD has identified in Reclamation's March 2008 WQ Policy/Guidelines raise substantial questions. Earlier this year, applying the similar standard for an EIR under CEQA, the Ventura County Superior Court set aside approval of the Modified Pixley Groundwater Banking Program based on, among other things, AEWSD's water quality concerns as raised in this letter (see attached Judgment). Reclamation can no longer rely on Title 22 drinking water standards with no in-stream monitoring to avoid analyzing the real water quality impacts of projects including this Program. Additionally, the analysis should consider the cumulative impact to downstream users such as AEWSD in terms of soil changes, groundwater quality changes, salt accumulation (including by evapotranspiration), and the resulting effects on crop yields, water management efforts, and drainage.

AE-7

For the above reasons, AEWSD believes the Draft EA for the five-year Program fails to comply with NEPA.

Thank you, and again we appreciate the opportunity to provide input into the Program, and If you have questions or comments, please contact me.

Sincerely,



Jeevan Muhar
Engineer-Manager

Encl.

cc: (via electronic w/o enclosures)
Board of Directors
Steve Collup, Director of Water Resources
Steve Torigiani Esq. Young Wooldridge
Anona Dutton, EKI
Michael Jackson, USBR
Jason Phillips, FWA

JSM:MC:sj\AEWSD\USBR\Envir.docs\2019\Lopez.Brian.AEWSD Response to Kaweah.River.EA.19-005.11.19.docx

STEVEN M. TORIGIANI, ESQ., SBN 166773
BRETT A. STROUD, ESQ., SBN 301777
THE LAW OFFICES OF YOUNG WOOLDRIDGE, LLP
1800 30th Street, Fourth Floor
Bakersfield, CA 93301
Telephone: (661) 327-9661
Facsimile: (661) 327-0720
Email: storigiani@youngwooldridge.com
bstroud@youngwooldridge.com

Attorneys for Petitioner ARVIN-EDISON WATER STORAGE DISTRICT

EXEMPT FROM FILING FEE [GOV. CODE §6103]

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF VENTURA

ARVIN-EDISON WATER STORAGE DISTRICT, a California water storage district, Petitioner, v. SOUTH VALLEY WATER BANKING AUTHORITY, a California joint powers authority; DOES 1-10, INCLUSIVE, Respondents.	Case No. 56-2018-00509394-CU-PT-OXN *Assigned to Hon. Glen Reiser* **JUDGMENT GRANTING PETITION FOR WRIT OF MANDATE**
PIXLEY IRRIGATION DISTRICT, a California irrigation district; DELANO-EARLIMART IRRIGATION DISTRICT, a California irrigation district; DOES 11-100, INCLUSIVE, Real Parties in Interest.	Judge: Hon. Glen Reiser Dept: J6 [Consolidated for hearing with Case No. 56-2018-00510012]

On October 4, 2018, this matter (Case No. 56-2018-00509394), into which Case No. 56-2018-00510012 was consolidated for purposes of a consolidated administrative record, coordinated briefing, and a single coordinated hearing on the merits, came on for hearing in Courtroom J6 of the Ventura County Superior Court, the Honorable Glen M. Reiser, Judge Presiding. The hearing continued for a second day on October 10, 2018 in Courtroom J2.

Petitioner Arvin-Edison Water Storage District appeared through its attorneys, Steven M. Torigiani and Brett A. Stroud of Young Wooldridge, LLP. Petitioners in the consolidated case, Los Alisos Ranch Company LLC and McAland Ranch LLC, appeared through their attorney, Steven A. Ehrlich of the Law Offices of Steven A. Ehrlich. Respondent South Valley Water Banking Authority appeared through its attorneys, Kevin P. Sullivan and Kimberly A. Foy of Gatzke Dillon & Ballance LLP.

After considering the filings of all parties, the oral arguments of counsel, and the records and files in this case, the Court took the consolidated matters under submission. After further deliberation and further review of applicable legal authorities, documents within the Administrative Record, and documents subject to judicial notice, the Court filed and served its "Order on Consolidated Petitions for Writ of Mandate" ("Order") on November 28, 2018. The Court then issued a "Notice of Errata" to the Order, dated December 4, 2018. A true and correct copy of the Order, with the Notice of Errata, is attached hereto as Exhibit 1, and is incorporated herein by reference. The Court having issued the Order that judgment and a peremptory writ of mandate shall issue in this proceeding:

IT IS THEREFORE ORDERED AND ADJUDGED that:

1. For all the reasons stated in the Order, the Court finds that South Valley Water Banking Authority's ("Respondent") approval of the Modified Pixley Groundwater Banking Project ("Project") on December 18, 2017, based on a final mitigated negative declaration titled "Environmental Assessment/Initial Study – South Valley Water Banking Authority Modified Pixley Groundwater Banking Project" ("EA/IS-MND"), instead of an Environmental Impact Report ("EIR"), violated the California Environmental Quality Act, Public Resources Code section 21000 et seq. ("CEQA"), and Judgment is hereby ENTERED in favor of Petitioner Arvin-Edison Water Storage District ("Arvin-Edison"), granting its petition for a Peremptory Writ of Mandate against Respondent.

2. A Peremptory Writ of Mandate ("Writ") SHALL ISSUE commanding Respondent to:

(a) VACATE AND SET ASIDE its approval of the Project and any associated approvals; and

(b) VACATE AND SET ASIDE its adoption of the EA/IS-MND and associated mitigation monitoring and reporting program, findings, and actions, including Resolution No. 2017-02.

3. Respondent SHALL FILE an initial return in this Court within sixty (60) days of receiving personal service of the Peremptory Writ of Mandate, specifying what steps it has taken to comply with the Writ.

4. If Respondent wishes to proceed with implementation of the Project, Respondent shall first prepare and certify an EIR, with the associated burden of full environmental review and analysis, including imposition of feasible mitigation measures and proper consideration of Project alternatives, and approve the Project, as required by CEQA.

5. Arvin-Edison is the prevailing party in this action and shall be AWARDED its costs of suit, as provided by law, pursuant to the timely filing of a memorandum of costs pursuant to the California Rules of Court, rule 3.1700, and the Court's ruling on any timely motion to strike or tax costs. Costs are awarded in the sum of _____.

6. The Court RETAINS jurisdiction over this proceeding until the Court has determined that Respondent has complied with the Peremptory Writ of Mandate and this Judgment and the provisions of CEQA. The Court also RETAINS jurisdiction to consider Arvin-Edison's claim for an award of private attorney general fees and costs pursuant to Code of Civil Procedure section 1021.5. Per rule 3.1702 of the California Rules of Court, any motion for such fees and costs shall be filed and served within sixty (60) days of the filing of the notice of entry of this Judgment. All post-trial motions and the return on the peremptory writ of mandate in this matter shall be heard by the Hon. Kevin DeNoce in Courtroom 43.

Dated: Jan. 2, 2019

Hon. Glen Reiser
Judge of the Superior Court

Exhibit 1

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF VENTURA

ARVIN-EDISON WATER STORAGE DISTRICT, a California Water Storage District,

Petitioner,

v.

SOUTH VALLEY WATER BANKING AUTHORITY, a California joint powers authority, and DOES 1-10, inclusive,

Respondents.

PIXLEY IRRIGATION DISTRICT, a California irrigation district; DELANO EARLIMART IRRIGATION DISTRICT, a California irrigation district; and DOES 11-100, inclusive,

Real Parties in Interest.

AND CONSOLIDATE CASES

Case No.: 56-2018-00509394-CU-PT-OXN
Consolidated with:

Case No.: 56-2018-00510012 –CU-PT-OXN

ORDER ON CONSOLIDATED PETITIONS FOR WRIT OF MANDATE

ORDER ON PETITION FOR PEREMPTORY WRIT OF MANDATE

STATEMENT OF FACTS

Surface Water Resources

In 1933, the California Legislature adopted a plan to transfer surplus water from the Sacramento River and its northern tributaries to water-deficient areas of the San Joaquin Valley through construction of the "Central Valley Project." *United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 98-99. The principal components of the Central Valley Project consist of Shasta Dam, designed to store and regulate waters of the Sacramento River; and Friant Dam, on the western edge of the Sierra, constructed to divert water from the San Joaquin River to southern regions of the valley; plus various other projects designed to transfer water from the Sacramento River system across the length and breadth of the San Joaquin Valley. (*Id*, at 99.)[1]

As expressively summarized by Justice Jackson in *United States v. Gerlach Live Stock Co.* (1950) 339 U.S.725, 728-729, 70 S. Ct. 955, 957, 94 L. Ed. 1231, 1236-1237:

> "[The Central Valley Project] is a gigantic undertaking to redistribute the principal fresh-water resources of California. Central Valley is a vast basin, stretching over 400 miles on its polar axis and a hundred in width, in the heart of California. Bounded by the Sierra Nevada on the east and by coastal ranges on the west, it consists actually of two separate river valleys which merge in a single pass to the sea at the Golden Gate. Its rich acres, counted in the millions, are deficient in rainfall and must remain generally arid and unfruitful unless artificially watered."
>
> "Water resources there are, if they can be captured and distributed over the land. From the highland barricade at the north the Sacramento River flows

[1] "The state of California produces more than half of the fruits, nuts, and vegetables grown in the United States, including many crops that are exclusively grown in California. The San Joaquin Valley, known as "America's fruit basket," is home to a 20 billion dollar crop industry and produces more in farm sales than any other individual state in the country. Nine of the ten top agricultural production counties in the United States are in California. Six of those counties, including Fresno, Tulare, Kern, Merced, Stanislaus, and San Joaquin counties, depend on CVP water for their crops." *San Luis & Delta-Mendota Water Auth. v. United States* (2012) 672 F.3d 676 (Smith J., conc. and diss. opin., at 715.)

> southerly, while from the Yosemite region at the southeast the San Joaquin River winds northeasterly until the two meet and consort in outlet to the sea through estuaries that connect with San Francisco Bay. These dominating rivers collect tribute from many mountain currents, carry their hoardings past parched plains and thriftlessly dissipate them in the Pacific tides. When it is sought to make these streams yield their wasting treasures to the lands they traverse, men are confronted with a paradox of nature; for the Sacramento, with almost twice the water, is accessible to the least land, whereas about three-fifths of the valley lies in the domain of the less affluent San Joaquin."
>
> "To harness these wasting waters, overcome this perversity of nature and make water available where it would be of greatest service, the State of California proposed to re-engineer its natural water distribution. **This project was taken over by the United States in 1935 and has since been a federal enterprise.** The plan, in broad outline, is to capture and store waters of both rivers and many of their tributaries in their highland basins, in cases taking advantage of the resulting head for generation of electric energy. Shasta Dam in the north will produce power for use throughout much of the State and will provide a great reservoir to equalize seasonal flows of the Sacramento. **A more dramatic feature of the plan is the water storage and irrigation system at the other end of the valley. There the waters of the San Joaquin will be arrested at Friant, where they would take leave of the mountains, and will be diverted north and south through a system of canals and sold to irrigate more than a million acres of land, some as far as 160 miles away. A cost of refreshing this great expanse of semiarid land is that, except for occasional spills, only a dry river bed will cross the plain below the dam. Here, however, surplus waters from the north are utilized, for through a 150-mile canal Sacramento water is to be pumped to the cultivated lands formerly dependent on the San Joaquin."** (Emphasis added.)

The Central Valley Project is managed by the United States Bureau of Reclamation, under the sponsorship of the United States Department of the Interior. *AquAlliance v. United States Bureau of Reclamation* (D.C. Cir. 2017) 856 F.3d 101, 103. The project serves 20,000,000 people and 7,000,000 acres of farm land in California. (*Id.*) The Central Valley Project is "largest federal water management project in the country." (*Id.*). To access Central Valley Water, users

must enter into water service contracts with the United States. *Tehama-Colusa Canal Auth. v. United States Dept. of the Interior* (2013) 721 F.3d 1086, 1089.[2]

The headwaters of the San Joaquin River are in the Sierra Nevada Mountains northeast of Fresno, fed by smaller rivers, including the Calaveras, Chowchilla, Fresno, Kings, Merced, Mokelumne, Stanislaus, and the Tuolumne. *San Luis & Delta-Mendota Water Auth. v. Jewell* (9th Cir. 2014) 747 F.3d 581, 593. The combined waters of the San Joaquin River are impounded at Millerton Lake and stored behind Friant Dam. *Dugan v. Rank* (1963) 372 U.S. 609, 613, 83 S. Ct. 999, 1002-1003, 10 L. Ed. 2d 15, 19; *Westlands Water Dist. v. United States* (9th Cir. 2003) 337 F.3d 1092, 1096. Once released, waters from the dam are diverted into Madera Canal to the north and to the Friant-Kern Canal to the south. *(Id.)*

Given its source as Sierra snow melt, and as conceded by all parties in this case, **"the water from the San Joaquin River that is delivered via the [Friant-Kern Canal] is considered to be of excellent quality.** [AR 3:93.][3]

This case concerns a water storage project involving waters proposed to be diverted from the Friant-Kern Canal, "banked" within the local subsurface aquifer, and then later restored after groundwater "recovery" back into the Friant-Kern Canal. The Friant-Kern Canal surface waters are specifically proposed to be stored within a natural subsurface aquifer located in southern San Joaquin Valley, beneath 800 acres of proposed recharge basins, just northeast of the common boundary point of Kings County, Tulare County and Kern County. [AR 3:57-63.]

Groundwater Resources

Unlike northern Central Valley Project waters which drain to the Sacramento Delta and ultimately the San Francisco Bay, San Joaquin River waters directed through the Friant-Kern Canal drain to the hydrologically closed Tulare

[2] Water service contracts with the Bureau of Reclamation–Friant Division are characterized as either "Class 1" or "Class 2" entitlements. Class I entitlements from Millerton Lake are intended to be reliable and non-contingent. [AR 3:59.]

[3] The administrative record in this case, digitally located and indexed on flash drive, is comprised of 316 digitally indexed documents, consisting of 11,182 consecutively and uniquely identified "Bates stamped" pages. References to the administrative record in this opinion shall be in the form "AR [document number]:[page number.]" The parties may need to create a hard copy of the administrative record in the event of review.

Basin. [AR 3:89, 993.] The project at issue is associated with 467,000 acre Tule Subbasin portion of the Tulare Basin. [*Id.*]

Groundwater quantity and quality have been a serious issue throughout the San Joaquin Valley for many years. Water quality within the San Joaquin River itself is susceptible to excessive salt and boron concentrations. (See, e.g., *San Joaquin River Exchange Contractors Water Authority v. State Water Resources Control Bd.* (2010) 183 Cal. App. 4th 1110). San Joaquin Valley groundwater *quantity* has been impacted by overdraft from agricultural wells and municipal/ industrial use. (See, *e.g.*, *Consolidated Irrigation Dist. v. City of Selma* (2012) 204 Cal. App. 4th 187, 193.)

According to the report relied upon by the lead agency in this case, with respect to affected *surface water* resources:

> "Common water quality issues are a result of runoff from direct discharge from industrial and commercial activities, resource withdrawal, leaking sewer infrastructure, and illicit dumping during wet weather conditions. Further potential sources of polluted water within Tulare County include past waste disposal practices, agricultural chemicals, and fertilizers applied to landscaping. Characteristic water pollutant contaminants include: sediments, hydrocarbons and metals, pesticides, nutrients, bacteria, and trash." [AR 3:995.]

