

# RECLAMATION

*Managing Water in the West*

**Draft Environmental Assessment**

## **Friant-Kern Canal Groundwater Pump-In Program Warren Act Agreements**

**EA-14-011**



**U.S. Department of the Interior  
Bureau of Reclamation  
Mid Pacific Region  
South-Central California Area Office  
Fresno, California**

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## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to 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.

# Table of Contents

<b>Section 1</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Background.....	1
1.2	Need for the Proposed Action.....	1
<b>Section 2</b>	<b>Alternatives Including the Proposed Action .....</b>	<b>2</b>
2.1	No Action Alternative.....	2
2.2	Proposed Action.....	2
2.2.1	Environmental Commitments .....	7
<b>Section 3</b>	<b>Affected Environment and Environmental Consequences .....</b>	<b>9</b>
3.1	Resources Eliminated from Further Analysis.....	9
3.2	Water Resources .....	9
3.2.1	Affected Environment .....	9
3.2.2	Environmental Consequences.....	12
3.3	Land Use.....	13
3.3.1	Affected Environment .....	13
3.4	Biological Resources .....	14
3.4.1	Affected Environment .....	14
3.4.2	Environmental Consequences.....	17
3.5	Socioeconomic Resources .....	18
3.5.1	Affected Environment .....	18
3.5.2	Environmental Consequences.....	18
3.6	Environmental Justice.....	18
3.6.1	Affected Environment .....	18
3.6.2	Environmental Consequences.....	19
<b>Section 4</b>	<b>Consultation and Coordination .....</b>	<b>20</b>
4.1	Public Review Period .....	20
4.2	Endangered Species Act (16 U.S.C. § 1531 et seq.).....	20
<b>Section 5</b>	<b>Preparers and Reviewers .....</b>	<b>21</b>
<b>Section 6</b>	<b>References.....</b>	<b>21</b>

# List of Tables and Figures

Figure 2-1 Friant-Kern Canal Contractors .....	3
Table 2-1 Discharge Point Authorizations.....	4
Table 2-2 Environmental Protection Measures and Commitments .....	7
Table 3-1 Resources Eliminated from Further Analysis.....	9
Table 3-2 Participating Contractors and their CVP Contract Supply .....	10
Table 3-3 Cross Valley Contractors and their CVP Contract Supply.....	11
Table 3-4 Agricultural Products by County.....	13
Table 3-5 Special-Status Species with the Potential to Occur in the Action Area .....	14
Table 3-6 Economic Data, 2012 .....	18
Table 3-7 Demographic Data, 2012.....	19

# Appendices

<b>Appendix A</b>	Guidelines for Accepting Non-Project Water in Friant Division Facilities
<b>Appendix B</b>	Cultural Resources Determination
<b>Appendix C</b>	Indian Trust Assets Determination

# Section 1 Introduction

## 1.1 Background

In recent years California has experienced droughts that have reduced water supplies to many water districts. As a result, Friant Division Central Valley Project (CVP) water service contractors have received unprecedented initial 0% water supply allocations in 2014. The historically low allocation is due to a combination of hydrologic, environmental, and regulatory conditions. The zero allocation follows previous dry years in 2012 and 2013, in which Friant Division CVP contractors received 57 and 62 percent of their full Class 1 contract supply, respectively.

Friant Division and other CVP contractors along the Friant-Kern Canal (FKC) thus need additional water supplies in order to mitigate for the shortages to their water users. The contractors have requested Warren Act agreements to convey pumped groundwater into the FKC for conveyance of such groundwater to their agricultural users. In addition to the Warren Act agreement, certain contractors could also have need of exchange agreements, for situations where water is needed upstream of the location where it can be discharged to the canal. This kind of arrangement was used in 1999 under similarly dry conditions in the Friant Division, and a corresponding program is currently in place for users of the Delta-Mendota Canal (Reclamation 1999, Reclamation 2013). In addition to the exchange and/or Warren Act agreement, certain Friant Division CVP contractors have also requested land use authorizations to use Reclamation right of way for temporary pumping facilities.

