

RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Hills Valley Irrigation District 5-year Warren Act Agreement for Kings River Water

EA-17-036



U.S. Department of the Interior
Bureau of Reclamation
South-Central California Area Office

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Mission Statements

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

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.

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Section 1 Introduction

1.1 Background

The Friant-Kern Canal transports water for the Friant Division of the Central Valley Project (CVP), operated by Reclamation. Friant Division CVP water originates from the San Joaquin River, which is stored in Millerton Reservoir. The CVP water released into the Friant-Kern Canal is used to meet the irrigation and municipal and industrial needs of 32 Friant Division CVP contractors.

Hills Valley is a Friant Division CVP Contractor located in Fresno and Tulare Counties, and (Figure 1). Hills Valley has negotiated the purchase of previously banked storm and flood waters that have been exchanged for Kings River entitlement water (hereafter referred to as non-CVP water) from Alta. In order to receive their purchased non-CVP water, Hills Valley has requested approval from Reclamation for the introduction and conveyance of this water in the Friant-Kern Canal for diversion at their existing turnouts.

1.2 Need for the Proposed Action

Hills Valley needs a conveyance mechanism to deliver supplemental water supplies to support existing crops within the District.

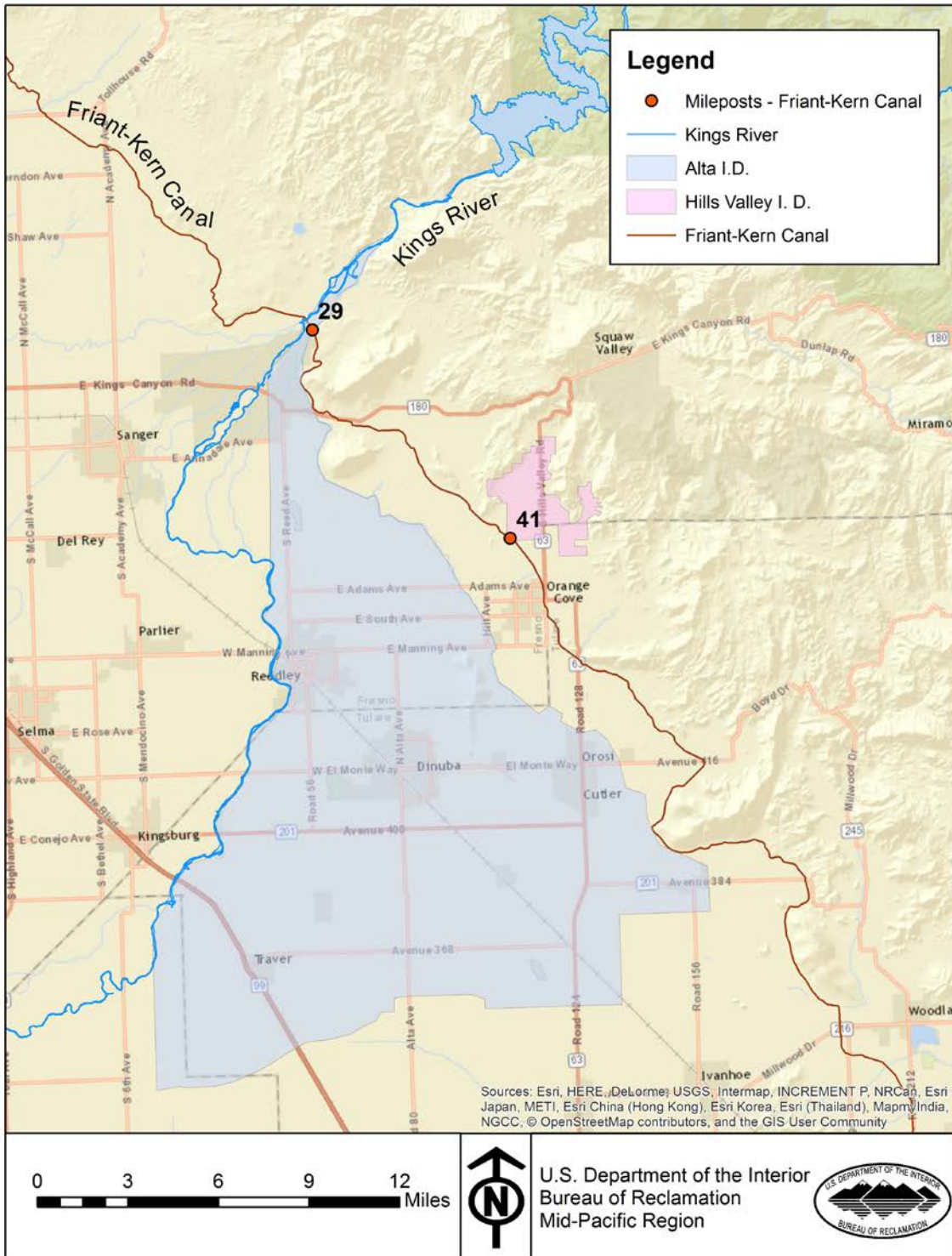


Figure 1 Proposed Action Area

Section 2 Alternatives Including the Proposed Action

This Environmental Assessment 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, Reclamation would not approve the 5-year Warren Act Agreement with Hills Valley for the annual introduction and conveyance of up to 2,500 acre-feet (AF) of their purchased non-CVP water supplies from Alta. Hills Valley would have to use another conveyance method to deliver this non-CVP water.

2.2 Proposed Action

2.2.1 Warren Act Agreement

Reclamation proposes to issue a 5-year Warren Act Agreement to Hills Valley for the introduction and conveyance of up to 2,500 AF per year of non-CVP water purchased from Alta. This agreement would end February 28, 2022. This non-CVP water would be introduced into the Friant-Kern Canal at Milepost 29.10 (Figure 1) from the pumping station owned by Delta Lands Reclamation District No. 770 (Delta Lands). Once in the Friant-Kern Canal, the non-CVP water would be conveyed to Hills Valley's sole delivery point at Milepost 41.15L (Figure 1).

The non-CVP water would be introduced into the Friant-Kern Canal only when there is excess capacity available, as determined by Reclamation.

Hills Valley is also requesting that Milepost 29.10 be added to its list of approved Points of Introduction.