The same report, addressing subsurface *groundwater* resources, notes that the deeper groundwater in the region typically contains total dissolved solids ("TDS") ranging from 200-600 mg/L, "which is satisfactory for a wide range of agricultural uses." [AR 3:997.] The **shallow aquifer** in the region, however, shows TDS values of shallow groundwater in "**poorly drained areas**" are as high as **30,000 mg/L** (USGS, 1995), "**exceeding all beneficial uses.**" (*Id.*) (Emphasis added.) Other noted regional water quality issues include "t[h]e eastern side of the Tule Subbasin, including areas near the Project location, [which] have occurrences of elevated nitrate." (*Id.*)

Of the twelve site-specific groundwater samples taken here on behalf of the lead agency, two on-site samples tested at or above state drinking water limits for arsenic, while a third sample exceeded state drinking water limits for lead. [AR 3:998.] The remaining nine on-site groundwater samples satisfied state drinking water thresholds for all tested constituents. (*Id.*) Two off-site but nearby existing

water wells tested at proposed project recovery well depth satisfied state drinking water standards. (*Id.*)

In terms of groundwater *quantity*, the lead agency's expert report references a general decline in local groundwater levels "as much as 100 feet since the 1940s." [AR 3:997.] According to the report:

> "The regional groundwater decline was somewhat arrested by the availability of CVP water starting in the 1960s; however, **CVP water is not available in the immediate vicinity** of the proposed Project. **Groundwater levels continue to decrease in** [real party in interest] **Pixley Irrigation District."** [AR 3:997.]

One potential adverse attribute of reduced groundwater levels, in addition to unavailability for local agricultural and domestic use, is the possibility of land subsidence. As noted in the report relied upon by the lead agency here:

> "**Over pumping of groundwater and chronic water level declines** in the Tule Basin and in other parts of the San Joaquin Valley **have induced land subsidence due to deep compaction of fine-grained lithologies. Areas most vulnerable to subsidence** are where pumping **occurs beneath the Corcoran Clay** west of the Project area. **Land subsidence beneath portions of the Tule Basin of 12 to 16 feet from 1926 to 1970 has been reported** (USGS, 1984). More recently **between 2007 and 2011, an additional 0.5 to 1 foot of subsidence occurred in the Project area** (LSCE, 2014). This is attributed to reduced availability of surface water supplies and reliance on groundwater to meet water demands." (Emphasis added.) [AR 3:999.]

The referenced "**Corcoran Clay**" refers to **a regionally significant, impermeable clay layer** which separates the upper "unconfined" aquifer from subsurface formations "**with distinctly different water chemistries**" [AR 3:996.] As reported in the lead agency's expert analysis: "Where the Corcoran Clay is present in the western portion of the Tule Basin, the shallow overlying aquifer is unconfined or semi-confined **while the aquifer beneath the Corcoran Clay is confined**." [AR 3:997.]

According to the lead agency's initial study, "[t]he Corcoran Clay occurs between depths of about 200 to 300 feet below ground surface (bgs) in the general Project area." The lead agency's subsequent hydrology report opines that an

impermeable subsurface Corcoran Clay layer exists approximately two miles southwest of the project site, but this does not exist on the project site, where the subsurface is "moderately to highly permeable." [AR 3:996.]

Litigation and Regulatory Framework

In resolution of a lengthy federal lawsuit entitled *Natural Resources Defense Council v. Kirk Rodgers* (E.D. Calif. case no. CIV S-88-1658 LKK/GGH), a settlement was signed on September 16, 2006 by a variety of stakeholders, including co-petitioner Arvin-Edison Water Storage District ("AEWSD"), co-real party Delano-Earlimart Irrigation District ("DEID"), and the Department of the Interior. [AR 7:4353.] The intent of the settlement was to increase release flows from Millerton Lake to maintain fish populations in "good condition" in the San Joaquin River below Friant Dam, and at the same time "reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors," including AEWSD and DEID. (*Id.*) Central to the stipulated settlement was the passage by Congress of the San Joaquin River Restoration Settlement Act ("SJRRSA"). (Title X of P.L. 111-11, the Omnibus Public Land Management Act of 2009.)

By its terms, SJRRSA authorizes federal financial assistance to local agencies promulgating projects designed to "reduce, avoid or offset" water availability losses associated with required release flows designed to sustain fish populations. (Title X of P.L. 111-11, at §10202(b).) Specifically, the SJRRSA proposes supportive federal funding for "the planning, design, environmental compliance, and construction of local facilities to bank water underground or to recharge groundwater, and that recover such water..." (*Id.*, at §10202(a).)

Commencing January 1, 2015, the California Sustainable Groundwater Management Act ("SGMA") took effect. (Water Code §10720 *et seq.*) The state legislative preamble to SGMA states, in pertinent part:

> "(2) Groundwater provides a significant portion of California's water supply. Groundwater accounts for more than one-third of the water used by Californians in an average year and more than one-half of the water used by Californians in a drought year when other sources are unavailable.
> (3) **Excessive groundwater extraction can cause overdraft, failed wells, deteriorated water quality, environmental damage, and irreversible land subsidence that damages infrastructure and diminishes the capacity of aquifers to store water for the future.**

(4) When properly managed, groundwater resources will help protect communities, farms, and the environment against prolonged dry periods and climate change, preserving water supplies for existing and potential beneficial use.
(5) **Failure to manage groundwater to prevent long-term overdraft infringes on groundwater rights.**
(6) Groundwater resources are most effectively managed at the local or regional level.
(7) **Groundwater management will not be effective unless local actions to sustainably manage groundwater basins and subbasins are taken.**" (Wat.C.§10720)"

Under SGMA requirements, some "high priority" and "medium priority" groundwater basins are required to be managed under a comprehensive groundwater sustainability plan by January 31, 2020, the balance by 2022. (Wat.C.§10720.7.) The Tule Subbasin is deemed a "high priority" basin. [AR 3:175.]

SGMA authorizes the creation of groundwater sustainability agencies with broad statutory powers, funding allowances and enforcement powers. (Wat.C. §10723 *et seq.*) SGMA recognizes that fallowing of agricultural lands and reduction of groundwater pumping may be required to achieve sustainability. (Wat. C. §§ 10726.2(c), 10726.4(a)).

The Project

Co-real party Pixley Irrigation District ("PID") traverses 70,000 acres of principally farmland in western Tulare County southwest of Porterville, straddling the town of Pixley and U.S. Highway 99. [AR 3:61, 3:187.] PID has a reported annual irrigation demand of 137,600 acre feet of water per year ("AFY"), the bulk of which is pumped by farmers from private groundwater wells. [AR 3:88.]

Co-real party DEID covers 56,500 acres of principally farmland immediately south of PID and immediately north of the town of Delano, straddling the Kern/ Tulare County border. [AR 3:61.] DEID has a reported annual irrigation demand of 145,600 AFY, the preponderance of which is obtained contractually from the Bureau of Reclamation via the Friant-Kern Canal. [AR 3:88.]

In this case, PID and DEID came together on November 26, 2013 to form a joint powers authority under Government Code §§6500 *et seq.*, which agency they

collectively named the "South Valley Water Banking Authority ("SVWBA".) [AR 3:57, 91:9245 *et seq.*] The SVWBA is considered the lead agency for purposes of this litigation.

The project site consists of 1012 acres of producing farmland within the PID to be converted to water recharge basins and "recovery wells." [AR 3:57, 3:156.] According to the proposal, a total of up to **90,000 acre feet** of Friant-Kern Canal water would be **diverted onto the project site** typically during storm periods, **recharged** into the subsurface aquifer through spreading ponds, **banked** in the aquifer until needed, **90%** of which would then **recovered** during dry years (with a maximum 30,000 AFY annual extraction limit) and returned to the Friant-Kern Canal through sixteen on-site recovery wells. [AR 3:57-59.] In this fashion, SVWBA would be credited with the water returned to the Friant-Kern Canal, to be delivered through the canal to either its members or to third parties purchasing those rights. (*Id.*) The unrecovered 10% of the recharged water is intended to assist in the districts' respective groundwater sustainability obligations.[4] [AR 3:58-59.]

In addition to the recharge basins and recovery wells, the proposed physical project facilities include pipelines, "turnouts" to and from the Friant-Kern Canal, and a pumping plant. [AR 3:63 (map), 3:67-69.]

Administrative Proceedings

2008-2015

Since 2008, long before SGMA was legislated and pending congressional passage of SJRRSA, PID and DEID had been discussing a joint water banking project. [AR 67:8890, 73:9079.][5] Technical issues arose in the early years due to unavailability of predictive groundwater modeling associated with expected drawdown of neighboring agricultural wells during times of heavy groundwater "recovery" from the proposed water bank. [AR 70:8998-9001.] A November 11, 2011 project timeline from the agencies' consulting engineer anticipated that they

[4] SVWBA believes there to be "significant groundwater storage potential" in this locale as depth to static groundwater from the surface in the project area is estimated to be approximately 300 feet. [AR 6: 3368.]

[5] PID, unlike DEID, is not a recognized "Friant Division long-term contractor." (Title X of P.L. 111-11, at §10010(a); AR 7:4374.) It appears under the requirements of SJRSSA that DEID's participation in SVWBA was critical to acquisition of federal funding for the banking project. (*Id.*, at §10202(b)(1).)

would be seeking approval of the water bank **upon certification of a formal environmental impact report** ("EIR"). [AR 67:8991.]

By mid-2013, SVWBA was offering to interested parties 30,000 shares in the proposed water bank at $1750 per share, for a total initial capitalization of $52,500,000, plus a total $630,000 annual maintenance fee for the first three years, to be adjusted annually thereafter. [AR 75:9116-9118.] On September 13, 2013 the Bureau of Reclamation anticipated total development/construction project cost to be $13,315,920, for which it agreed to provide a federal grant for one-half of that sum. [AR 78:9125 *et seq.*] SVWBA noted at the time that it is expecting "some level of profit" from the venture. [AR 86:9225.]

In a letter to the Bureau of Reclamation dated November 13, 2013, SVWBA indicated concern as to return water quality issues being raised by petitioner Arvin-Edison Water Storage District ("AEWSD"). [AR 89: 9232-9233.] SVWBA insisted upon meeting with the Bureau of Reclamation and an "acknowledgement from Reclamation that the responsibility for setting Friant-Kern Canal water quality standards is [within] the exclusive purview of the Bureau." (*Id.*) By responsive letter, the Bureau of Reclamation confirmed its current non-project water acceptance standards into the Friant-Kern Canal as those set forth in a March 7, 2008 policy memorandum. [AR 93: 9264-9265.]

Stated simply, the Bureau of Reclamation uses **Title 22 California drinking water standards** as its baseline for water quality within the Friant-Kern canal. According to the referenced 2008 policy memorandum: **"The quality of CVP water will be considered impaired if the conveyance of the Contractor's nonproject water is causing the quality of CVP water to exceed a maximum contaminant level specified in Title 22** [Cal.Code Regs.]."[6] [AR 93:9264-9273.] (Emphasis added.)

In a revised timeline dated November 22, 2013, SVWBA's engineers prepared a revised project timeline which calendared preparation of a mitigated negative declaration ("MND") in lieu of the previously scheduled environmental impact report. [AR 90 2936.][7]

[6] It should be noted that the focus of the Bureau of Reclamation standard is not the quality of the foreign water deposited *into* the canal, only the resultant overall canal water quality once imported and diluted.

[7] This change of CEQA direction appears somewhat premature as SVWBA's hydrogeologic expert was not retained until more than ten months later. [AR 106: 9388 *et seq.*]

SVWBA's CEQA consultant proposed preparation of a joint EIS/EIR.[8] According to the consultant: "**[We] recommend[] that an EIR be prepared to adequately assess the anticipated environmental impacts pursuant to both CEQA and NEPA.**" [AR 99:9297.] With respect to water quantity and water quality, SVPBA's consultant proposed that the draft EIR include the following:

"□ *Groundwater Quantity*: From an annual water balance perspective, over time, Project implementation would increase local groundwater levels; however, **should several of the recovery wells be operational at the same time, significant draw down will occur. A technical analysis will be prepared to fully support the analysis required in the DEIR/DEIS and will be sufficient to show the changes in groundwater levels with Project operation and under the full range of hydrological conditions (i.e. water year types). The Project's potential effect on local subsidence would also be analyzed.**"

"□ *Groundwater and Surface Water Quality*: **The recovered water to be put back into the Friant-Kern Canal for distribution would likely have a different quality than that of the water already in the Canal. The potential changes in groundwater quality and subsequent surface water quality in the receiving water will be evaluated.**" (Emphasis added.) [AR 99:9299.]

Despite this recommendation, prior to receiving the "finalized" hydrology/ water quality report from its technical expert, SVWBA determined to proceed by mitigated negative declaration rather than by EIR. [AR 124:9540.] No scientific "evaluation" of the impacts of recovered water upon Friant-Kern Canal water was ever performed.

The 2016 Initial Study

By the beginning of 2016, a number of water banking projects had been proposed within the southern San Joaquin Valley to store and later pump back water into the Friant-Kern Canal, as a means to comply with the San Joaquin River Restoration Program in order to restore fish populations. [AR 127:9552.] A color-coded map from the Bureau of Reclamation depicts four such proposed "pump

---

[8] The Bureau of Reclamation, the federal lead agency under NEPA and partial underwriter of the subject project, is guided by the requirements of the National Environmental Policy Act ("NEPA"), with its conditional requirement of an environmental impact statement ("EIS"). (42 U.S.C. § 4321 *et seq.*)

back" facilities along the Friant-Kern Canal between the town of Shafter and the project site. [AR 127:9554.]

As of February 16, 2016, prior to completion its initial study, SVWBA and its engineers anticipated that all CEQA approvals for its water banking project would become final by April 20, 2016. [AR 130:9612 (handwritten notes).]

SVWBA issued its CEQA initial study on March 28, 2016, anticipating adaption of a mitigated negative declaration in lieu of an environmental impact report. [AR 7:4423.][9]

With respect to groundwater *quantity*, SVWBA's initial study notes in relevant part:

> "**Over pumping of groundwater beneath the Corcoran Clay has resulted in historical land subsidence of 12 to 16 feet** due to deep compaction of fine-grained units beneath portions of the Tule Basin (USGS, 1984). Between 2007 and 2011, continued overdraft pumping in the Tule basin has resulted in an additional 0.5 to 1 foot of subsidence in the Project area (LSCE, 2014). The eastern side of the Tule Basin, including **areas near the proposed Project location, have localized nitrate pollution**, likely as a result of agricultural fertilizers."
>
> "**An overdraft for the Tulare Lake Basin is projected at 820,000 acre feet per year (AF/year), the greatest overdraft projected in the state [of California,] and 56 percent of the Statewide total overdraft. The Tule sub-basin has been identified and defined by Water Code §12924 as a basin in critical condition of overdraft. This designation indicates a basin where a continuation of present water management practices would likely result in significant adverse overdraft-related environmental, social, or economic impacts.**" (Emphasis added.) [AR 7:4515.]

[9] The initial study doubles as an environmental assessment document under NEPA, and in large part was written in language designed to confirm federal funding requirements under SJRRSA. SVWBA's opening rationale on rejection of the required "no project" alternative is the loss of federal funding. [AR 7:4361.]

The proposed water quantity **mitigation would require SVBWA to reclaim only 90% of the water delivered** for aquifer recharge. According to the initial study:

> "The Project would provide opportunities for partners to bank water during wet years and recover water in normal and dry years. **The proposed Project would operate on a 10 percent "leave behind" fraction, where water recovered would not exceed more than 90 percent of the previously recharged water; thus creating a minimum net benefit of at least 10 percent of the banked groundwater.** As a result of the proposed Project the groundwater levels would increase in and around the proposed Project, as compared to conditions remaining unchanged and the Project not existing. **Therefore the proposed Project would not substantially deplete groundwater supplies, interfere with groundwater recharge, or result in a net deficit to groundwater levels.**" [AR 7:4523.]