The Warren Act of February 21, 1911, CH. 141, (36 STAT. 925; 43 U.S.C. § 523) authorizes Reclamation to enter into agreements to store or convey Non-Project Water when excess capacity is available in federal facilities. Section 14 of the Reclamation Project Act of 1939 (53 Stat. 1197; 43 U.S.C. § 389) allows the United States to enter into contracts for the exchange or replacement of water for the benefit of the United States and the project. Title 34, Section 3408(c) of P.L. 102-575, Central Valley Project Improvement Act (CVPIA) allows for the exchange, impoundment, storage, carriage, and delivery of CVP and Non-CVP water for domestic, municipal, industrial, fish and wildlife, and any other beneficial purpose.

## 1.2 Need for the Proposed Action

There is a need to supply additional water to areas where shortages are taking place within the Friant CVP Division. The purpose of Reclamation's action is to facilitate conveyance of supplemental water supplies to areas where it is needed to maintain crops, and to provide authorizations for the necessary discharge facilities within Reclamation right of way.

## **Section 2 Alternatives Including the Proposed Action**

This Environmental Assessment (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, Reclamation would not permit the CVP contractors located within the Friant Division to discharge pumped groundwater into the FKC. Affected growers would have to find alternative supplies of water, provide for alternative conveyance path(s), and/or temporarily take land out of production.

### **2.2 Proposed Action**

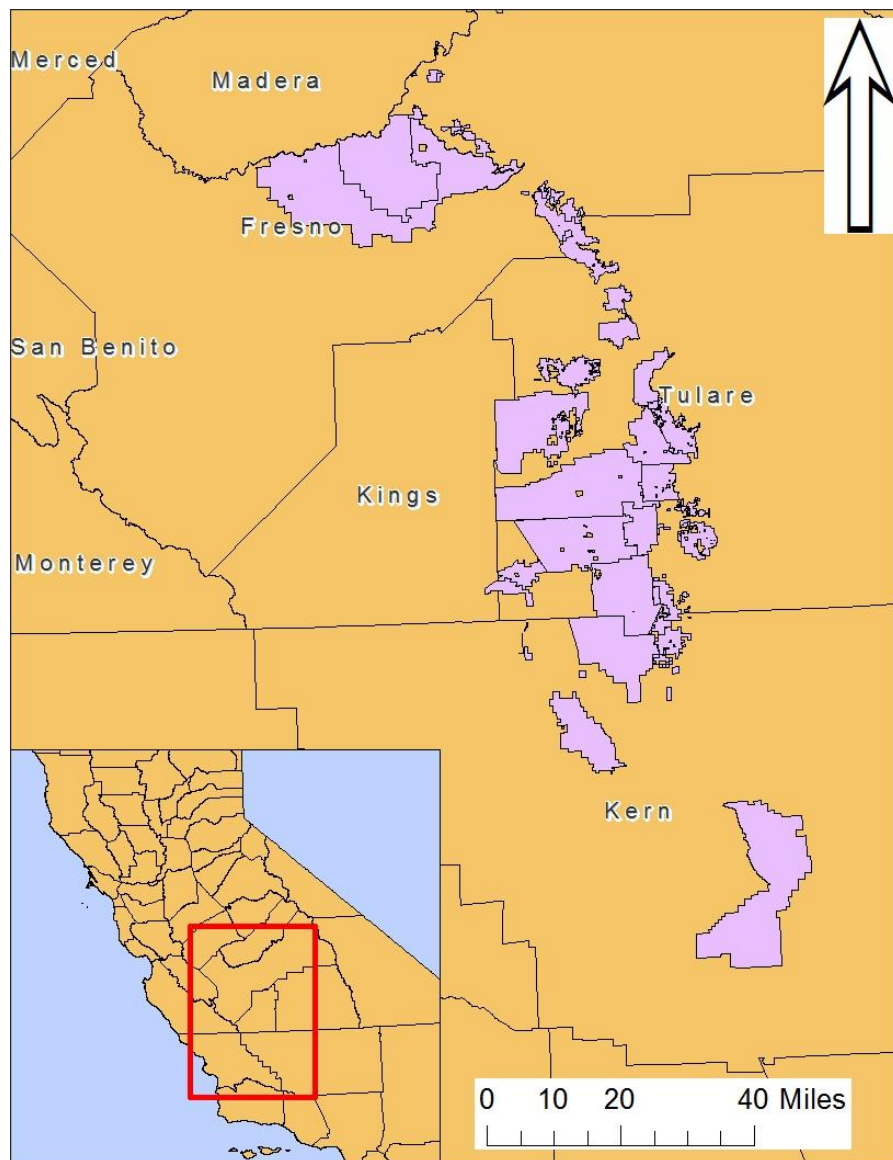
Reclamation proposes to enter into Warren Act agreements with the CVP contractors located in the Friant Division and physically adjacent to the FKC. A list of the participating contractors may be found in Section 3.2 (also see Figure 2-1). The agreements would allow for the introduction of up to 50,000 acre-feet (AF) of non-CVP water, with varying amounts from different participating contractors. The agreements would be effective for a period of one year, with an option for a second one-year term.