No ground disturbance or modification of existing facilities would be needed to complete the Proposed Action.

2.2.2 Environmental Commitments

Hills Valley must implement the following environmental protection measures to avoid environmental consequences associated with the Proposed Action (Table 1).

Table 1 Environmental Commitments

Resource	Protection Measure
Multiple Resources	There will be no construction or modification of water conveyance facilities.
Biological Resources	The Proposed Action would not involve the conversion of any natural land, or land fallowed and untilled for three or more years.

Environmental consequences for resource areas assume the measures specified would be fully implemented. Copies of all reports would be submitted to Reclamation.

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 2.

Table 2 Resources eliminated from further analysis

Resource	Reason Eliminated
Air Quality	There would be no construction or modification of facilities as a result of the Proposed Action, so there would be no construction-related emissions. Any pumping would make use of existing equipment operating within typical ranges. Therefore no air emissions are anticipated beyond what has already been evaluated and permitted.
Cultural Resources	There would be no impact to Cultural Resources under the No Action Alternative as conditions would remain the same as existing conditions. Reclamation determined that the Proposed Action has no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1). See Appendix A for Reclamation's determination.
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, increase flood, drought, disease, and would not disproportionately impact economically disadvantaged or minority populations.
Global Climate Change	No new construction or new facilities are proposed. Some pumping would be required to move water under the Proposed Action, but power usage would be within the typical range for the facilities involved and are a part of the baseline condition. No greenhouse gas emissions are anticipated outside normal operational fluctuations. 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. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. 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 operation flexibility under either alternative.
Indian Sacred Sites	The Proposed Action would not limit access to ceremonial use of Indian Sacred Sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. Therefore, there would be no impacts to Indian Sacred Sites as a result 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 Proposed Action would not facilitate unplanned growth, land use changes, or conflict with existing land uses. Therefore, there would be no adverse impacts to land use in this area as a result of the Proposed Action.
Socioeconomic Resources	The Proposed Action would have beneficial impacts on socioeconomic resources as it would preserve the area's water supply.