The initial study notes that SVWBA's proposed mitigation is supported by a hydrologic modeling study establishing a *long-term* "net benefit" to groundwater quantity after a 40-year simulation period. [AR 7:4523.] The same modeling study, however, establishes negative *short-term* impacts associated with water well recovery operations "**as much as 116 feet of drawdown** within the recovery well itself due to aquifer parameters and well design," though the study opines that "the lateral extent of the recovery well drawdown is limited to the area immediately surrounding the [SVBA recovery] well." (*Id.*)

As to groundwater *quality* issues, SVWBA's initial study states in pertinent part:

> "[W]ater quality on the east side of the valley floor of the county in this area is **characterized by diminished quality where nitrates, phenols, and salts are present** in different concentrations and in different locales. On the westerly side of the Deer Creek/White River Watershed, groundwater **quality again declines into unacceptable conditions**. Principal among these conditions are **elevated levels of arsenic and micro-sand** (very fine sand entrained in the water) conditions (Tulare County, 2012)." (Emphasis added.) [AR 7:4377.]

SVBWA's initial study "checklist," *inter alia*, found no project impact which could "[s]ubstantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume

or a lowering of the local groundwater table level." [AR 7: 4511.] The checklist did find that the project could substantially alter drainage (i.e., the Friant-Kern Canal) and "[o]therwise substantially degrade water quality," but concluded that both potentially significant impacts would be mitigated to levels of environmental insignificance. (*Id.*)

In the initial study, SVWBA notes that "residual concentrations of nitrates and other agricultural related chemicals (if present) could be mobilized beneath the recharge basins with initial water applications ... [which] would result in short-term impacts to groundwater quality, but opines that the sheer volume of recharge will "flush" the contaminants, and that mitigation through periodic water quality sampling would quantify resultant water quality prior to returning any water to the Friant-Kern Canal. [AR 7:4521-4522.]

As to both water quantity *and* water quality issues, SBWBA's proposed project mitigation includes establishment of a "**Groundwater Monitoring Committee**" to "**recommend immediate steps** needed to be taken to minimize these effects to less than significant," "including depth to groundwater, well interference (if any) and groundwater quality," **if and when groundwater depletion or water quality degradation issues reaches a "level of concern**." [AR 7:4524.]

The SVBWA initial study concludes that the project's water quantity impacts, in light of the proposed mitigation, "would be less than significant." [AR 7:4524.] The initial study concludes that the project's water quality impacts, in light of the proposed mitigation, "would be less than significant." [AR 7:4526.] The December 21, 2015 report of SVBWA's hydrology consultant is attached to the initial study. [AR 5239-5285.] SVBWA also attaches to its initial study the Bureau of Reclamation's March 7, 2008 non-project water acceptance policy. [AR 5286-5302.]

Public Comment on the 2016 Initial Study

On May 11, 2016, petitioner and adjoining landowner McAland Ranch LLC, and its farming operator Los Alisos Ranch Co. LLC (collectively McAland"), provided written comments on the initial study.[10] [AR 20:5567 *et seq.*] McAland

[10] McAland's proximity to the project is perhaps best depicted in the green square on the color-coded map at AR 151:9686, and immediately west thereof. The project site is depicted in the

contended, *inter alia*, that it had "engaged the services of a highly qualified hydrologist who opines that the existing information set forth in [the initial study] is inadequate and/or erroneous." [AR 20:5569.]

Specifically, according to McAland, in pertinent part:

> "The analysis of Project impacts in the [initial study] is fundamentally flawed in that the premise is that there is one aquifer underlying the Project and adjacent lands. **My clients' technical expert believes that in reality there are two aquifers**. It does not appear that any technical work was performed to determine that only one aquifer is implicated by the Project, and thus, **the conclusion of one aquifer is premised upon incomplete and/or erroneous data**."
>
> ..."**If there are in fact two aquifers, then movement of water from the shallow water aquifer will be impeded by clay** and water contained therein (including water recharged by the Project) will tend to stay shallow. **As to the deep aquifer, the confined nature of same will cause significant drawdowns of water when the deep recovery wells are pumped**. In order to properly evaluate the situation, there should be pump tests implemented to determine the transmissivity of each layer of materials and the impact analysis of the [environmental documentation] revised accordingly." [AR 20:5569-5570.]

In addition to raising issues as to the number of aquifers and the "predicted [land] subsidence" associated with proposed multi-well drawdown of the deeper aquifer [AR 20:5573], McAland raised a lengthy series of additional technical questions as to the significance of the hydrologic impacts associated with SVWBA's proposed water bank project. [AR 20:5569-5573.]

On May 19, 2016, comments were received by SVWBA from petitioner and downstream Friant-Kern Canal water recipient Arvin-Edison Water Storage District ("AEWSD"), challenging "the [project's] proposed discharge of non-project water into the [Friant-Kern Canal] and **potentially significant water quality impacts to Arvin-Edison's surface and groundwater irrigation supplies**, water banking programs, **and associated negative impacts on crops in the [Arvin-Edison] District** among other things." [AR 21:5574 et seq.]

---

orange-striped full and partial squares and the blue square. The Friant-Kern Canal is depicted as a blue line at the very bottom right corner of the map.

AEWSD provides water for 132,000 acres of farmland in the southernmost reaches of the San Joaquin Valley, including the end-user of "Class 1" water rights from Millerton Lake through the Friant-Kern Canal. [AR 21:5575.]

Throughout the Tulare Lake basin there are high levels of salt in the groundwater, which is a problem for Arvin-Edison due to "the closed nature of the groundwater basin underlying Arvin-Edison which provides for accumulation and buildup of salts." [AR 21: 5576-5577.] In addition to direct Friant-Kern Canal water delivery to its customers, AEWSD uses the resource to replenish local AEWSD groundwater to minimize salt loads. (*Id.*)

A second water quality issue within AEWSD concerns elevated levels of arsenic, impacting water which the district contributes to the California Aqueduct. [AR 21:5577.] As noted by AEWSD, "Arvin-Edison has relied on the low levels of arsenic in the FKC for dilution purposes and accordingly, arsenic degradation of [the Friant-Kern Canal] will further harm Arvin-Edison and its existing water management programs."

Third, AEWSD has been designated by a state agency as a prospective "high vulnerability area" with respect to high nitrate levels in the groundwater. [AR 21: 5578.] AEWSD contends that SVWBA's water bank project, by infusing the proposed 30,000 acre-feet per year of groundwater into the upstream Friant-Kern Canal, "allows a few districts to export damaging nitrates and salts and convey them downstream to other districts that receive no benefit or mitigation whatsoever from the Project." (*Id.*) As asserted by AEWSD in response to the initial study:

> "The [initial study] concedes that the **[Friant-Kern Canal] water**, which Arvin-Edison receives by contract with the United States Bureau of Reclamation (Reclamation") **is excellent quality** and that **Project groundwater is of much lower quality, including with respect to the presence of nitrogen, arsenic, agricultural chemicals, lead contaminants, and salts at much higher levels than [the Friant-Kern Canal]** water. Practically speaking, **this means that operation of the Project will require Arvin-Edison and other downstream contractors using water from the [Friant-Kern Canal] to receive degraded water supplies**. However, the environmental impacts of degraded water supplies to Arvin-Edison and other downstream contractors or water users were not studied as to irrigation suitability or otherwise, and, as a practical matter, not analyzed in the draft EA/IS." (Emphasis added.) [AR 21:5574.]

In anticipation of SVWBA's position that Title 22 drinking water standards constitute all that is required in the Friant-Kern Canal under the Bureau of Reclamation's March 7, 2008 non-project water acceptance policy, AEWSD, citing prior documentation, contended that it "has consistently pointed out that Title 22 "drinking water" standards do not provide adequate protection for or avoid degradation of the quality of water *for "irrigation suitability.*" [AR 21:5575.] According to AEWSD:

> "[Friant-Kern Canal] water is of exceptionally high quality and particularly suitable for crops grown in Arvin-Edison, including citrus and vineyards which are not tolerant of several constitutes of concern that are more prevalent in the Project's groundwater than the [Friant-Kern Canal] water. These **constituents of concern include TDS, boron, sodium, chloride, bicarbonate and pH. Some of these constituents were not even tested for in the [initial study]** for the Project." (Emphasis added.) [AR 21:5575-5576.]

While the Bureau of Reclamation has released its 2008 policy memorandum allowing Friant-Kern Canal water to meet minimum California state drinking water standards, the contractual and historic expectation of AEWSD as a "Class I" contractor, according to AEWSD, has been to receive "that supply of water stored in or flowing through Millerton Lake ..." [AR 21:5578.] AEWSD stated in response to the initial study:

> **"Water that is stored in or flowing through Millerton Lake is pristine Sierra Nevada snowmelt and, as such, relied upon by Arvin-Edison to maintain its water quality. The Project as proposed will displace and degrade Arvin-Edison's contractual water supply.** Arvin-Edison wishes to continue to utilize its Friant Division supplies, un-degraded, to benefit Arvin-Edison landowners and its water management programs." (Emphasis added.) [AR 21:5578.]

Finally, AEWSD identified more than a dozen "past and present" upstream projects" discharging non-Millerton Lake water into the Friant-Kern Canal. [AR 21:5579.] The district contended that the cumulative impact of these projects upon water quality in downstream AEWSD requires environmental analysis. (*Id.*) AEWSD cited *County Sanitation District No. 2 of Los Angeles County v. County of Kern* (2005) 127 Cai.App.4th 1544, 1578-1579, for the proposition that a full environmental impact report should be prepared.

On May 23, 2016, former litigant Angiola Water District submitted comments. [AR 143:9646-9649.][11] Angiola Water District, a public agency located in both Tulare County and Kings County, contended that the initial study contained substantial evidence of **a fair argument that the SVWBA project could have a significant effect upon both groundwater depletion and water quality**, the "low threshold" standard for the preparation of a formal environmental impact report. [AR 143: 9647-9648, citing, *inter alia*, *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 151 and *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311.]

Specifically, Angiola noted SVWBA's expected groundwater drawdown of up to 116 feet for each recovery well, in a hydrologic subbasin "in a critical state of overdraft" with historical and subsidence of 12-16 feet, to be potentially significant. [AR 143:9648.] According to Angiola, there would be no reason for the proposed "Groundwater Monitoring Committee" to mitigate groundwater depletion and water quality impacts *to levels of insignificance* "if there was not at least a reasonable possibility that the Project may have significant effects in the first instance. (*Id.*) Angiola challenged SVWBA's undefined "level of concern" criterion as an improper CEQA mitigation performance standard. (*Id.*)[12]

On May 27, 2016, the Bureau of Reclamation increased its grant funding authorization on the project to $7,457,960, extending SVWBA's performance period to December 31, 2019. [AR 144:9650 *et seq.*] The increased federal financing authorization includes a line item budget. [AR 144:9653-9654.]

On June 10, 2016, the Bureau of Reclamation advised internally:

---

[11] The current litigation consists of three consolidated cases, two originating in Tulare County and one commenced in Kern County. All three cases were subsequently transferred to Ventura County, all utilizing the same administrative record. One of the two Tulare County cases, *Angiola Water Dist. v. South Valley Water Banking Authority* (Tulare Superior Court case no. 272428; Ventura County Superior Court case no. 56-2018-00509394) was resolved by the parties prior to the hearing on the petition for writ of mandate. The public comments of Angiola Water District are nevertheless part of the administrative record.

[12] Angiola Water District is a member of Tri-County Water Authority, a joint powers agency, which submitted a separate objection to SVWBA proceeding by mitigated negative declaration. [AR 147: 5731-5734.] The position of Tri-County Water Authority was consistent with the position asserted by Angiola. (*Id.*)

> "After the comment period for the EA/IS, **it is clear that more environmental analysis needs to be completed. This would be by either beefing up the EA/IS or going with a EIR/EIS. It is up to the district what approach is taken,** we will just follow their lead." (Emphasis added.) [AR 145:9657.]

By July 18, 2016, SVWBA elected to "beef up" its CEQA initial study and decided to modify its 2016 project description to include additional acreage. [AR 147:9660-9661.] SVWBA, through its engineers, proposed to retain a second groundwater consulting firm to provide both a scope of work and peer review for the previous hydrogeological consultant. (*Id.*)[13] SVWBA did not offer the "focused" EIR requested by the commenters.[14] [AR 20:5569, 160:9724-9725.]

By early 2017, SVWBA had revised its initial study to the point it believed it had "a very good product that will [with]stand the tightest of scrutiny." [AR 174:9775.]

The 2017 Initial Study

SVWBA released its revised initial study on April 12, 2017. [AR 179: 9794.] On April 17, 2017, SVWBA published its intention to and approve the water banking project subject to a mitigated negative declaration, without the preparation of an environmental impact report. [AR 182:9779.]

---

[13] SVWBA's additional groundwater consulting firm was hired, according to terms of its own retention letter, *inter alia*, "to develop comprehensive responses to technical concerns stated in comment letters of the draft [initial study]," and "to demonstrate how the project is consistent with SGMA and does not interfere with planning and implementation of the Act by other GSAs in the groundwater subbasin," [AR 158:9709 *et seq.*]

[14] Time was no longer an ally of SVWBA. The agency was acutely aware of the January 31, 2020 initial implementation date of SGMA. [AR 167:9755.] As stated by DEID to a local farming enterprise, stressing the need to support the water bank as a means to maximize availability of future irrigation resources: "I am confident that the amount of land being farmed in the post□SGMA world will be much less than is being farmed today." (*Id.*)

Perhaps even more critically, SVWBA was under "hard deadlines that must be met" with the Bureau of Reclamation financing grant. [AR 177:9779.] SVWBA fired off a letter to the Chief of the United States Army Corps of Engineers, advising her that the Army's request for two additional months to review its jurisdictional waters delineation under the federal Clean Water Act was "unreasonable and unacceptable." [AR 177:9778.] There can be little doubt that SVWBA's sense of urgency at this stage was at least a factor in in its decision *not* to proceed with a comprehensive draft environmental impact report.

The 2017 initial study sets forth a more definitive protocol for compensating water well owners when SVWBA recovery well pumping results in nearby groundwater "drawdown" of more than 10 feet. [AR 6:3357, 6:3380.] The 2017 initial study adds two site-specific geologic cross-sections delineating Corcoran Clay formations west of the project site. (*Id.*, at 3370.) As with the 2016 initial study, SVWBA once again determined that "[a]lthough the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because the recommended mitigation measures ... are preliminarily agreed to by the signatory." (*Id.*, at 3430.)

In preparation for its 2017 initial study, SVWBA hydrologists examined "over 450 water well drillers reports and oil and gas electric logs" in various locations. [AR 6:3370.] SVWBA took "nine geotechnical borings at the Project site to investigate the upper 100 feet of sediments." (*Id.*) And, as indicated above, SVWBA drafted "[t]wo regional and two site-specific geologic cross sections... to characterize the occurrence of [site specific] aquifer materials and their stratigraphic relationships." (*Id.*)

Contravening the earlier McAland contention that "in reality there are two aquifers" [AR 20:5569], SVWBA's 2017 initial study concludes that its hydrologists' own "conceptualization of the aquifer system in the Project area is of **a single aquifer system** consisting of sands and interbedded clays typical of alluvial plain deposition." [AR 6:3370.] SVWBA's conceptualization diagram **locates the impermeable Corcoran Clay layer outside the Project recharge area**. [AR 6:3371.][15]

With respect to expected periodic groundwater drawdown upon nearby agricultural wells as the result of project recovery well operations in an already overdrafted aquifer, SVWBA proposed further possible mitigation depending upon groundwater monitoring once the project became operational:

> "Through implementation of the monitoring program, further refinements may be recommended as pumping influences are delineated through water level monitoring using transducers and data loggers that provide continuous feedback. Such refinements may include changing monitoring frequency,

[15] The Corcoran Clay layer is generally 200-450 feet below surface in the region. [AR 6:3528, 6:4251 (map).] The geographic breadth of the Tule Subbasin is depicted on the map at AR 6:4247.

deployment of water level transducers to other locations, and installation of additional observation wells." [AR 6:3372.]