The source of the non-CVP water introduced into the FKC would be groundwater pumped from privately owned wells within each district. The water would be introduced either directly or via the district's existing distribution systems. The quantity of groundwater pumped into the FKC would be measured by flow-meters read and calibrated by Friant Water Authority (FWA) field staff. Each participating district would be permitted to pump groundwater into the FKC, although total quantities introduced under the Proposed Action would not exceed a combined volume of 50,000 AF. After introduction, the district(s) would then convey a like amount of water through turnouts on the FKC within their district or to other districts within the Friant CVP Division for agricultural use. Exchanges would also be permitted in situations where a contractor's discharge point to the canal is downstream of the location where the water is needed. Prior to introduction, all wells would be tested to demonstrate compliance with Reclamation's then-current water quality standards. The current water quality standards can be found in Appendix A.

Also as part of the Proposed Action, Reclamation would issue land use authorizations for use of Reclamation right of way at discharge points at the locations listed in Table 2-1. No new permanent modifications to the Canal would be authorized. However, some existing discharge facilities whose licenses have expired would have their license renewed for a period of 25 years. Also some locations are proposed to have new temporary discharge points. These could involve

facilities placed over the canal bank (drivable pipe or hose) or suspended from bridges, or new temporary pipe installation. The new temporary pipes would be no larger than 1 foot in diameter, and would be installed only within the canal berm, existing roadways, and disturbed agricultural fields within the plow zone. These new pipes would be removed upon expiration of the Warren Act agreement.

Additional land use authorizations or discharge points within the geographical coverage of this environmental analysis may also be included as long as they meet the then-current water quality requirements for the FKC and do not affect protected species.



**Figure 2-1 Friant-Kern Canal Contractors**

**Table 2-1 Discharge Point Authorizations**

<b>Irrigation District</b>	<b>FKC Milepost</b>	<b>Section/Township/Range</b>	<b>Well Owner/ID</b>
Delano-Earlimart Irrigation District	107.34	23-23-26	Castlerock
Delano-Earlimart Irrigation District	NP	23-23-26	Castlerock 2
Delano-Earlimart Irrigation District	110.57	03-24-26	Sun Pacific 1
Delano-Earlimart Irrigation District	110.57	03-24-26	Sun Pacific 2
Delano-Earlimart Irrigation District	NP	15-24-26	Poonian
Delano-Earlimart Irrigation District	112.09	09-24-26	Kovacevich 5 #3
Delano-Earlimart Irrigation District	NP	27-23-26	Golden State Grapes
Delano-Earlimart Irrigation District	108.45	27-26-23	Kovacevich #1
Delano-Earlimart Irrigation District	NP	09-25-26	Hronis Family #1
Delano-Earlimart Irrigation District	NP	03-25-26	Hronis Family #2
Delano-Earlimart Irrigation District	NP	04-25-26	K & P Hronis
Delano-Earlimart Irrigation District	111.07	04-24-26	Delano Vineyards
Delano-Earlimart Irrigation District	NP	21-24-26	Delano Farms
Delano-Earlimart Irrigation District	115.8	16-24-26	Di Buduo
Delano-Earlimart Irrigation District	112.3	34-23-36	Four Star Fruit
Delano-Earlimart Irrigation District	115.8W	17-24-26	Delano
Delano-Earlimart Irrigation District	115.85	29-24-26	Avenue 8 Almond
Delano-Earlimart Irrigation District	105.66	01-26-23	Hronis Ranch #4
Delano-Earlimart Irrigation District	112.09	09-24-26	D Hillon #1
Delano-Earlimart Irrigation District	112.09	09-24-26	D Hillon #2
Delano-Earlimart Irrigation District	108.85	27-23-26	Kovacevich #2
Lindsay-Strathmore Irrigation District	NP	28-20-27	Lobue
Lindsay-Strathmore Irrigation District	86.42	16-20-27	M Kausen
Lindsay-Strathmore Irrigation District	86.17	09-20-27	S Kausen
Lindsay-Strathmore Irrigation District	84.11	04-20-27	Limoneira
Lindsay-Strathmore Irrigation District	86.19	16-20-27	C Loeffler
Lindsay-Strathmore Irrigation District	84.26	04-20-27	M Loeffler
Lindsay-Strathmore Irrigation District	86.17	09-20-27	Mittman
Lindsay-Strathmore Irrigation District	86.0	16-20-27	Sun Pacific North