3.2 Biological Resources

3.2.1 Affected Environment

The Proposed Action Area includes Alta and Hills Valley service areas (Figure 1).

Reclamation requested an official species list for the entire Action area from the U.S. Fish and Wildlife Service (USFWS) on September 5, 2017, by accessing their database: <https://ecos.fws.gov/ipac/> (Consultation Code: 08ESMF00-2017-SLI-3132). Reclamation further queried the California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the project location (CNDDB 2017). The two lists, in addition to other information within Reclamation's files were combined to create the following list (Table 3).

Table 3 Federally listed species, status, effects, and occurrence in the Proposed Action Area

Species	Status ¹	Effects ²	Potential to occur and summary basis for ESA determination ³
Amphibians			
California red-legged frog (<i>Rana draytonii</i>)	T	NE	Absent. No longer occurs on valley floor.
California tiger salamander (<i>Ambystoma californiense</i>)	T, X	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
Birds			
California condor (<i>Gymnogyps californianus</i>)	E, X	NE	Absent. Not expected to use farm fields on the valley floor.
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E	NE	Absent. Suitable riparian habitat is lacking.
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	T	NE	Possible. In Tulare County, snowy plovers are known to use evaporation basins. These basins will not be affected by the Proposed Action.
Fish			
Delta smelt (<i>Hypomesus transpacificus</i>)	T	NE	Absent. Proposed Action is outside the species' range.
Invertebrates			
Conservancy fairy shrimp (<i>Branchinecta conservatio</i>)	E	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	T, X	NE	Possible. Proposed Action area overlaps with known occurrences, but no habitat change will occur from Proposed Action.
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	E, X	NE	Possible. Proposed Action area overlaps with known occurrences, but no habitat change will occur from Proposed Action.
Mammals			
Fresno kangaroo rat (<i>Dipodomys nitratoides exilis</i>)	E, X	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
Giant kangaroo rat (<i>Dipodomys ingens</i>)	E	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.

Species	Status ¹	Effects ²	Potential to occur and summary basis for ESA determination ³
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	E	NE	Possible. The foxes can use agricultural lands for foraging, but they must have other habitat nearby that they can use for denning (Warrick et al. 2007). The Proposed Action would not do anything to affect agricultural lands as potential kit fox foraging habitat.
Tipton kangaroo rat (<i>Dipodomys nitratooides nitratooides</i>)	E	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
Plant			
Hoover's spurge (<i>Chamaesyce hooveri</i>)	T, X	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
Keck's checker-mallow (<i>Sidalcea keckii</i>)	E, X	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial, or conveyance facilities.
San Joaquin adobe sunburst (<i>Pseudobahia peirsonii</i>)	T	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
San Joaquin Valley Orcutt grass (<i>Orcuttia inaequalis</i>)	T, X	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
Reptiles			
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	E	NE	Absent. Does not occur in farmlands, lands developed to municipal and industrial use, or conveyance facilities.
Giant garter snake (<i>Thamnophis gigas</i>)	T	NE	Absent. The species no longer occurs in this part of the valley, and no land use change or construction would occur as part of the Proposed Action.

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

Possible: Species recorded in area and habitat suboptimal

Absent: Species not recorded in study area and suitable habitat absent

3.2.2 Environmental Consequences

No Action

Under the No Action alternative, Hills Valley would have to rely on their other water supplies and up to 2,500 AF per year of Kings River water would be retained by Alta Irrigation District. Hills Valley may need to fallow some of their lands under the No Action alternative if they are unable to receive enough water to meet demands. If agricultural lands are fallowed, there is some potential for federally protected species to temporarily move through, or forage in, the fallowed areas. Newly fallowed fields may provide temporary low quality habitat, but it is unlikely that federally listed species would move into these areas.