As to groundwater quality impacts, SVWBA's 2017 initial study held to its earlier position that periodically testing the return water to comply with Bureau of Reclamation "drinking water" standards for non-Millerton Lake water in the Friant-Kern Canal satisfies all necessary required mitigation to avoid adverse impacts. [AR 6:3379.]

Attached to the 2017 initial study is SVWBA's supporting hydrology report dated February 1, 2017 [AR 6:4226 *et seq.*], and a "Geologic and Stratigraphic Evaluation" report dated January 18, 2017 [AR 6:4255 *et seq.*]. The latter technical report provides more detail as to the known extent of the Corcoran Clay layer and attempts to map the subsurface with geologic cross-sections:[16]

> "The most extensive of these clay beds is the **E-Clay, or Corcoran Clay,** which **extends from northern Kern County all the way to the City of Tracy** in the San Joaquin Delta. The E-Clay was formed when a lake occurred in most of the San Joaquin Valley, which is delineated by the presence of this formation.... **The E-Clay has been long recognized as a major confining bed in much of the San Joaquin Valley separating two major aquifers: a shallow unconfined aquifer and a confined to semi-confined lower aquifer.**" (Emphasis added.) [AR 6:4260.]

The technical study concedes that the "majority" of subsurface electric logs used to develop the conceptual subsurface cross-sections had been created for oil and gas purposes, and "may not record the E-Clay and shallower features." [AR 6:4260.] The technical study further concedes that only a "few" of the 450 water drillers' reports from Tulare and Kern County also used to develop the cross-sections contain electric logs, and that "most [water] driller's reports fail to describe the color of the clay beds that would delineate the blue or gray coloration of the E-Clay." *(Id.)*

Despite these limitations, this technical study confirmed that "the mapped extent" of the Corcoran Clay ("E- Clay") "is about 2 miles east of the [project] site

[16] The conceptualized stratigraphic cross-sections are embedded in the record at AR 6:4266-4272.

at a depth of about 200 feet." [AR 6:4261.] As concluded in the technical report, "[n]o evidence was found in drillers logs indicating an extension of the E-Clay, or other continuous lake bed clay, into the Project area." [AR 6:4262.]

Public Comment on the 2017 Initial Study

The first public agency to raise concerns with respect to SVWBA's 2017 initial study was the immediately adjacent Saucelito Irrigation District ("SID"). [AR 24: 5741-5742; see AR 6:3346.] SID took the position that SVWBA's mitigated negative declaration would be appropriate only where the stated mitigation "is able to eliminate or avoid all significant impacts." [AR 24:5741.]

SID contended that SVWBA's monitoring program, designed to assess recovery well drawdown upon neighboring wells, did not insure mitigation of the initial study's conceded significant impacts upon neighboring agricultural wells, including those of nearby SID. [AR 24: 5741-5742.] SID requested SVWBA to "either revise its MND to provide mitigation measures that do entirely eliminate impacts to neighboring wells or complete further study with an Environmental Impact Report." [AR 24:5742.]

Next to challenge the 2017 initial study was petitioner McAland. [AR 29: 5747 *et seq.*][17] McAland advised that it had retained the services of hydrologist Kenneth D Schmidt & Associates in 2015. Dr. Schmidt, a frequently hired and highly published Central Valley hydrologist [AR 29: 5766-5778], had made the following preliminary analysis in October 2015 prior to the issuance of the 2016 initial study:

> **"Evidence indicates that there are two aquifers in the area. Because the deep groundwater is confined, storage coefficients are small and drawdowns are large. ... Pumpage of confined groundwater can be expected to cause land subsidence, as this area is in an area of historical land subsidence."** [AR 29:5781.]

Upon receipt of the 2017 initial study, Dr. Schmidt updated his initial analysis with a more comprehensive written analysis. [AR 5783-5787.] Dr. Schmidt's May 1, 2017 memorandum notes that SVWBA's Geologic and

[17] Additional project acreage added to the 2017 initial study includes a portion of farmland owned by McAland, which additional farmland SVWBA proposes to take by eminent domain. [AR 29: 5747-5748.]

Stratigraphic Evaluation" report dated January 18, 2017 utilizes two cross-sections showing geologic subsurface conditions many miles from the project site, extending to depths well beyond those of concern with respect to the Corcoran Clay. [AR 29:5783-5784.] Of the two cross-sections conceptualized by SVWBA within the project area, according to Dr. Schmidt's interpretation of the drawings, "individual clay layers weren't identified or correlated beneath the banking site." [AR 29:5784.]. Dr. Schmidt contends that the same data relied upon by SVWBA **supports a two-aquifer system.** [AR 29:5784-5785.]

Utilizing SVWBA's water quality data to support the existence of a confined lower aquifer beneath Corcoran Clay, Dr. Schmidt notes:

> "In examining Table 1 of (Appendix H-1), one can see that the deep groundwater (below a depth of about 500 feet) had low nitrate concentrations (5 mg/l or less), and relatively high arsenic concentrations (6 to 13 ppb) and pH (8.9 to 9.3). In contrast, nitrate concentrations in water from many shallower wells ranged from 10 to 34 mg/l and the arsenic concentrations in water from many of these wells were 3 ppb or less. **These differences are consistent with the presence of one or more local confining beds**." (Emphasis added.) [AR 29:5785.]

In other words, Dr. Schmidt's position is that in a single, unconfined aquifer with hydraulic continuity, the scenario "conceptualized" by SVWBA, the variations in contamination levels within the same hydraulic unit would not be as pronounced as those evidenced by the data.

With respect to water quality, Dr. Schmidt notes that SVWBA's limited "deep well" testing evidenced **high levels of both arsenic and pH,** the latter "above the levels normally considered desirable for drinking water." [AR 29:5785.] Dr. Schmidt found inadequate data in order to properly quantify local well interference due to drawdown [AR 29:5786].

SVWBA's 2017 initial study concedes that "**[a]reas of the Tule Subbasin affected by the Corcoran Clay are "most vulnerable to [land] subsidence.**" [AR 6:3374.] Dr. Schmidt's review of the 2017 initial study cites to prior findings of significant land subsidence "well east of the east edge of the Corcoran Clay" currently identified by SVWBA. [AR 29:5786.] According to Dr. Schmidt, in pertinent part:

> "Because of the probable depth of the proposed recovery wells (1,000 to 1,200 feet), **there would be substantial new pumping from strata below the confining bed(s), and substantial land subsidence would be expected.** ... The new SGWMA provisions target land subsidence as an undesirable situation that is to be managed. Thus attempts will need to be made to minimize, not increase, the land subsidence. **The lack of evaluating land subsidence due to recovery well pumping for the proposed project is a fatal flaw in the [initial study.]**." (Emphasis added.) [AR 29:5787.]

Two days later, Dr. Schmidt supplemented his March 1, 2017 memorandum with further data establishing that "there has been significant land subsidence in the area well east of the east edge of the Corcoran Clay, including [along the Deer Creek corridor] east of the proposed water bank." [AR 30:5789.]

Beyond the hydrogeologic analysis of Dr. Schmidt and SVWBA's refusal to evaluate the impacts of a confined upper aquifer, McAland criticizes the lack of any concrete mitigation measures when a significant groundwater level, well interference, or subsidence issue does arise. As noted by McAland with respect to SVWB's proposed groundwater monitoring and associated monitoring committee:

> "A promise of adaptive management in response to impacts that are encountered is not an acceptable mitigation measure, in that **every project could in theory state that environmental impact issues will be avoided by asserting that impacts will be addressed if and when encountered. It is vague, non-specific and essentially meaningless.** Definitive mitigation measures must be identified which requires that impacts have to be identified with specificity rather than glossed over by a generic commitment to address them in the future." (Emphasis added.) [AR 29:5760.]

McAland raises the further point that the recharge water will migrate across the Tule Subbasin away from the recharge basins, "which migrated water can be pumped by others with access to groundwater, reducing the yield of the Project." [AR 29:5761.] A litany of other substantive hydrological and geotechnical issues were again raised by the landowner. [AR 29:5760-5764.]

The comment letter of petitioner AEWSD was submitted on May 16, 2017. [AR 31:5934 *et seq.*] AEWSD asserts that its May 19, 2016 comment letter on 2016 initial study was "blatantly ignored" by SVWBA, effectively reissuing its

2016 letter with additional concerns, including reduced downstream flow capacity of the Friant-Kern Canal due to upstream land subsidence. [AR 31:5934-5935.][18]

With respect to water quality impacts, AEWSD asserts that the 2017 initial study documents "focus on the construction portion of the Project and completely ignore and are eerily silent regarding the Project's dry year operational scenario and consequent discharge of degrading Project water supplies into the [Friant-Kern Canal]." [AR 31:5939.] AEWSD once again cites to sixteen other specifically identified Central Valley projects discharging non-Millerton Lake water into the Friant-Kern Canal, as a basis for requesting a cumulative impacts analysis. [AR 31:5940.]

The same day as AEWSD's submission, a comment letter was written on behalf of former petitioner Angiola Irrigation District. [AR 32:6104 *et seq.*] Angiola took the position, *inter alia*, that the initial study contained an inadequate project description under CEQA, since the ultimate use of the banked water remains unknown or otherwise undisclosed, which unstated uses may have significant impacts, growth inducing or otherwise, either within or outside the project area. [AR 32:6106.]

Angiola submitted an updated May 15, 2017 memorandum from hydrogeologist Dr. Kenneth Schmidt, borrowing extensively from Dr. Schmidt's memoranda earlier that month on behalf of McAland, with some technical expansion. [AR 32:6119-6124.] In addition to other issues, Angiola was particularly critical of SVWBA's treatment of prospective land subsidence:

> "Perhaps the [initial study]'s biggest shortcoming relates to the Project's woefully inadequate subsidence analysis, which basically gives short-shrift to and dismisses the potential for significant Project induced subsidence and related impacts based on the fact that the Project's wells will be located outside of the Corcoran Clay area. ... In doing so, **the [initial study] has ignored substantial evidence that the Corcoran Clay in fact extends into the Project area and that significant subsidence is occurring even outside Corcoran Clay area in areas that are both within and near the area where the Project wells are proposed to be located.**" [32:6108.]

[18] This reduction of capacity of the Friant-Kern Canal due to subsidence is corroborated in a memorandum from the chief operating officer of the Friant Water Authority attached to a March 1, 2017 email from SVWBA. [AR 195:10291-10292.]

Tri-County Water Authority ("Tri-County"), a joint powers agency consisting of Kings County, Angiola and the Deer Creek Storm Water District,[19] submitted separate opposition to the 2017 initial study. [AR 34:3262 *et seq.*] Tri-County contended that SVWBA's initial study was "inadequate," citing, *inter alia*, the potentially significant **adverse impacts to subbasin groundwater** [and] the **lack of consideration of** the Sustainable Groundwater Management Act ("**SGMA**")." [AR 34:3262-3263.]

As a statutorily designated "Groundwater Sustainability Agency" under SGMA, Tri-County commented as follows:

> "**The [initial study] should, but does not, specifically study or address whether the proposed Project will adversely impact neighboring wells including Angiola's well field wells or the groundwater (e.g., levels and quality) in the vicinity of those wells. The [initial study] also should but does not study the Project's potential impacts to Angiola's Deer Creek water supplies to which [Angiola] owns water rights**, since Deer Creek water is identified as one source of water proposed to be recharged by the Project (EA, p. 2-3)." (Emphasis added.) [AR 34:3263-3264.]

Tri-County pointed out that SVWBA, in addition to sourcing its proposed recharge water from storm flows in Friant-Kern Canal proposes to also access recharge waters from adjacent Deer Creek. [AR 34:3264.] According to Tri-County, however, **neither SVWBA nor its constituent water districts has the right to take any water from Deer Creek.** (*Id.*) According to the Groundwater Sustainability Agency in downstream Kings County:

> "**[N]either PID nor DEID have a right to take water out of Deer Creek. Moreover, the two primary licensed water rights holders on Deer Creek are downstream of this Project. Therefore, there is a concern that this Project will limit Deer Creek's flows from reaching its riparian corridors and negatively impact downstream licensed water rights holders. There is no analysis about the impacts on downstream water users, landowners, or the downstream environment as a result of this Project, and there should be.** As TCWA's members have water rights on Deer Creek and are responsible for the flood flows of Deer Creek, **[Tri-County] requests that the environmental impacts of these statements be further analyzed in an EIR/EIS.**" [AR 34:3264.]

---

[19] See fn. 12, *ante*.

Citing *Stanislaus Audubon Society, Inc. v. County of Stanislaus*, *supra*, 33 Cal.App.4th 144, 151 and *Sundstrom v. County of Mendocino*, *supra*, 202 Cal.App.3d 296, 311, Tri-County echoed the legal contention of the other challenging commenters that an **environmental impact report is mandatory** where a fair argument is presented that a proposed project **may** have a significant environmental impact. [AR 34:3264.] Tri-County asserts that SVWBA's 2017 initial study "simply touts the benefits of 'almost entirely passive' recharge basins **capturing surplus flows that it is not entitled to and ignores impacts of downstream licensed water rights holders, GSAs, and operating Project wells**." (Emphasis added.) [AR 34:3265.][20]

Further responsive comment to SVWBA's proposed mitigated negative declaration on the initial study was received from Friant-Kern Canal downstream public agency Shafter-Wasco Irrigation District ("SWID"). [AR 35:6266 et seq.] Referencing acknowledged contamination issues with respect to groundwater quality in the project area aquifer, SWID wrote:

> "The [2017 initial study] acknowledges that the [Friant-Kern Canal] water, which SWID receives by contract with [the Bureau of] Reclamation is excellent quality and that **Project groundwater is of much lower quality, including with respect to the presence of nitrogen, arsenic, agricultural chemicals, lead contaminants, and salts** at much higher levels than [Friant-Kern Canal] water. However, the Project omits any relevant discussion about mitigation for any adverse impacts to the many activities within SWID's service area should SWID be compelled to supply lower quality water to the many users of [Friant-Kern Canal] water in SWID's service area. Moreover, **the [2017 initial study] omits any relevant discussion to mitigate water quality degradation to the [Friant-Kern Canal] coming from the Project's area and operation.**"
>
> "...[T]he Project will require SWID and other downstream contractors using water from the FKC to receive degraded water supplies. However, **the environmental impacts of degraded water supplies to SWID and other downstream contractors or water users were not studied as to irrigation suitability or otherwise, and, as a practical matter, not analyzed in the [2017 initial study**.]" (Emphasis added.) [AR 35:6267-6268.]

[20] Tri-County also commented that SVWBA's "minimalist and largely non-responsive approach to the evaluation of cumulative impacts is inadequate." [AR 34:3265.]

Referencing the increased levels of nitrates, salinity and arsenic measured within the SVWBA's project's groundwater storage basin, SWID asserted that "there is no water quality analysis [in the 2017 initial study] made between the Project and baseline [Friant-Kern Canal] supplies, and there is no analysis of the downstream water quality or associated adverse impacts from the degradation." [AR 35:6268.] SWID identified thirteen other projects which discharge non-Millerton Lake water into the Friant-Kern Canal, and which cumulative impacts SWID believes "should be considered in a cumulative impacts analysis as to water quality and capacity restrictions." [AR 34:6269.]