<b>Irrigation District</b>	<b>FKC Milepost</b>	<b>Section/Township/Range</b>	<b>Well Owner/ID</b>
Lindsay-Strathmore Irrigation District	87.68	21-20-27	Sun Pacific South
Lindsay-Strathmore Irrigation District	86.44	27-16-20	Chill
Lindsay-Strathmore Irrigation District	NP	28-20-27	Bechtel
Lindsay-Strathmore Irrigation District	86.19	16-20-27	Heuer
Lindsay-Strathmore Irrigation District	89.19	28-20-27	Patterson
Lindsay-Strathmore Irrigation District	81.75R	29-19-27	CUS
Lindsay-Strathmore Irrigation District	87.30	21-20-27	Golden Valley
Lindsay-Strathmore Irrigation District	88.18	21-20-20	Sierra Sunrise
Lindsay-Strathmore Irrigation District	88.18	21-20-27	Starr Warson
Lindsay-Strathmore Irrigation District	86.68	16-20-27	M Kausen #2
Lindsay-Strathmore Irrigation District	86.68	16-20-27	Sun Pacific Middle
Orange Cove Irrigation District	38.88R	34-14-24	P Lawson
Orange Cove Irrigation District	38.88L	34-14-24	M Lawson
Orange Cove Irrigation District	40.37	04-15-24	Booth #2
Orange Cove Irrigation District	52.44	14-16-25	Booth #28
Orange Cove Irrigation District	47.37	28-15-25	Booth #4
Orange Cove Irrigation District	50.38	11-16-25	K Harrison
Orange Cove Irrigation District	51.62	NP	Bee Sweet Citrus
Orange Cove Irrigation District	NP	NP	Bee Sweet Citrus
Orange Cove Irrigation District	39.45	NP	Mulholland
Orange Cove Irrigation District	45.46	NP	Ken Carrol
Orange Cove Irrigation District	44.56	NP	Ken Carrol
Orange Cove Irrigation District	45.46	NP	CitriCare
Orange Cove Irrigation District	45.46	NP	CitriCare
Orange Cove Irrigation District	53.52	NP	Riddle
Orange Cove Irrigation District	45.46	NP	Kryder
Orange Cove Irrigation District	38.74	NP	Barthulli
Orange Cove Irrigation District	38.74	NP	Barthulli
Orange Cove Irrigation District	38.74	NP	Barthulli
Orange Cove Irrigation	45.46	NP	Rogalsky

<b>Irrigation District</b>	<b>FKC Milepost</b>	<b>Section/Township/Range</b>	<b>Well Owner/ID</b>
District			
Orange Cove Irrigation District	44.56	NP	MilMar
Orange Cove Irrigation District	47.03	NP	MilMar
Orange Cove Irrigation District	53.32	NP	MilMar
Orange Cove Irrigation District	45.46	NP	Dean Gillette
Orange Cove Irrigation District	45.46	NP	Jay Gillette
Orange Cove Irrigation District	47.03	NP	Booth
Orange Cove Irrigation District	40.37	NP	Booth
Orange Cove Irrigation District	52.44	NP	Booth
Orange Cove Irrigation District	47.37	NP	Booth
Orange Cove Irrigation District	45.65	NP	K Howard
Orange Cove Irrigation District	36.50	NP	Cotter
Orange Cove Irrigation District	38.88R	NP	P Lawson
Orange Cove Irrigation District	38.88L	NP	M Lawson
Orange Cove Irrigation District	36.79	NP	Carlson/Carlson
Orange Cove Irrigation District	47.03	NP	H&H Ranches
Orange Cove Irrigation District	36.79	NP	Hogan Citrus
Orange Cove Irrigation District	36.5	20-14-24	J Cotter
Orange Cove Irrigation District	46.65	29-15-25	K Howard
Saucelito Irrigation District	103.19R	36-22-26	MZIRP Inc
Saucelito Irrigation District	98.12	06-22-27	Changala
Saucelito Irrigation District	105.55L	12-23-26	MAMZIRP LLC
Terra Bella Irrigation District	NP	04-23-28	Cholworthy
Terra Bella Irrigation District	NP	30-22-27	BTV Crown/Weldon
Terra Bella Irrigation District	NP	NP	J Poonian Wilkinson
Terra Bella Irrigation District	NP	31-22-37	South Valley Farms
Terra Bella Irrigation District	NP	16-21-27	Cannella