Proposed Action

The Proposed Action would involve the introduction and conveyance of up to 2,500 AF per year of Kings River water purchased by Hills Valley from Alta for delivery to Hills Valley annually over a 5-year period. The Proposed Action would not involve any construction or changes in land use. The water involved in the Proposed Action would be used to support existing uses within Hills Valley Irrigation District and would not be used to convert fallowed lands or lands that have been untilled for three or more years. No native lands would be cultivated as a result of the Proposed Action. With the implementation of the environmental commitments included in Table 1, Reclamation has determined that the Proposed Action would result in 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 is not expected to result in any direct or indirect impacts to biological resources, there would be no cumulative impacts.

3.3 Water Resources

Alta belongs to The Kings River Watershed Coalition Authority. “The Coalition was formed in 2009 in order to provide growers within the region a cost-effective way to comply with the Central Valley Regional Water Quality Control Board regulations. The Coalition conducts regional monitoring and reporting and assists members in compliance with the regulations.” (Kings River Water Coalition 2017).

Previous water quality sampling of Kings River Water are included in Table 4.

Table 4 Water Quality for Kings River Water from the Gould Canal 2013-2014

	Date	Constituent	Result	MCL	Units
Primary Constituents	8/7/2013	Aluminum	98	1000	mg/L
	8/7/2013	Antimony	ND	6	mg/L
	8/7/2013	Arsenic	ND	10	mg/L
	8/7/2013	Asbestos	0	7	MFL
	8/7/2013	Barium	ND	1000	mg/L
	8/7/2013	Beryllium	ND	4	mg/L
	8/7/2013	Cadmium	ND	5	mg/L
	8/7/2013	Chromium (total)	ND	50	mg/L
	8/7/2013	Chromium, Hexavalent	0	-	mg/L
	8/7/2013	Cyanide	ND	150	mg/L
	8/7/2013	Fluoride	ND	2	mg/L
	8/7/2013	Lead	ND	-	mg/L
	8/7/2013	Mercury	ND	2	mg/L
	8/7/2013	Nitrate (as NO3)	ND	45	mg/L
	8/7/2013	Nitrite (as N)	ND	1000	mg/L
	8/7/2013	Nickel	ND	100	mg/L
	8/7/2013	Perchlorate	ND	6	mg/L
	8/7/2013	Selenium	ND	50	mg/L
	8/7/2013	Thallium	ND	2	mg/L
Secondary Constituents	8/7/2013	Aggressive Index (Corrosivity)	9.3	-	-
	8/7/2013	Bicarbonate Alkalinity	12	-	mg/L
	8/7/2013	Calcium	2.9	-	mg/L
	8/7/2013	Carbonate Alkalinity	ND	-	mg/L
	8/7/2013	Chloride	1.3	600	mg/L
	8/7/2013	Color	15	15	Units
	8/7/2013	Copper	ND	1000	mg/L
	8/7/2013	MBAS	ND	0.5	mg/L
	8/7/2013	Hardness	9.6	-	mg/L
	8/7/2013	Hydroxide Alkalinity	ND	-	mg/L
	8/7/2013	Iron	240	300	mg/L
	8/7/2013	Magnesium	0.56	-	mg/L
	8/7/2013	Manganese	ND	50	mg/L
	8/7/2013	Ordo	10	3	Ton
	8/7/2013	pH	7.4	-	Units
	8/7/2013	Silver	ND	100	mg/L
	8/7/2013	Sodium	2.2	-	mg/L
	8/7/2013	Specific Conductance	31	2200	uS/cm
	8/7/2013	Sulfate	ND	600	mg/L
	8/7/2013	TDS	24	1500	mg/L
8/7/2013	Turbidity	3.4	5	NTU	
8/7/2013	Zinc	ND	5000	mg/L	

*** Organic samples associated with Title 22 were analyzed. None were detected.

3.3.1 Affected Environment

Hills Valley Irrigation District

Hills Valley is located about 20 miles east of Fresno and 5 miles north of Orange Cove. Most of the district is located in Fresno County, with a small portion in Tulare County. In 1976, Hills Valley entered into a long-term renewable contract with Reclamation for 2,146 AF per year. In 1995, the contract amount was amended to 3,346 AF per year. On October 1, 2012, Hills Valley became a long-term Friant Division CVP contractor with two partial contract assignments totaling 1,250 AF per year of Class 1 water. The first partial contract assignment was purchased from the Lewis Creek Water District for 250 AF per year of Class 1 water, with the second purchased from the Porterville Irrigation District for 1,000 AF per year of Class 1 water.