SWID contended that SVWBA is obligated to prepare a formal environmental impact report "along with the appropriate mitigation," which mitigation SWID recommended as follows:

> "[SVWBA's water bank] "[p]roject should develop and discuss a **controllable and attainable mitigation program for** degradation of water quality to SWID, its users and **potential crop, soil, and root degradation** due to the increased use of water containing the contaminants discussed above. Such a mitigation program should also contain a soil analysis and discuss the possible degradation to crops, soil, and roots along with mitigation costs for such monitoring, rehabilitation, and reimbursement to affected [SWID] landowners." [AR 35:6270.]

SVWBA's public comment period on the 2017 initial study closed on May 16, 2017. No additional comments were offered at SVWBA's May 26, 2017 public hearing in Pixley. [AR 9: 5385; 10:5388-5389.]

By July 3, 2017, despite the numerous substantive adverse public comments, SVWBA staff indicated an intent to have the CEQA notice of determination on the mitigated negative declaration filed with the state clearinghouse by "mid-July, maybe late July." [AR 196:10294.]

Though the SVWBA board action had not been taken on the 2017 initial study/proposed mitigated negative declaration, internally SVBWA was contracting to begin the design phase of the proposed recharge basins "so that construction could begin in the winter of 2017-18." [AR 197:10297.] SVBWA deemed there to be "zero financial risk" in commencing work on the engineering design phase of the unapproved water bank project *before* CEQA approval as, according to

SVWBA, "this is good project that will ultimately be built," even if the initial study "is challenged by one or more of our detractors in a CEQA lawsuit." [AR 197:10295.][21]

SVWBA's Responses to Public Comments

Two months *after close of public comment* on SVWBA's 2017 initial study had closed, a series of one-page, nearly duplicative letters, most using the exact same wording, were submitted to SVWBA by nine water and irrigation districts, including SVWBA agencies PID and DEID. [AR 43:6499, 44:6500, 45:6501, 46:6502, 47:6503, 48:6504, 49:6505, 50:6506, 51:6507.] Each of the brief letters vocalizes support for SVWBA's project. (*Id.*)[22]

As of August 1, 2017, SVWBA anticipated "completing project construction by the fall of 2019." [AR 198:10300.] As of August 9, 2017, McAland advised SVWBA that McAland "will oppose the project if it goes forward by way of a proceeding for a writ of mandate." [AR 200:10304.]

On September 7, 2017, SVWBA issued notice of a *new public comment period* ending on October 9, 2017. [AR 203:10310.][23]

A proposed final draft of SVWBA's response to the public comments was forwarded to federal co-project sponsor Bureau of Reclamation. [AR 213:10332.] The Bureau of Reclamation requested that the response to comments be clarified to exclude Deer Creek as a proposed source of recharge water; asked that the response not understate the quality of the aquifer recovery water; questioned why "[the] response **refers only to drinking water standards without further explanation of how adhering to Title 22 standards would be protective of Ag water quality needs**;" and stated that both the initial study and the proposed draft

[21] One of the fundamental drivers of CEQA is for the governing board of a lead agency to consider environmental consequences of proposed action *before* "bureaucratic and financial momentum" dictates project approval. (*Laurel Heights*, *supra*, 47 Cal.3d at 395.)

[22] There is no indication that SVWBA re-opened the public comment on the 2017 initial study during this time frame for any project critic or objector.

[23] SVWBA's engineering consultants advised counsel for Angiola and AEWSD that the re-opening of the public comment period was designed "to address an oversight on a notice requirement relating to the NOI sent out and published in April 2017." [AR 206:10313.]

response failed to squarely address **"indirect impacts of where the banked water would go and how it would be used."** (*Id.*)

There was discussion within co-sponsor Bureau of Reclamation with respect to the legitimacy of SVWBA's proposed rejection of Dr. Schmidt's hydrogeological analysis with a negative declaration. According to Bureau of Reclamation staff, in pertinent part:

> "[SVWBA] is basically saying they disagree with the commenter on technical issues, and I don't know enough about [groundwater] to say we agree with the responses.... **[I]f it can be demonstrated that there is some uncertainty regarding technical issues, then I feel an EIS/EIR may need to be prepared to analyze the proposed action**, if we are looking to minimize our risk." (Emphasis added.) [AR 214:10340.]

On October 6, 2017, SWID reissued its prior objections, noticing the re-opened period of public comment and unclear why had it not received responses to its prior comments. [AR: 36:6288 *et seq.*] A similar posture was taken by petitioner AEWSD, which resubmitted its earlier comments "out of an abundance of caution," even though SVWBA's 2017 initial study remained unchanged. [AR 37:6295 *et seq.*][24]

SVWBA prepared draft responses to the public comments and delivered them to project co-sponsor Bureau of Reclamation. [AR 234:10558 *et seq.*]

In reviewing the draft responses, the Bureau of Reclamation requested that SVWBA provide:

> "...[A]cknowledgment that **certain actions are not covered by the [initial study] and are expected to be covered in future documents** when more information is known. **An example of this type of action may be deliveries of water to banking partners.** For now, there is only a list of potential banking partners so as I understand the [initial study] does not cover the delivery of water to banking partners. **NEPA/CEQA will be deferred until such time as a partner is identified.**" (Emphasis added.) [AR 230:10540.]

[24] The Bureau of Reclamation was also confused by the re-opened public comment period on its own co-sponsored project. [AR 219:10351.] SVWBA responded that it had omitted to properly file its notice of intent in May. [AR 225:10528.]

In contrast to SVWBA's stated sense of urgency in moving forward with the project,[25] Bureau of Reclamation staff proposed to "step back and look at the big picture." [AR 232:10552.] Among other things, the Bureau of Reclamation recommended that SVWBA agree to prohibit future use of the recovered water "as a new water supply for land development," or other end uses which could result in growth-inducing or other indirect impacts. [AR 233:10556.] The Bureau of Reclamation advised SVWBA that "the potential for **effects of how the return water would be used needs to be analyzed** at some level." [AR 234:10562.][26]

The Bureau of Reclamation took issue with or raised questions regarding literally dozens of SVWBA's proposed responses to public comments. [AR 234:10561-10565.] In responding to AEWSD's contentions that **Title 22 drinking water standards do not even test for certain contaminants of concern** for agricultural use, the Bureau of Reclamation advised SVWBA "we need to address the comment that **some constituents of concern were not tested** for and explain how we get to a less than significant conclusion without testing for those parameters." (Emphasis added.) [AR 234:10561.]

To address "baseline" conditions for purposes of project alternatives, the Bureau of Reclamation recommended that SVWBA clarify "**what would water quality in the [Friant--Kern Canal] be like without the proposed project.**"." [AR 234:10561.] Co-project sponsor Bureau of Reclamation stressed to SVWBA the **"[n]eed to make sure [initial study] water quality analysis supports a finding that no significant impacts to ag resources would occur.**" (*Id.*)

With respect to localized hydrogeological issues in general, the Bureau of Reclamation requested further technical opinion on potential environmental significance of the following concerns:

> "**Lack of detailed subsurface geologic cross sections** for the project vicinity, **in particular clay layers that could be confining beds**.
> 2. **Lack of depths and perforated intervals for sampled wells and the possible arsenic problem**.
> 3. **The well interference evaluation is not adequate**.

[25] Per SVWBA, "time is not our friend." [AR 274:10763.]

[26] There is some suggestion in the record that SVWBA intended from the outset to allocate some portion of its water bank to augment future residential development, but elected not to play its hand in the environmental documents. [See, *e.g.*, AR 80:9214.]

4. **Land subsidence was not evaluated**." (Emphasis added.) [AR 234:1052.]

The Bureau of Reclamation's technical expert responded that the issues raised by Dr. Schmidt would be significant *if* the proposed project area contains a confined aquifer [AR 231:10548.] The Bureau of Reclamation analysis states:

> "**Any time a clay layer is drained of water, subsidence will occur.** The project describes a net 10% "leave behind" requirement. If the aquifer in unconfined, this "leave behind" policy is likely an adequate protective measure against subsidence. **If the aquifer is confined, water would be pumped from a confined aquifer not receiving recharge** from [the] recharge basin. **This would likely drain clay layers causing subsidence.** It's important to note that **subsidence has been observed along the Friant-Kern Canal.**"
>
> **"In summation, Dr. Schmidt's questions are significant if it is determined the project area overlies a confined aquifer system. If the aquifer is unconfined, the questions would not apply**." (Emphasis added.) [AR 231:10458.]

According to the Bureau of Reclamation, the confined aquifer issue would be a critical factor in determining potential significance on water and quantity/well interference, water quality and land subsidence issues. [AR 231:10458.] This analysis was delivered to SVWBA. [AR 234:10559.]

On November 3, 2017, the geology division of the Bureau of Reclamation opined that "**one major deficiency** noted in this [initial study] is that [**the initial study] does not adequately address potential land subsidence that could be caused by the proposed Project recovery pumping.**" (Emphasis added.) [AR 268:10471.] SVWBA was advised of the opinion of its co-sponsor. [AR 269:10745.]

On November 6, 2017, SVWBA asked project opponent SWID to "withdraw" its critical comments regarding the proposed water bank in return for SVWBA's promise **to attend a forum** with SWID "**for further pursuing a science-based understanding of potential water quality impacts of introducing**

water into the [Friant-Kern Canal], as well as **additional appropriate measures** to address those impacts." [AR 271:10748-10749.][27]

On December 1, 2017, SVWBA issued its formal response to written public comments and final initial study. [AR 3:2414 *et seq.*] Prior to hearing additional public comment at the ensuing SVWBA board hearing, SVWBA privately advised its board members that the proposed mitigated negative declaration was "a very comprehensive product that is very defendable should any or our detractors choose to take us on in court." [AR 292:10824.]

SVWBA's response to comments notes that fourteen water wells "in the area" of the project were tested for quality, and are "considered most representative of the quality of water to be recovered from the Project operations." [AR 3:2423.] SVWBA extrapolates that satisfaction of Title 22 drinking water standards by these area wells affirmatively "demonstrated that groundwater *within the Project site* met Title 22 standards." (*Id.*) The response, however, subsequently notes that among those "area" well results are "two relatively minor variances" outside Title 22 compliance, one showing arsenic "slightly above" acceptable levels. [AR 3:2424, 2429.] Another of the 14 "area" wells tested found lead contamination in excess of acceptable California drinking water standards, which result SVWBA determined should be disregarded as an "anomaly." [AR 3:2429.]

The proposed mitigation under the 2017 initial study for aquifer return water failing to meet Title 22 drinking water standards requires proposed periodic sampling/testing of that water, after which "a blending protocol" would be implemented to reach allowable Title 22 contaminant thresholds. [AR 3:245.] The proposed mitigation fails to identify the intended recovery water contaminant levels after blending, other than Title 22-compliant. (*Id.*)

Instead, SVWBA defers its proposed recovery water quality monitoring program to the future determination of the Bureau of Reclamation by referencing initial study appendix I, which says that "Reclamation will provide a Quality

[27] SVWBA's 2017 initial study relies entirely upon the Bureau of Reclamation's 2008 adoption of Title 22 minimum drinking water standards for introducing non-Millerton Lake water into the Friant-Kern Canal, as the benchmark guideline for post-project water quality, agricultural or otherwise. This letter seems to suggest that SVWBA is not itself convinced of the "science-based" accuracy of such reliance. The deferral of a "science-based" analysis and consideration of "appropriate measures to address those impacts" intimates both deferred analysis and mitigation in contravention of CEQA.

Assurance Project Plan (QAPP) that will describe the protocols and methods for sampling and analysis of Type B non-project water." [AR 3:2429-2430, 6:4333.] Appendix I does specifically state that "**non-project water must be tested every year**" and prior to at least the initial introduction into the canal. [AR 6:4333]. It is SVWBA's contention, however, that the recovery water aquifer is unconfined, thereby allowing any contaminated upgradient groundwater sources to be pumped into the Friant-Kern Canal at any time during the ensuing twelve months.

SVWBA's response to comments concludes that blending aquifer **return water** to presumably maximum drinking water contaminant thresholds "**will not introduce water supplies into the FKC which are significantly higher in salts, nitrate, and arsenic as compared to Millerton Lake/ FKC supplies.**" [AR 3:2426.] The court can find no substantial evidence in the record to support this assertion.

Nowhere does SVWBA indicate that it *ever tested* the Millerton Lake/Friant-Kern Canal water supply, but everyone does agree that the resource is freshly melted Sierra Nevada snowmelt of "excellent quality." [AR 3:2424, 2429.] The unverified theory of SVWBA in its response to comments is that once the Friant-Kern Canal travels an additional 46.1 miles to AEWSD, the SVWBA aquifer return water will be so diluted with canal water that the water quality impact upon AEWSD could not conceivably be "significant." [AR 3:2425.] Even if this conclusion could be scientifically substantiated by testing and/or modeling, which it was not, it begs the question of offsite downstream impacts upon DEID and the many other lesser remote districts, landowners and other downstream Central Valley Project water users. [See map at AR 6:4246-4247.]

The response to comments on the 2017 initial study next affirmatively represents that "**no significant ground subsidence will result from the Project.**" [AR 3:2426.] To reach this opinion, SVWBA begins with the premise that "**land subsidence in the Tule Subbasin is typically caused by over pumping of groundwater and chronic water level declines, and by related deep compaction of fine-grained subsurface sediments such as the Corcoran Clay layer.**" (Emphasis added.) [AR 3:2427.] Declaring definitively that "**the Project area is outside the Corcoran Clay layer,**" SVWBA relies upon the 10% "leave behind" project requirement to show that aquifer storage will improve over 40 years. (*Id.*)

It should be noted at this point that Central Valley hydrogeologist Dr. Kenneth Schmidt contends that **there is a Corcoran Clay layer** and confined sub-

aquifer underlying the project area. [AR 29:5785.] Second, the response to comments contains no calculation or adjustment for that portion of the 10% "leave behind" which would be estimated lost to atmospheric evaporation over the proposed eight-month period of recharge while the ponds percolate into the subsurface [AR 3:2427].[28] Third, groundwater levels under this project description are not intended to increase as a constant arithmetic progression, but rather, are subject to bulk pumping of recovery water at a proposed 30,000 acre-feet per year resulting in a localized SVWBA-calculated **groundwater drawdown** at each of the sixteen pumping recovery wells **of up to 116 feet**. [AR 7:4523, 3:57.] The project's intended **replenishment** of the pumped groundwater would occur **only in excess water years**, which the 2017 initial study fails to mention have become few and far between.[29] [See, *e.g.*, AR 6:4250.]

In this hydrogeologic subbasin with historic land subsidence due to groundwater pumping of up to 16 feet in elevation loss [AR 7:4515], SVWBA's response to comments concludes that **land subsidence in the project area is** nevertheless **"speculative or unlikely to occur" and therefore "not reasonably foreseeable."** [AR 3:2427.]

On the issue of cumulative downstream impacts of introduction of non-Millerton Lake water sources, SVWBA's response to comments contends that "**no specifics or details**" were provided by AEWSD of "**groundwater banking projects near the Project [that AEWSD] believes would reasonably foreseeably contribute to any cumulative effects.**" [AR 3:2447.] In fact, AEWSD specifically cited SVWBA to thirteen other projects discharging non-Millerton Lake water to the Friant-Kern Canal. [AR 21:5579.] That list, according to AEWSD's public comment, included:

"1) 5-year FKC Groundwater Pump-In Program
2) San Joaquin River Restoration Program Recapture and Recirculation EIR

[28] Evaporation rates are variable depending upon the temperature of the water at the air-water surface, the humidity of the air, the area of the air-water surface, and the temperature of the air. https://van.physics.illinois.edu/qa/listing.php?id=1440 (Evid.C.§452.)