NP – Not provided

Note that addition of wells would not increase the total volume of non-CVP water that could be conveyed under this program above 50,000 AF. Prior to introduction, additional wells must meet the requirements described above and shall be added, by an amendment, to the applicable agreements.

### 2.2.1 Environmental Commitments

The participating CVP contractors shall implement the following environmental protection measures to reduce environmental consequences associated with the Proposed Action (Table 2-2). The determinations of the effects from the Proposed Action assume the following measures would be fully implemented. Copies of all reports and monitoring data collected for the Proposed Action shall be submitted to Reclamation.

**Table 2-2 Environmental Protection Measures and Commitments**

<b>Resource</b>	<b>Protection Measure</b>
Air Quality	All pumps to be used shall meet the applicable emission standards set by the San Joaquin Valley Air Pollution Control District (SJVAPCD).
Groundwater	Districts in Fresno and Kern Counties shall comply with applicable ordinances regarding transfer of pumped groundwater outside of the county and/or aquifer zone. Kings and Tulare Counties do not have such ordinances.
Land Use/Biology	The non-CVP water involved in these actions must not be used to cultivate native or untilld land (fallow for three years or more).
Land Use	The Proposed Action does not allow permanent modification of existing facilities.
Biological Resources	A preconstruction survey for Federally protected species will be required prior to any ground disturbance.

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## 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 3-1.

**Table 3-1 Resources Eliminated from Further Analysis**

Resource	Reason Eliminated
Cultural Resources	On March 19, 2014, Reclamation determined that the Proposed Action has no potential to affect Cultural Resources. See Appendix B.
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	On March 19, 2014, Reclamation determined that the Proposed Action has no potential to affect Indian Trust Assets. See Appendix C.
Air Quality	The SJVAPCD requires pumps operated within the district to meet strict emission standards. With the requirement that equipment used for the Proposed Action must meet SJVAPCD standards, impacts to air quality should be discountable.
Global Climate	The combined greenhouse gas emissions of all pumps that could be used under the Proposed Action are not anticipated to approach the 25,000 tons of carbon dioxide equivalent per year threshold of significance set by the Environmental Protection Agency. The pumps would also have to meet SJVAPCD emission standards, which are set such that impacts from regulated emission sources would not cumulatively cause an adverse effect.

### 3.2 Water Resources

#### 3.2.1 Affected Environment

##### ***Friant Division***

Friant Dam is located on the San Joaquin River, 25 miles northeast of Fresno, California. The dam controls the San Joaquin River flows, provides downstream releases to meet requirements above Mendota Pool, and provides flood control, conservation storage, diversion into Madera and Friant-Kern Canals, and delivers water to a million acres of agricultural land in the San Joaquin Valley. The reservoir, Millerton Lake, has a total capacity of 520,528 AF, a surface area of 4,900 acres, and is approximately 15 miles long.

There are 32 Friant Division CVP contractors located on the eastern side of the San Joaquin Valley in Merced, Madera, Fresno, Tulare, Kings, and Kern Counties. CVP water for a majority of these contractors comes from Millerton Lake via the FKC or the Madera Canal. Water conveyed to these contractors is categorized as either Class 1 or Class 2 water depending on its

reliability and allocation circumstances. Twenty-eight of the Friant contractors are included in this Proposed Action.