Hills Valley does not directly own any groundwater extraction facilities. Some landowners within the district do have private wells to sustain irrigation during periods when surface water supplies are inadequate. However, local geological conditions (i.e. low aquifer storage capacity and drainage limitations) make these wells an unreliable long-term source of water.

Alta Irrigation District

Alta is located on the east side of the San Joaquin Valley in Tulare, Fresno, and a small portion of Kings Counties. Dinuba and Reedley are within its boundaries. Alta is comprised of approximately 129,000 acres, of which 110,000 are irrigated. Alta is a non-CVP contractor and has pre-1914 Kings River water rights. Alta owns and operates its own canals.

3.3.2 Environmental Consequences

No Action

Under the No Action alternative, Hills Valley would continue to receive CVP water via the Friant-Kern Canal; however, their non-CVP water would not be conveyed in the Friant-Kern Canal. Hills Valley would have to find an alternate conveyance method to deliver this non-CVP water to their customers' crops. If no alternative conveyance method could be found, Hills Valley would likely have to find a way to exchange it for other, usable water supplies, or crops would be fallowed or damaged and/or lost.

Proposed Action

The Proposed Action would allow non-CVP Kings River water purchased from Alta to be conveyed in CVP facilities when excess capacity is available. This would allow the water to be delivered to Hills Valley's service areas for agricultural use. There would be no modification of the Friant-Kern Canal.

The Kings River water is already allocated for use. Alta would meet its water needs with surface runoff from storm events that it has recaptured as part of its irrigation demand. The Proposed Action does not represent a new diversion of the water, or a new water right, but an alternate use for existing supply.

The total quantity of water that would be conveyed in the Friant-Kern Canal under the Proposed Action would be limited to 2,500 AF/year through February 28, 2022. The quantity of water pumped into the Friant-Kern Canal would be delivered (less conveyance losses) and used for

irrigation purposes. Some of the irrigation water would be lost to evapotranspiration, and some would also percolate back into the aquifer.

Non-CVP water introduced into the Friant-Kern Canal must meet Reclamation's then-current water quality requirements prior to approval for introduction (Appendix B). If testing (by the Kings River Watershed Coalition Authority) shows that the water does not meet then-current standards, Hills Valley would not be allowed to discharge into the Friant-Kern Canal until water quality concerns are addressed. Testing is conducted on a yearly basis using Reclamation's then current water quality requirements. This testing program is anticipated to adequately protect the quality of water and limit degradation of other users' supplies. Reclamation anticipates that the current Kings River water quality will be similar to that in Table 4 sampled during 2013-2014.

Cumulative Impacts

The Friant-Kern Canal is used to convey water for a variety of users from a variety of sources. The quality of water being introduced is tested regularly in order to limit the potential for degradation of mixed water supplies. This testing program is anticipated to adequately protect the quality of water in the Friant-Kern Canal from the cumulative effects of this and other water conveyance actions.

Although capacity in the Friant-Kern Canal is limited, Friant Water Authority and Reclamation actively operate it in order to balance competing demands. Non-CVP water such as the water which would be conveyed under the Proposed Action has a lower priority than CVP water. Therefore the Proposed Action is not anticipated to cause conflicts or create other cumulative impacts to Friant-Kern Canal operations.

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Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation intends to provide the public with an opportunity to comment on the Draft Finding of No Significant Impact and Draft Environmental Assessment during a 30-day public review period.

4.2 List of Agencies and Persons Consulted

Reclamation is coordinating the Proposed Action with Hills Valley, Alta, and Delta Lands.

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Section 5 References

California Natural Diversity Database (CNDDDB). 2017. California Department of Fish and Wildlife, Government Version.

Kings River Water Quality Coalition. 2017. About the Kings River Water Quality Coalition. Website accessed December 2017 <http://kingsriverwqc.org/about/>.

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* 67:270- 277.