[29] The 2017 initial study is **silent on climate change** issues, assuming without comment that excess water availability to replenish proposed groundwater "recovery" pumping within the critically overdrafted Tule Subbasin [AR 7:4515] will continue at historic levels and time intervals. **The historic water data charts used by SVWBA in its 2017 initial study end in 2003.** [AR 3:73.]

3) Kaweah River Pump-in Program
4) Tule River Pump-in Program
5) Storage and Conveyance of Non-Project Water for Kern Tulare Water District and Lindsay-Strathmore Irrigation District
6) Delta Lands 770 Warren Act
7) Kern Tulare Water District and West Kern Water District Groundwater Banking Project
8) Madera Irrigation District long term banking and return in North Kern Water Storage District and Semitropic Water Storage District
9) Poso Creek Regional Water Management Group 25-year Program
10) Cawelo Water District Warren Act
11) Rosedale Rio-Bravo and Delano Earlimart Irrigation District Banking Program
12) Kern Tulare Water District Return of Banked Water
13) North Kern Water Storage District Recovery and Transportation of Banked Water" [AR 21:5579.][30]

It is unclear to this court how more specific and detailed AEWSD's comment it should have been to identify the Friant-Kern Canal cumulative impact projects of concern. In responding to the list, however, SVWBA replies that "**the comment does not cite any specific information concerning these projects or their alleged cumulative impacts when considered with the Project**," and accordingly, "**no specific response can be provided or is required.**" [AR 3:2449; see also 3:2654.] It appears therefore to be SVWBA's position that it is the public's burden to provide the lead agency with a detailed CEQA cumulative impact study in advance *before* SVWBA has any obligation to perform such analysis in the environmental documents.

In response to AEWSD's comment that Title 22 drinking water standards do not address **irrigation suitability or even test for crop contaminant sensitivities of concern such as boron, sodium, bicarbonate, chloride, pH, and sodium adsorption ratio**, SVWBA responds that **no evidence is provided, that any significant impact would result on this issue** based on Project operations." [AR 3:2451.] Since AEWSD has never been in a position under CEQA to test proposed project groundwater within SVWBA boundaries, and since SVWBA failed to test

[30] By October 1, 2017, AEWSD's list of projects permitted to flow non-Millerton Lake water into the Friant-Kern Canal had reached sixteen, including:
14) Poso Creek Regional Water Management Group EA amendment to include South San Joaquin Municipal Utility District;
15) Shafter-Wasco Kimberlina Groundwater Recharge and Banking; and
16) Fresno Irrigation District Gould Canal to FKC Intertie Project. [AR 37:6301.]

for these contaminants on or near the project site over the nineteen months between AEWSD's comment letter and SVWBA's response to comments, SVWBA effectively asserts lack of information when SVWBA is the only public agency with reasonable access to the information.

SVWBA's reticence to inquire into data only SVWBA has the ability to acquire is further corroborated in a response to comments on the issue of pH levels:

> "**There is no MCL for pH levels under Title 22.** Accordingly, the existing groundwater quality does not violate Title 22 regarding pH levels... **The comment[er] does not provide any substantial evidence that Project recovery water will have adverse pH levels** or will exceed Title 22 standards on that item." (Emphasis added.) [AR 3:2645.]

SVWBA concludes its AEWSD response, *inter alia*, by stating that downstream irrigation impacts would be "economic in nature," and therefore not sufficient to justify an environmental impact report. [AR 3:2452.]

SVBWA next addresses the comments of dismissed litigant Angiola. [AR 3:2629 *et seq*]. These responses contend that anticipated localized aquifer drawdowns due to groundwater recovery operations are **not significant** because the 10% "leave behind" requirement on recharge results in **a net gain in groundwater over a forty- year cycle.** [AR 3:2631.] The proposed mitigation conditions include a "well interference observation and monitoring program that includes continuous data collection from manual readings and pressure transducers with data loggers at key monitoring well locations to identify possible well interference effects." (*Id.*) Under SVWBA's groundwater model, "**no active irrigation wells are expected to be dewatered.**" [AR 3:2633, 2866.]

SVWBA, extrapolating from another agency's banking water project overlying a different subbasin in northeast Kings County,[31] recalculates the previously modeled eleven-foot loss in groundwater down to a 6.5 foot reduction in groundwater two miles from the project site. [AR 3:2641.] In considering the comparative hydrogeology of the Kings County project, SVWBA relies upon the analysis of co-petitioner's' expert, Dr. Kenneth Schmidt. [AR 3:2642, 2865, 2903.]

31

https://water.ca.gov/LegacyFiles/lgagrant/docs/applications/Kings%20Co.%20Water%20District%20(201209870037)/Att04_KCWD_ProjD_1of2.pdf (Evid.C.§452.)

Recognizing that the recovery pumping drawdown could result in "adverse well interference effects on irrigation that will require a limited number of nearby irrigation well owners to incur additional economic costs to reach temporarily lowered groundwater levels," SVWBA again takes the position that such impacts are "economic in nature," and outside the scope of CEQA. [AR 3:2643.]

In its final version of the 2017 initial study, after public comment, in order to monitor off-site irrigation well interference concerns, SVWBA expanded its proposed mitigation on this issue to create a detailed groundwater monitoring program designed by a certified hydrogeologist. [AR 3:2650-2652.] The mitigation, *inter alia*, requires an aggrieved landowner to comply with the California Tort Claims Act in the event of well interference caused by SVWBA's water banking project. (Govt.C.§901 *et seq.*)[32] [3:2651.]

With regard to alleged inadequacy of the project description since **SVWBA has not identified the end user(s) of the banked water**, rejecting co-sponsor Bureau of Reclamation's recommendation that project water not be used for land development or other end uses which could result in growth-inducing or other indirect impacts [AR 233:10556], SVWBA responds that **the initial study "is not required to speculate about such items**" and that "forecasting the unforeseeable is not required", citing a federal case interpreting NEPA. [AR 3:2636.] SVWBA's final initial study includes a non-exclusive sampling of some "potential" water bank partners. [AR 3:72-73.]

In dealing with Dr. Schmidt's expert opinions with respect to the project at issue, SVWBA's response to comments, citing 14 Cal. Code Regs.§15384, notes that "**expert testimony may be disregarded and does not constitute substantial evidence, when, among other things, it is incredible, irrelevant, clearly erroneous or inaccurate, lacking in an adequate factual foundation, or outside the expert's field.**" [AR 3:2649.]

Suggesting Dr. Schmidt's contrary findings to be "clearly erroneous or inaccurate," SVWBA's responses note that its own hydrogeologists have submitted two cross-sections within the project area diagramming their assessment of the subsurface. [AR 3:2658.] According to SVWBA:

[32] As a matter of law, inverse condemnation claims are not subject to the Tort Claims Act. (Govt.C. §905.1.)

> "**The presence of clay layers is identified** through the stratigraphic characterization.... [T]he stratigraphic units called 3rd, 4th, and 5th sand sequences embody the aquifer "system" within which the Project would operate. The descriptions of these stratigraphic units include interbeds of clays and fine-grained materials (e.g., silts), **but no extensive clay unit such as the Corcoran Clay dividing the "system" into multiple discrete aquifers**." (Emphasis added.) [AR 3:2659.]

Conceding Dr. Schmidt's conclusion that there are indeed clay beds within the project area subsurface, SVWBA responds that **such evidence "does not preclude the presence of intermittent clay beds in a single but heterogeneous aquifer** that may impede direct vertical groundwater recharge or provide varying degrees of confinement to groundwater during recovery pumping." [AR 3:2660.] According to SVWBA, "**In this model, groundwater recharge can migrate around** the intermittent sediment (**clay** and sand) beds through pathways to deeper aquifer zones determined to be present at the site." (*Id.*; see also AR 3:2869.)

Challenging Dr. Schmidt's reliance upon local water well driller's logs for purposes of determining the existence of subsurface confining clays, **SVWBA hydrologists contend that their "methodology"** of utilizing oil driller's electronic logs "**is more sound than that discussed [by Dr. Schmidt]**, and it applies more appropriate weighting to the available information sources." [AR 3:2660, 2894.]

Responding to Dr. Schmidt's evidence of significantly different contaminant concentrations at the project site between the shallow wells and the deeper wells. [AR 29:5785], SVWBA's response to comments states:

> "**In a single heterogenous aquifer, some water quality and water level variations are expected** as cited by the commenter. But this is **due to the discontinuous nature of the interbedded sands and clays**." (Emphasis added.) [AR 3:2662, 2870.]

SVWBA advances its "conceptualization" of the subsurface aquifer as follows:

> "**[SVWBA's] interpretation [of the available data] is that while the Corcoran Clay is not present at the Project site, it does not preclude the presence of [non-Corcoran] clay beds that may impede vertical recharge or provide varying degrees of confinement during recovery pumping. In**

the stratigraphic model, groundwater recharge can migrate around the intermittent sediment (clay and sand) beds through transmission pathways to deeper aquifer zones. This interpretation presents a more complex geology than a two aquifer system suggested by [Dr. Schmidt.]." (Emphasis added.). [AR 3:2663, 2871, 2872.]

SVWBA supports its contention with evidence of detectable levels of nitrates in three of the four deeper wells cited by Dr. Schmidt. [AR 3:2664, 2898.] According to SVWBA's analysis, "The occurrence of nitrate in groundwater is generally anthropogenic, such as due to farming and urban activities. As such, **nitrate originates at the surface and migrates downward through the aquifer system.**" Since three of the four deeper wells examined by Dr. Schmidt him tectable levels of nitrates, and since reported levels of nitrates in deeper wells in Corcoran Clay areas "directly west of the Project...is essentially zero," SVWBA concludes there is a single heterogeneous aquifer. (*Id.*)[33]

Dr. Schmidt had submitted an earlier geologic cross-section from a United States and Geological Survey professional paper. [3:2696.] That cross-section shows that **"the [Corcoran] clay extend[s] into the proposed well field for the [SVWBA] project.**" (*Id.*) SVWBA contends that the USGS cross-section "is **simply an unsupported projection** of the Corcoran Clay into the Pixley vicinity," and that the cross-section is **inconsistent with other credible studies and reports.**" (*Id.*) SVWBA contends that more current USGS data supports the existence of "a single heterogeneous aquifer system" at the Project site [AR 3:2895.]

In response to the comments of petitioner McAland, SVWBA reiterates, most often verbatim, its response to the comments of water agencies AEWSD and Angiola. [AR 3:2856 *et seq.*] SVWBA's earlier responses to comments were also repurposed to respond to the comments of adjacent water agency SID [AR 3:3121 *et seq.*] and downstream water agency SWID [AR 3:3121 *et seq.*, 3172 *et seq.*].

Responding to the public comments of joint powers water agency Tri-County that SVWBA has no legal right to take its recharge water from Deer Creek, SVWBA states that "since the close of the public comment period, VWBA has elected to commit that **Deer Creek surface water and flood flows will no longer be [a] source of recharge water** for the Project." [AR 3:3102, 3103, 3104, 3106.]

[33] With respect to elevated arsenic levels, SVWPD hydrogeologists assert that its presence "is more directly tied to mineralogy" and "naturally exists in the Central Valley." [AR 3:2664.]

By process of elimination, therefore, SVWBA's proposed water bank will be taking all of its recharge water from the Friant-Kern Canal.

SVWBA'S Adoption of the 2017 Initial Study and MND, and Rejection of an EIR

SVWBA set hearing on the adoption of its initial study and mitigated negative declaration for December 18, 2017. [AR 289:10821, 290:10822, 305:11038-11039.]

On December 12, 2017, SVWBA's consulting hydrologists provided an opinion letter to SVWBA asserting that that "**the contentions made [in Dr. Schmidt's written hydrogeologic opinion] are unsubstantiated, amount to speculation, are based on dubious or incomplete data, or are contradicted by extensive analysis and modeling** in the EA/MND." [AR 10852-10854.]

On December 14, 2017, McAland advised SVWBA that eleven days notice was insufficient time to respond to SVWBA's changes to the 2017 initial study. [AR 38:6465 *et seq.*] The communication attached an updated memorandum from Dr. Schmidt. [AR 38: 6468 *et seq.*]

Dr. Schmidt notes that **the ten drillers' logs he utilized, ignored by SVWBA, were the ten *most immediately* local sources of information with respect to the project site**, as opposed to the more geographically remote information used by SVWBA. [AR 3:6468.] With respect to SVWBA's challenge to Dr. Schmidt's reliance upon water well driller's logs as opposed to oil and gas exploration electric logs, Dr. Schmidt replies that the **oil and gas logs "normally do not extend up above a depth of about 500 to 700 feet**," the omitted area being where the Corcoran Clay is located. [AR 3:6468-6469.] According to Dr. Schmidt, with respect to the Corcoran Clay area "**for the interval between 100 and about 500 to 700 feet in depth, only drillers logs could have been used.**" (*Id.*) Dr. Schmidt contends that his hydrogeologic **site-specific evaluation is superior** to SVWBA's geologic regional evaluation. (*Id.*)

Dr. Schmidt next replies that the serious land subsidence issues in the area are not resolved through a long-term 10% "leave behind" mitigation requirement:

> "**Because the project site is located within a subsidence area (as evidenced by the recent Friant-Kern Canal surveying and other results), there is every reason to believe that irreversible land subsidence would**

> **occur due to deep recovery well pumping** for the project. **This could occur even if more water is placed into storage than is withdrawn, because subsidence can occur seasonally, irrespective of long-term water-level changes.**" (Emphasis added.) [AR 3:6499.]

After identifying a number of distinctions between the Kings County project that SVWBA engineers deemed analogous and SVWBA's project site, Dr. Schmidt returns to the significance of subsidence:

> "[SVWBA] believe[s] ... that the historical land subsidence in the area was caused by 'regional pumping and chronic water-level declines.' **My experience indicates that significant land subsidence at a particular site is directly related to pumping of the nearest deep wells to this site. This applies directly to the subsidence along the Friant-Kern Canal near Deer Creek. That is, pumping of the closest deep wells to this area (ie, within a few miles) was responsible for most of the subsidence.** The failure to evaluate land subsidence remains a fatal flaw for the proposed project." [AR 38:6471.]

SVWBA responded to McAland, *inter alia*, that ten days was sufficient notice of responses to comments under CEQA, and that the substantive changes to the 2017 initial study were "minor." [AR 308:11046.]

By letter dated December 17, 2018, former litigant Angiola points out that SVWBA's "final" version of the 2017 initial study includes a non-exclusive list of potential water banking partners (*i.e.*, shareholders/users) which list includes the City of Fresno and other municipalities, the County of Fresno, the County of Madera, and the County of Tulare. [AR 3:68-69]. The letter contends that SVWBA's refusal to identify the buyers/anticipated end uses of the banked water violates the "project description" requirement of the CEQA by "piecemealing" the project to avoid discussing "the whole of the action." [AR 40:6481-6485.]