Cross Valley contractors are CVP contractors that are geographically located on the eastern side of the San Joaquin Valley in Fresno, Kern, Kings, and Tulare Counties. There are seven Cross Valley contractors with a total CVP supply of 128,300 AF/year. Those Cross Valley contractors which are located in the Friant Division are included in the Proposed Action.

A list of participating contractors and their contract supplies may be found in Tables 3-2 and 3-3, below.

**Table 3-2 Participating Contractors and their CVP Contract Supply**

<b>Contractor</b>	<b>Class 1 (AF/year)</b>	<b>Class 2 (AF/year)</b>
<b>Arvin-Edison Water Storage District</b>	40,000	311,675
<b>City of Fresno</b>	60,000	0
<sup>2</sup> <b>City of Lindsay</b>	2,500	0
<b>City of Orange Cove</b>	1,400	0
<b>Delano-Earlimart Irrigation District</b>	108,800	74,500
<b>Exeter Irrigation District</b>	11,100	19,000
<b>Fresno Irrigation District</b>	0	75,000
<b>Garfield Water District</b>	3,500	0
<b>Gravelly Ford Water District</b>	0	14,000
<sup>2</sup> <b>Hills Valley Irrigation District</b>	1,250	0
<b>International Water District</b>	1,200	0
<b>Ivanhoe Irrigation District</b>	6,500	500
<sup>1</sup> <b>Kaweah Delta Water Conservation District</b>	1,200	7,400
<sup>2</sup> <b>Kern-Tulare Irrigation District</b>	0	5,000
<b>Lewis Creek Water District</b>	1,200	0
<b>Lindmore Irrigation District</b>	33,000	22,000
<b>Lindsay-Strathmore Irrigation District</b>	27,500	0
<sup>2</sup> <b>Lower Tule River Irrigation District</b>	61,200	238,000
<b>Orange Cove Irrigation District</b>	39,200	0
<b>Porterville Irrigation District</b>	15,000	30,000
<sup>2</sup> <b>Saucelito Irrigation District</b>	21,500	32,800
<b>Shafter-Wasco Irrigation District</b>	50,000	39,600
<b>Southern San Joaquin Municipal Utility District</b>	97,000	45,000
<sup>2</sup> <b>Stone Corral Irrigation District</b>	10,000	0
<b>Tea Pot Dome Water District</b>	7,200	0
<b>Terra Bella Irrigation District</b>	29,000	0
<sup>2</sup> <b>Tri-Valley Water District</b>	400	0
<b>Tulare Irrigation District</b>	30,000	141,000
<sup>1</sup> Kaweah Delta Water Conservation District is comprised of four districts: Lakeside Irrigation Water District, Kings County Water District, Corcoran Irrigation District, and Tulare Irrigation District. <sup>2</sup> Lower Tule River ID, Saucelito ID, Stone Corral ID, Tri-Valley, Kern-Tulare, Hills Valley and City of Lindsay receive CVP water under more than one contract, either as a Friant Division and/or Cross Valley Contractor/Sub-Contractor.		

**Table 3-3 Cross Valley Contractors and their CVP Contract Supply**

<b>Contractor</b>	<b>CVP Contract Supply (AF/year)</b>
<b>Hills Valley Irrigation District</b>	3,346
<sup>1</sup> <b>Kern Tulare Water District</b>	53,300
<sup>2</sup> <b>Lower Tule River Irrigation District</b>	31,102
<b>Tri-Valley Water District</b>	1,142
<sup>1</sup> Kern Tulare Water District and Rag Gulch Water District consolidated on January 1, 2009. <sup>2</sup> Lower Tule River ID, Saucelito ID, Stone Corral ID, Tri-Valley, Kern-Tulare, Hills Valley and City of Lindsay receive CVP water under more than one contract, either as a Friant Division and/or Cross Valley Contractor/Sub-Contractor.	

***Friant-Kern Canal***

The FKC carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, four miles west of Bakersfield. The water is used for supplemental and new irrigation supplies in Fresno, Tulare, and Kern Counties. The canal has an initial capacity of 5,000 cubic feet per second that gradually decreases to 2,000 cubic feet per second at its terminus near the Kern River.