Angiola further took the position, *inter alia*, that Dr. Schmidt's expert opinion compelled the preparation of an environmental impact report:

> **"If there is disagreement among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR. (CEQA Guidelines §15064(g).) Dr. Schmidt prepared a memorandum expressing the opinion that the project may result in several significant**

> **adverse impacts, including subsidence, supported by facts and literature**.... The response to comments disagree with Dr. Schmidt's opinions without further subsidence analysis - relying on the premise that subsidence will not be a problem "overall" because the Project will result in a net increase in groundwater levels....As explained above, however, this is not an appropriate standard because it ignores actual short-term (albeit permanent) subsidence impacts that will occur during pumping cycles. It is illogical and indeed unsupported by substantial evidence in the record that subsidence may not occur simply because over the "long-term" there will be more water put in the ground than is pumped out - no matter how aggressively or how long the drought pumping cycle is." [AR 40:6485.]

Angiola's communication included a further updated memorandum from Dr. Schmidt. [AR 40:6490-6493.]

On the day of the public hearing, SVWBA's hydrogeologists submitted their rebuttal to Dr. Schmidt's answer to SVWBA's response to comments. [AR 42:6495-6498.] SVWBA takes the position, *inter alia*, that "subsidence to the degree observed historically [in the project area] is not permitted under SGMA." [AR 42:6496.][34] The balance of the discussion by SVWBA's hydrogeologist relates to whether the subject project can be analogized to the project site in Kings County. [AR 42:6496-6498.]

The SVWBA board unanimously approved a resolution adopting the proposed mitigated negative declaration at a 28-minute public hearing. [AR 16: 5482 *et seq*; 2:3 *et seq*.] [AR 8:5525-5525.] The SVWBA board made the following findings under CEQA:

> "9. No Credible Evidence of Significant Adverse Project Effects: The Authority has considered written comments received from Dr. Kenneth D. Schmidt & Associates on behalf of Angiola Water District, Arvin-Edison Water Storage District, and Los Alisos Ranch Company, LLC and McAland Ranch, LLC. **The Authority hereby finds that the comments received from Dr. Schmidt are not based on substantial evidence, are not credible or reliable, and are instead argument, unsubstantiated opinion, speculative, conclusory, unsupported by facts in the record, and/or**

[34] The suggestion by SVWBA that the State of California has legislated against land subsidence in the Tule Subbasin needs little discussion.

sufficiently contradicted or refuted based on facts in the record. (Pub. Res. Code §§ 21080(c), 21082.2(c), CEQA Guidelines § 15064(f)(5).) **Dr. Schmidt's statements** about possible adverse hydrology, subsidence, well interference and water quality impacts relating to the Project **are refuted in the responses to comments** ..., as well as [SVWBA's hydrologist's] letter to the Authority dated December 12, 2017."

"**Furthermore, Dr. Schmidt's professional experience does not proclaim him to have any relevant expertise in the field of crop tolerance and water quality for agricultural irrigation**. Accordingly, Dr. Schmidt has not been shown to be an "expert" on topics such as the ultimate effect of impaired water quality to crop production based on the type of crop planted, type of pollutant, ion toxicity, infiltration rates, absorption rates, yield declines, balance of pollutants, and type of soil being irrigated. Accordingly, Dr. Schmidt's comments on these items are found not to be substantial evidence as they are not supported by fact, but are speculative and conclusory."

"Lastly, **Dr. Schmidt's comments are found to be not credible or reliable to the extent they have been provided in support of interested parties** including **Arvin-Edison Water Storage District**, Angiola Water District, **McAland Ranch, LLC, and Los Alisos Ranch Company, LLC**. Specifically, **Dr. Schmidt has worked with Arvin-Edison Water Storage District since 1964. Dr. Schmidt has thus been shown to have an interest in the matter under dispute** through his long-term representation of these interested water agencies and property owners operating wells in the Project vicinity. **Bias in favor of these entities' interests further supports the Board's determination to not give weight to Dr. Schmidt's testimony as substantial evidence** in this matter." (Attempted added.) [AR 2:10-11.]

SVWBA filed its CEQA notice of the termination in Tulare County on December 19, 2017. [AR 1:1-2.]

STATEMENT OF THE CASE

On January 17, 2018, in Kern County, AEWSD filed a petition for writ of mandate under Public Resources Code §21000 *et seq*. The petition asks this court, *inter alia*, to set aside the approval of its MND as an alleged violation of the California Environmental Quality Act.

On January 25, 2018, in Tulare County, McAland filed a separate petition for writ of mandate, also seeking relief under CEQA to set aside the SVWBA project.

Along with a third (and subsequently resolved) CEQA petition filed by Angiola, the matters were transferred to the Ventura County and consolidated for purposes of hearing. An administrative record was prepared and certified. The case was fully briefed and argued on October 5, 2018 and October 10, 2018. The matter was taken under submission.

This ruling follows.

I

AN EIR MUST BE PREPARED WHEN A FAIR ARGUMENT IS MADE THAT A PROJECT MAY HAVE A SIGNIFICANT EFFECT UPON THE ENVIRONMENT

Fortunately in this case, the relevant law is far less formidable than the facts.

"[T]he Legislature intended [CEQA] 'to be **interpreted in such manner as to afford the fullest possible protection to the environment** within the reasonable scope of the statutory language. (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 390 (*Laurel Heights*).) "The EIR is the primary means of achieving the Legislature's considered declaration that it is the policy of this state to 'take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.' [Citation.] ... **An EIR is an 'environmental "alarm bell" whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return**.' [Citations.] The EIR is also intended 'to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.' [Citations.] Because the EIR must be certified or rejected by public officials, **it is a document of accountability**. If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees. [Citations.] **The EIR process protects not only the environment but also informed self-government**." (*Laurel Heights, supra*, 47 Cal.3d at p. 392.)

As here, where a project may have a significant effect on the environment, the lead agency must first prepare an initial study:

> "CEQA requires an agency to conduct an initial study to determine if a project may have a significant effect on the environment. [Citation.] '**If there is substantial evidence that the project *may* have a significant effect on the environment, then the agency *must* prepare and certify an EIR** before approving the project.' [Citation.] **The EIR is "the heart of CEQA** [citation], and its purpose is 'to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project" [Citations.] *San Franciscans for Livable Neighborhoods v. City and County of San Francisco* (2018) 26 Cal. App. 5th 596, 6-7. (Emphasis added.)

As stated in *Pocket Protectors v. City of Sacramento* (2004) 124 Cal. App. 4th 903, 935:

> **Unlike the situation where an EIR has been prepared, neither the lead agency nor a court may "weigh" conflicting substantial evidence to determine whether an EIR must be prepared in the first instance.** Guidelines section 15064, subdivision (f)(1) provides in pertinent part: "**if a lead agency is presented with *a fair argument that a project may have a significant effect* on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not** have a significant effect. [Citation.]." Thus... **Consideration is not to be given contrary evidence supporting the preparation of a negative declaration.** [Citations.]"
>
> **"It is the function of an EIR, not a negative declaration, to resolve conflicting claims, based on substantial evidence, as to the environmental effects** of a project. [Citation.]" (Emphasis added.)

Where a public agency has adopted a negative declaration (or, as here, a mitigated negative declaration), "**unlike in other areas of CEQA, courts do not give deference to the agency's decision when determining whether the petitioner presented a fair argument** based on substantial evidence in the

record." *Friends of Riverside's Hills v. City of Riverside* (2018) 26 Cal. App. 5th 1137, 1151. The **"fair argument" test** imposes a **low threshold** requirement for the preparation of an EIR and reflects a **preference for resolving doubts in favor of environmental review.** *(No Oil Inc v. City of Los Angeles* (1974) 13 Cal.3d 68, 83-84.).

In this case, SVWBA's CEQA findings rely upon its own engineers' methodologies and subsurface "conceptualizations" in order to arguably "refute" the local data points and expert conclusions of Dr. Schmidt, a noted, experienced and highly relied-upon Central Valley hydrogeologist. [AR 2:10.] Under applicable principles of law, since SVWBA chose *not* to proceed by EIR, **SVWBA and the court are not entitled to give consideration** to the contrary opinions of the engineers retained by SVWBA in determining whether or not petitioners have advanced a fair argument that SVWBA's water banking project "may" have a significant effect on the environment. *Pocket Protectors v. City of Sacramento, supra*, 124 Cal. App. 4th at 935.

II
THERE IS SUBSTANTIAL EVIDENCE IN THE RECORD TO SUPPORT DR. SCHMIDT'S OPINIONS OF A FAIR ARGUMENT

The core issue presented therefore becomes whether there are sufficient facts in the record to support a fair argument for Dr. Schmidt's opinions and assumptions predicated upon those facts.

> "Substantial evidence to support a fair argument of environmental impact is "'**enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached.**'" (*Pocket Protectors, supra*, 124 Cal.App.4th at p. 927; see Guidelines, §§ 15088.5, subd. (a), 15384, subd. (a).) **Substantial evidence "include[s] facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.**" ([14 Cal.Code Regs.] §15384, subd. (b).) In other words, evidence of environmental impacts must be founded upon *facts* in the administrative record, it cannot be based on "[a]rgument, speculation, unsubstantiated opinion or narrative, [or] evidence which is clearly erroneous or inaccurate." (*Id.*, subd. (a); see *Pocket Protectors*, at p. 927.)" *Friends of Riverside's Hills v. City of Riverside, supra*, 26 Cal. App. 5th at 1151. (Emphasis added.)

Dr. Schmidt focused his inquiry specifically upon local subsurface hydrogeologic conditions beneath the proposed project, and more specifically upon the "uppermost 1200 feet," where the impermeable Corcoran Clay is found across significant portions of the San Joaquin Valley, including much of the Tule Subbasin. [AR 29:5783-5784, 32:6119-6120, 3:997, 3:2427, 6:4260.] Dr. Schmidt examined **ten well drillers' logs** in the immediate area, seven of which describe **materials predominantly consistent with clay**. [AR 29:5784, 32:6120.]

In addition, using hydrographs provided by SVWBA's engineers in the appendix to the 2017 initial study, Dr. Schmidt notes evidence of **areas of little seasonal water variation, "indicative of a shallow unconfined aquifer** (i.e. T23S/R26E-8R1)," yet other areas of the same supposed aquifer **with much larger seasonal variations** (i.e. T23S/R26E-9C1), **indicative of a deeper confined aquifer.** [AR 29:5784-5785, 32:6120-6121.]

Moreover, according to the data submitted by SVWBA:

> "[O]ne can see that **the deep groundwater (below a depth of about 500 feet) had low nitrate concentrations (5 mg/l or less), and relatively high arsenic concentrations (6 to 13 ppb)** and pH (8.9 to 9.3). **In contrast, nitrate concentrations in water from many shallower wells ranged from 10 to 34 mg/l and the arsenic concentrations in water from many of these wells were 3 ppb or less. These differences are consistent with the presence of one or more local confining beds.**" (Emphasis added.) [AR 29:5785, 32:6121.]

Not to oversimplify the science, the concern is a project which proposes to recharge 90,000 acre-feet water into an upper ("unconfined") aquifer as to which there is **hard evidence in terms of local drillers logs as to subsurface soil composition** plus **reasonable factual inferences from water quantity and water quality data** of a clay confining bed several hundred feet below the surface. With hydraulic continuity impeded by the clay at this location, the recharge water could only move laterally after reaching the clay bed, with no recharge water migrating to the confined aquifer below. Meanwhile, the project proposes pumping of 30,000 acre-feet per year directly from deeper wells in the confined aquifer, which confined aquifer is already notoriously overdrafted in a local region of unprecedented land subsidence due to historic groundwater pumping exacerbated by the existence of those very clay beds [see AR 32:6122-6124, 6147-6258].

Through Dr. Schmidt, both AEWSD and McAland submitted substantial evidence of a fair argument of SVWBA drilling one or more (and perhaps all) of its sixteen expected groundwater recovery wells into a confined aquifer unaffected by recharge from the proposed recharge ponds. In that circumstance, all parties including SVWBA concede significant environmental impacts associated with groundwater quantity, land subsidence and well interference of a substantial magnitude. [See, *e.g.*, AR 231:10458 (Bureau of Reclamation): "In summation, Dr. Schmidt's questions are significant if it is determined the project area overlies a confined aquifer system. If the aquifer is unconfined, the questions would not apply."]

With respect to the *quality* of the proposed return aquifer water and its impact upon downstream Friant-Kern Canal users, using SVWBA's 2017 sampling results, Dr. Schmidt noted calculable **arsenic contamination** issues at proposed recovery well depth, no sampling information at all with respect to **trichloropropane** (TCP),[35] and of the items tested for, "**the pH values** for the four deep wells ranged from 8.9 to 9.3, which is considered high, **above the levels normally considered desirable for drinking water**." [AR 32:6121-6122.][36]

As part of its submission from Dr. Schmidt, AEWSD supplied SVWBA with a chart of suitable water quality standards for agricultural irrigation, including electrical conductivity, total dissolved solids, sodium absorption ratio, sodium, chloride, boron, bicarbonate, nitrate and pH. [AR 3:2517.][37] Again through Dr. Schmidt, AEWSD provided SVWBA with a 2009 submission of water quality within the Friant-Kern Canal. [AR 3:2503.] Utilizing the associated expert report, AEWSD made the following comment:

---

[35] See, *e.g.*, https://www.calwater.com/waterquality/tcp/ (Evid.C.§452.)

[36] The United States Environmental Protection Agency recommends drinking water contain pH levels of 6.5-8.5. See https://www.epa.gov/dwregdev/drinking-water-regulations-and-contaminants (Evid.C.§452.)

[37] In its formal CEQA findings, SVWBA makes the peculiar and factually unsupported finding that Dr. Schmidt "lacks relevant expertise in the field of crop tolerance and water quality for agricultural irrigation." [AR 2:11.] The public comment itself comes through AEWSD, which self-identifies as a 76-year public agency created for the exclusive purpose of bringing irrigation water to 132,000 acres of prime farmland. [AR 3:2468.] Dr. Schmidt's *curriculum vitae* includes a client list of sixteen Central Valley irrigation agencies and dozens of private clients, including Dole Fruit and Nut Co., Gallo Winery, Holly Sugar Co., Kraft Foods, Spreckels Sugar Co., Sun-Maid Growers, Sunkist, Harris Ranch and Paramount Farms. [AR 32:6128 *et. seq.*].

> "[Title 22 drinking water] standards do not cover water quality criteria for irrigation suitability. **Some of the important constituents for irrigation use of water are boron, sodium, bicarbonate, chloride, pH, and sodium adsorption ratio**. Boron concentrations in well water in AEWSD have been of concern since at least the late 1920's. **One of the greatest benefits of Friant water to [AEWSD], besides the amount and low salinity of the water, is the very low boron concentrations** that are usually present (0.05 mg/1 or less).
> The Reclamation monitoring requirements and Title 22 Standards generally are not protective of the water quality for irrigation use." (Emphasis added.) [AR 3:2450.]

Reviewing the 2017 draft initial study, project co-sponsor Bureau of Reclamation questioned why "[SVWBA's draft] response refers only to drinking water standards without further explanation of how adhering to Title 22 standards would be protective of Ag water quality needs..." [AR 213:10332.][38]

In its final response on the 2017 initial study, in addition to reiterating that the recovered Pixley aquifer water will be diluted him downstream with "excellent" Friant-Kern Canal water, SVWBA states in pertinent part that "[t]he [AEWSD] comment implies, **without any support or evidence**, that such return water might possibly result in adverse effects on farming business operations." [AR 3:2452.] As a matter of law in this context, **is not of the burden** of SVWBA or Dr. Schmidt, however, to conduct SVWBA's required environmental analysis.