***Groundwater Resources***

Two primary hydrologic divisions of the San Joaquin Valley are agreed upon by the Department of Water Resources, the State Water Resources Control Board, and the U.S. Geological Survey: 1) the San Joaquin River Hydrologic Region covering approximately 15,200 square miles and including all of Calaveras, Tuolumne, Mariposa, Madera, San Joaquin, and Stanislaus counties, most of Merced and Amador counties, and parts of Alpine, Fresno, Alameda, Contra Costa, Sacramento, El Dorado, and San Benito counties; and 2) the Tulare Lake Hydrologic Region covering approximately 17,000 square miles and including all of Kings and Tulare counties and most of Fresno and Kern counties (DWR 2003).

According to DWR Bulletin 118, groundwater provides approximately 30 percent of the total supply for the San Joaquin River Hydrologic Region (DWR 2003). All of the sub-basins within the San Joaquin River Hydrologic Region have experienced some overdraft. Groundwater quality conditions vary throughout the San Joaquin River Hydrologic Region. Salinity, boron, nitrates, arsenic, selenium, and mercury are parameters of concern for agricultural and municipal uses throughout the region.

In the southern region of the San Joaquin Valley, several conjunctive use projects are operating or are in the proposal stages. The purposes of each project vary and include recharge of overdrafted basins using surface water, cooperative banking concepts that rely on groundwater in dry years and surface water in wet years, and temporary storage of surface water for later withdrawal.

Fresno and Kern Counties have ordinances in place which restrict transfer of groundwater outside of their respective counties and/or aquifer areas. Kings and Tulare Counties do not have such ordinances at this time.

### **3.2.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, Reclamation would not permit the introduction of the pumped groundwater into federal facilities. The contractors would need to find alternative supplies of water, provide for alternative conveyance path(s), and/or temporarily take land out of production.

#### ***Proposed Action***

##### **Surface Water**

The Proposed Action would allow groundwater to be conveyed and stored in CVP facilities when excess capacity is available. This would allow the water to be delivered to CVP contractors' service areas for agricultural use. There would be no permanent modification of the FKC, and the capacity of the facility would remain the same.

Water from each well must meet water quality standards prior to approval for conveyance. If testing from any individual well indicates that its water does not meet then-current standards, it would not be allowed to discharge into the FKC until water quality concerns are addressed. This testing program is anticipated to adequately protect the quality of water in the canal and limit degradation of other users' supplies.

##### **Groundwater**

The total quantity of groundwater that would be pumped into the FKC under the Proposed Action would be limited to 50,000 AF/year. The quantity of groundwater pumped into the FKC by a district would be delivered back into the district by way of the canal (less conveyance losses), and used for irrigation purposes. Though some of the water used for irrigation would be lost to evapotranspiration, some would also percolate back into the aquifer.

The groundwater to be pumped under the Proposed Action would come from wells at varying depths, at a wide range of locations along the FKC. While none of the wells are expected to individually draw enough water to affect local or regional supplies, cumulative regional groundwater overdraft is an ongoing concern. Similarly, none of the wells are expected to individually pump enough water to create subsidence problems, but regional trends are towards gradually lowering ground surface levels as a result of subsidence.

Water users within Fresno and Kern counties would be required to comply with applicable groundwater ordinances in order to limit impacts to local groundwater supplies.

##### ***Cumulative Impacts***

The FKC 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 FKC from the cumulative effects of this and other water conveyance actions.

Although capacity in the FKC is limited, FWA and Reclamation actively operate the canal in order to balance competing demands. Non-CVP water such as the groundwater which would be conveyed under the Proposed Action has a lower priority than CVP water for conveyance in the



FKC. Therefore the Proposed Action is not anticipated to cause conflicts or other cumulative impacts to FKC operations.

Groundwater overdraft is an ongoing challenge in the San Joaquin Valley. Pumping increases in dry years, and drops off in years when surface water supplies are plentiful. A variety of agencies throughout the region and state are working on balancing competing water needs in order to provide the greatest benefit possible with the limited resources available. The needs of the State will likely be met over time through a combination of demand management, increases in storage capacity and new supply development. Ground subsidence is related, and efforts to reduce subsidence will depend on success in meeting California's surface water needs while keeping groundwater pumping within a sustainable range.

### 3.3 Land Use

#### 3.3.1 Affected Environment

The CVP contractors are located in Fresno, Kern, Kings and Tulare Counties, in California's Central Valley. The valley is generally rural and agricultural in nature, with several medium-sized cities located along major transportation corridors. The leading agricultural products in each county are outlined below in Table 3-4.