Moreover, even if SVWBA's currently unsupported conjecture regarding downstream dilution is ultimately quantified, AEWSD notes that there are at least 16 projects now contributing non-Millerton Lake water to the pristine Sierra snow melt requiring cumulative impact analysis. [AR 21:5579; 37:6301.] Once again, **SVWBA erroneously places the burden upon public commenter AEWSD** to conduct that cumulative source testing, modeling and analysis in its stead. [AR

[38] SVWBA's reliance upon the Bureau of Reclamation's current Title 22 non-Millerton Lake water guidelines, or Title 22 minimum regulatory drinking water standards themselves, as the "be all and end all" for lack of significant downstream impacts, cannot serve as a substitute for proper environmental analysis of significant impacts under CEQA. See discussion in *Californians for Alternatives to Toxics v. Dept. of Food & Agriculture* (2005) 136 Cal.App.4th 1, 15-17.

3:2449: "**the comment does not cite** any specific information concerning these projects or their alleged **cumulative impacts** when considered with the Project."][39]

Though there currently is insufficient data for AEWSD or Dr. Schmidt to definitively opine as to agricultural water quality impacts of SVWBA's recovery water into the Friant-Kern Canal, as many of the contaminants/items of concern were not tested and "baseline" Friant-Kern Canal water was not analyzed downstream, SVWBA's refusal to scientifically engage on this point relates directly to application of the fair argument standard.

As held by the Court of Appeal in *Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d 296, 311:

> "While a fair argument of environmental impact must be based on substantial evidence, mechanical application of this rule would defeat the purpose of where the local agency has failed to undertake an adequate initial study. **The agency should not be allowed to hide behind its own failure to gather relevant data. ... CEQA places the burden of environmental investigation on government rather than the public. If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record. Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences."**

In this case, SVWBA failed to gather data on the requested **groundwater contaminants/issues of concern** to the objecting downstream water districts, failed to gather data on **crop patterns** in those districts and their respective **crop sensitivity levels** to those contaminants/issues, failed to gather data on associated **water quality in the Friant-Kern Canal, and** failed to consider the **cumulative impacts** of the at least sixteen other cited projects pouring non-Millerton Lake water into the canal.

What *is* factually undeniable based upon substantial evidence is that project area aquifer water [6:4235] is qualitatively inferior to Friant Kern Canal surface water [3:3503]. As SVWBA failed to make any reasonable effort to consider the

---

[39] "The **fair argument** test... **requires the preparation of an EIR where "there is substantial evidence that any aspect of the project,** either **individually or cumulatively,** may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial." (Emphasis added.) *County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal. App. 4th 1544, 1580.

potential significance of that quantified differential as it relates to the many downstream agricultural users,[40] the court is compelled under the holding of *Sundstrom* to find a fair argument that there may be potentially significant downstream water quality impacts, individually and cumulatively.

To summarize then, petitioners have through substantial evidence and applicable law set forth *a fair argument* that there *may be* a significant environmental impact arising from SVWBA's water banking project in terms of *groundwater quantity and quality*, *well interference*, *land subsidence*, and the *individual and cumulative downstream impacts* to those holding rights to access water from the Friant-Kern Canal.

This court does not and indeed cannot take a position with respect to the relative overall benefits and merits of SVWBA's proposed water banking project. But, if SVWBA wishes to proceed, it must prepare and certify an environmental impact report, with the associated burden of full environmental review and analysis under CEQA,[41] including imposition of feasible mitigation measures and proper consideration of project alternatives.

Let a peremptory writ of mandate issue, vacating and setting aside the SVWBA Board's December 18, 2017 approval of the mitigated negative declaration, Resolution 2017-02 and associated findings. Petitioners are directed to submit their proposed judgment and peremptory writ for signature within ten days.

---

[40] SVWBA's responses to comments avoid discussing consequential agricultural loss issues, whether involving water well interference or substantial changes to water quantity/quality, as purely an "economic" concern outside the ambit of CEQA. [See. *e.g.*, AR 3:2452.] SVWBA ignores Appendix G to the CEQA Guidelines, which state in relevant part "**A project will normally have a significant effect on the environment if it will**: ... (y) Convert prime agricultural land to non-agricultural use or **impair the agricultural productivity of prime agricultural land**." [See generally, *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 42 Cal. App. 4th 608, 626.]

[41] This is not the situation where a lead agency has prepared a full environmental impact report and subjected that EIR to statutory public review, only to have the EIR (or some supplement or addendum thereto) set aside on certain specific grounds within a given scientific discipline. In that situation, this court has historically directed the preparation of a "focused" EIR addressing the subject matter(s) of concern. This court declines to direct preparation of a "focused" EIR where the lead agency has elected, in violation of CEQA, to dispense with an EIR altogether.

Costs to AEWSD and McAland.[42]

Glen M. Reiser
Judge of the Superior Court

[42] The undersigned's fourth and final judicial term expires at noon on January 7, 2019. All post-trial motions and the return on the peremptory writ of mandate in this matter shall be heard by the Hon. Kevin DeNoce in Courtroom 43.

SUPERIOR COURT OF CALIFORNIA, COUNTY OF VENTURA

DECLARATION OF MAILING/PROOF OF SERVICE

Case No. 56-2018-00509394 Consolidated with Case No. 56-2018-00510012

I am employed in the County of Ventura, State of California. I am over the age of 18 years and not a party to the above-entitled action. My business address is 4353 E. Vineyard Avenue, Oxnard, CA 93036. On the date set forth below, I served the within: **ORDER ON CONSOLIDATED PETITIONS FOR WRIT OF MANDATE** on the following:

STEVEN M TORIGIANI
BRETT A STROUD
L/O OF YOUNG WOOLDRIDGE LLP
1800 30TH STREET 4TH FLOOR
BAKERSFIELD CA 93301-5398
***E-mail*:** storigiani@youngwooldridge.com
bstroud@youngwooldridge.com

MARK J DILLON
KEVIN P SULLIVAN
KIMBERLY A FOY
GATZKE DILLON & BALLANCE LLP
2762 GATEWAY ROAD
CARLSBAD CA 92009
E-mail: mdillon@gdandb.com
ksullivan@gdandb.com
kfoy@gdandb.com

STEVEN A EHRLICH
L/O OF STEVEN A EHRLICH
2601 MAIN STREET 1200
IRVINE CA 92614
***E-mail*:** sehrlich@ehrlich-law.com

____**BY PERSONAL SERVICE**: I caused a copy of said document(s) to be hand delivered to the interested party at the address set forth above.

__X_ **BY MAIL**: I caused such envelope to be deposited in the mail at Oxnard, California. I am readily familiar with the court's practice for collection and processing of mail. It is deposited with the U.S. Postal Service on the dated listed below.

_X__**BY ELECTRONIC SERVICE**: I caused said document to be sent via electronic mail system to the e-mail addresses as stated on the service list set forth above.

I declare under penalty of perjury that the foregoing is true and correct and that this document is executed on **November 28, 2018** at Oxnard, California.

MICHAEL D. PLANET, Superior Court
Executive Officer and Clerk

By: _____
Sandy McCarty, Deputy Clerk

The following typographical errors appear in the Order on Consolidated Petitions for Writ of Mandate filed November 28, 2018, and should be corrected:

1. On page 44, the line "SVWBA filed its CEQA notice of the termination in Tulare County on" should read "SVWBA filed its CEQA notice of determination in Tulare County on."

2. On page 50, the line "[AR 3:2452.] As a matter of law in this context, it is not the burden of SVWBA" should read "[AR 3:2452.] As a matter of law in this context, it is not the burden of AEWSD".

Dated: December 4, 2018

GLEN M. REISER

Judge of the Superior Court

Response to Arvin-Edison Water Storage District (Arvin-Edison, AE) Comment Letter, November 26th, 2019.

AE-1 This is a general introductory comment with specific comments provided in the rest of the letter. Responses to the specific comments are addressed below.

AE-2 The comment addresses concerns related to Reclamation's 2008 water quality guidelines for the Friant-Kern Canal and urges Reclamation to engage in revisions to the guidelines.

In 2012, at the request of the Friant Division Contractors, including Arvin-Edison Water Storage District, and the Friant Water Authority, Reclamation agreed to hold off on revising its water quality criteria pending a joint proposal that was supposed to be provided to Reclamation for consideration. As noted in the comment letter, Reclamation has been awaiting a proposal from the Friant Water Authority and the Friant Division Contractors that would include the "science based" understanding that they have been working on over the last few years. Reclamation is looking forward to working with the Friant Division Contractors and the Friant Water Authority once the proposal is received in order to define criteria that is mutually agreeable to all users of the Friant-Kern Canal.

As described in Section 3.3.1 of EA-19-005, the source of water proposed for introduction into the Friant-Kern Canal is Kaweah River water which originates from the Sierra Nevada Mountains as does the "baseline" CVP water that flows in the Friant-Kern Canal from Millerton Lake. As the sources of water are similar (i.e. snowmelt from the Sierra Nevada Mountains), no direct, indirect or cumulative degradation of water supplies or adverse impacts are anticipated. In addition, the Kaweah River water, as with all non-CVP water, is required to be tested for the full suite of primary and secondary constituents under Title 22 (California Domestic Water Standards) prior to introduction. An analysis of Kaweah River water in regard to criteria for agricultural irrigation suitability is provided, showing that levels of sodium, bicarbonate, nitrate, chloride, and boron (for those years tested) are all within acceptable limits. Since the Kaweah River water is similar to water quality from Millerton and has previously been analyzed to ensure that it meets Federal and State requirements, Reclamation has included the appropriate level of analysis in the EA to determine that an EIS is not necessary, pursuant to NEPA regulations.

AE-3 The comment states that no analysis of "downstream water quality or associated adverse impacts" was included in EA-19-005. As described in Section 3.3.2 and response AE-2, Reclamation requires annual sampling of non-CVP water prior to introduction into its facilities to be sure it meets Reclamation's then-current water quality requirements prior to introduction. This is required for all projects that introduce non-CVP water into Reclamation facilities and has thus far been shown to prevent the possibility of substantial degradation of water quality in the canal. In addition, the implementation of monitoring thresholds during introductions

based on field measurements pursuant to Reclamation's then-current water quality monitoring plan allows for rapid assessment of degradation caused by introduction of non-CVP water and termination of introductions as needed to maintain water quality for all downstream users.

The comment states that EA-19-005 fails to include information needed by the Regional Water Quality Control Board in assessing whether a discharge permit should be issued and whether the discharge can be made consistent with the anti-degradation policy and Basin Plan requirements. Water from the Kaweah River would be tested prior to introduction into the Friant-Kern Canal pursuant to Reclamation's then-current water quality monitoring plan and is required to meet Title 22 standards, therefore no degradation of water in the Friant-Kern Canal will occur and a discharge permit is not required.

AE-4 The comment references Article 17(a) of Arvin-Edison's water service contract related to maintenance of water quality and states that the "United States is obligated to operate and maintain project facilities in the most practical manner to maintain the quality of the water at the highest level possible." As stated in response AE-2, Kaweah River water has a similar source of water as that from Millerton Lake and previously analyzed in similar EAs. In addition, pursuant to Reclamation's then-current water quality criteria, this water will be tested regularly in order to limit the potential for degradation of the Friant-Kern Canal water supply.

The comment correctly references the definition of Class 1 water in Arvin-Edison's water service contract as being "that supply of water stored in or flowing through Millerton Lake…" and states that Arvin-Edison relies on that water to maintain its water quality and no information was provided in regarding the Proposed Action's "anticipated degradation" of water supplies. As noted above and described in Section 3.3.1 of EA-19-005, the source of water proposed for introduction into the Friant-Kern Canal is Kaweah River water which originates from the Sierra Nevada Mountains, as does the CVP water that flows in the Friant-Kern Canal from Millerton Lake. As the sources of water are similar (i.e. snowmelt from the Sierra Nevada Mountains), and, as has been previously analyzed, shows water quality that is similar to Millerton Lake, no degradation of water supplies or adverse impacts are anticipated. Discussion regarding degradation under the State of California's Antidegradation Policy is provided in Section 3.3.2 of EA-19-005.

Additionally, Reclamation has modified statements within Section 3.3.1 of EA-19-005 regarding boron concentrations in surface waters originating from the Sierra Nevada Mountains.

AE-5 Reclamation disagrees the EA lacks cumulative impact analysis. As noted above, Kaweah River water shares a similar source as Millerton Lake as previously analyzed in similar EAs. As such, no direct or indirect impacts on water quality would occur and the introduction of Kaweah River water into the Friant-Kern

Canal would not have a cumulative effect on Arvin-Edison's water quality. See also response to AE-3.

AE-6 The comment asserts that "Reclamation can no longer rely on Title 22 drinking water standards with no in-stream monitoring to avoid analyzing the real water quality impacts of projects including this Program" due to the fact that in 2018 the Ventura Count Superior Court set aside approval of the Modified Pixley Groundwater Banking Program based on, among other things, Arvin-Edison's water quality concerns that are similar to the concerns raised in the comment letter to EA-19-005. The ruling does not state that Title 22 Drinking Water standards are not suitable for avoiding water quality impacts in the Friant-Kern Canal. This ruling clearly states that the California Environmental Quality Act (CEQA) approval was set aside due to the failure of the South Valley Water Banking Authority to consider that it is "factually undeniable" and that there is "substantial evidence" that the project area aquifer water is qualitatively inferior to Friant-Kern Canal surface water. As Kaweah River water originates from the Sierra Nevada Mountains, as does the CVP water that flows in the Friant-Kern Canal from Millerton Lake, substantial evidence does not exist that Kaweah River water is qualitatively inferior to flows from Millerton Lake. As previously analyzed in this and similar EAs, Reclamation has determined that introduction of Kaweah River water would not indirectly, directly, or cumulatively impact water supplies.

AE-7 The comment is a general closing comment that summarizes specific comments provided previously in the comment letter. Responses to the comments are addressed above.

Appendix B: Reclamation’s Cultural Resource Determination

CULTURAL RESOURCES COMPLIANCE
Division of Environmental Affairs
Cultural Resources Branch (MP-153)

MP-153 Tracking Number: 19-SCAO-079

Project Name: Kaweah River Warren Act Agreements 2019-2023

NEPA Document: EA-19-005

NEPA Contact: Brian Lopez, Natural Resources Specialist

MP 153 Cultural Resources Reviewer: BranDee Bruce, Architectural Historian

Date: February 8, 2019

Reclamation proposes to issue Warren Act agreements to five Friant Division contractors (Garfield Water District, Hills Valley Irrigation District, Orange Cove Irrigation District, Exeter Irrigation District, and Terra Bella Irrigation District) under Article 18 of their Repayment Contracts. Under the proposed agreements, Lindsay-Strathmore Irrigation District would convey a total of up to 7,450 acre feet (AF) of non-Central Valley Project (CVP) Kaweah River water into the FKC by way of their turnout/Wutchumna Ditch Siphon at MP 69.13. The various districts would then take delivery of the water at their respective existing turnouts. Each Warren Act agreement would be individually issued effective through February 28, 2023. Water delivered as part of the proposed undertaking would be from existing facilities. No construction or modification of facilities will be needed for delivery of this water.

Reclamation determined the proposed action constitutes a Federal undertaking, as defined at 36 CFR § 800.16(y), that has no potential to cause effects to historic properties pursuant to 36 CFR § 800.3(a)(1). As such, Reclamation has no further obligations under Title 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation Act (NHPA). I have reviewed the draft project description from EA-19-005 and the proposed action will not have significant impacts on properties listed or eligible for listing in the in the National Register of Historic Places.

This document conveys the completion of the cultural resources review and NHPA Section 106 process for this undertaking. Please retain a copy of this document in the administrative record for the proposed action. Should changes be made to the proposed action, additional NHPA Section 106 review, possibly including consultation with the Tribal Historic Preservation Officer or State Historic Preservation Officer, may be necessary.