**Table 3-4 Agricultural Products by County**

County	Major Agricultural Products
Fresno	Almonds, livestock, raisins, milk, tomatoes
Kern	Grapes, almonds, milk, vegetables, pistachios
Kings	Milk, cotton, cattle, tomatoes, walnuts
Tulare	Milk, grapes, cattle, navel oranges, silage corn
Source: California Farm Bureau Federation 2012	

#### **No Action**

Under the No Action Alternative, Reclamation would not permit the CVP contractors located in the Friant Division to discharge pumped groundwater into the FKC. Growers would have to find alternative supplies of water, provide for alternative conveyance path(s), and/or temporarily take land out of production.

#### **Proposed Action**

The Proposed Action would support current land uses by making additional supplies of water available to agricultural users to support existing crops. It would help sustain permanent crops that are currently at risk of dying due to lack of water. The water would not be used to support new development or convert fallow land for agriculture.

#### **Cumulative Impacts**

The Proposed Action would provide a source of water to support agriculture in a time of shortage. This helps to mitigate the impacts of external challenges, in particular California's ongoing drought. Several similar water-moving actions have been authorized or are currently under review. Cumulatively they are expected to provide a benefit to existing land uses.

## 3.4 Biological Resources

### 3.4.1 Affected Environment

Reclamation requested an official species list from the U.S. Fish and Wildlife Service (Service) via the Sacramento Field Office's website, [http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists-overview.htm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm), on March 25, 2014 (document number: 140325073023). The list is for the following counties: Fresno, Kings, Kern, and Tulare (Service 2014). Reclamation further queried the California Department of Fish and Wildlife California Natural Diversity Database (CNDDDB) for records of Federally listed species within the Proposed Action Area (CNDDDB 2014). A summary table (Table 3-5) was created from the Service's species list, CNDDDB records, and additional information in Reclamation's files.

**Table 3-5 Special-Status Species with the Potential to Occur in the Action Area**

Species	Status <sup>1</sup>	Effects <sup>2</sup>	Summary basis for ESA determination
<b>INVERTEBRATES</b>			
Conservancy fairy shrimp ( <i>Branchinecta conservatio</i> )	E	NE	Not documented in the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.
Kern primrose sphinx moth ( <i>Euproserpinus euterpe</i> )	T	NE	Does not occur in Proposed Action Area.
longhorn fairy shrimp ( <i>Branchinecta longiantenna</i> )	E, X	NE	Not documented in the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.
Vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> )	T, X	NE	Known from along the FKC, but no ground disturbance or land conversion as a result of the Proposed Action.
Valley elderberry longhorn beetle ( <i>Desmocerus californicus dimorphus</i> )	T	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Vernal pool tadpole shrimp ( <i>Lepidurus packardii</i> )	E, X	NE	Not documented in the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.
<b>FISH</b>			
delta smelt ( <i>Hypomesus transpacificus</i> )	T	NE	No waterways within the species' range would be affected by the proposed project.
Central Valley steelhead ( <i>Oncorhynchus mykiss</i> )	T, NMFS	NE	No waterways within the species' range would be affected by the proposed project.
Lahontan cutthroat trout ( <i>Oncorhynchus clarki henshawi</i> )	T	NE	Does not occur in Proposed Action Area.
Little Kern golden trout ( <i>Oncorhynchus aquabonita whitei</i> )	T, X	NE	Does not occur in Proposed Action Area.

Species	Status <sup>1</sup>	Effects <sup>2</sup>	Summary basis for ESA determination
Paiute cutthroat trout ( <i>Oncorhynchus clarki seleniris</i> )	T	NE	Does not occur in Proposed Action Area.
Owens tui chub ( <i>Gila bicolor snyderi</i> )	E	NE	Does not occur in Proposed Action Area.
<b>AMPHIBIANS</b>			
California tiger salamander, central population ( <i>Ambystoma californiense</i> )	T, X	NE	Known from along the FKC, but no ground disturbance or land conversion as a result of the Proposed Action.
California red-legged frog ( <i>Rana draytonii</i> )	T, X	NE	Presumed extirpated from the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.
mountain yellow-legged frog ( <i>Rana muscosa</i> )	PE, PX	NE	Does not occur in Proposed Action Area.
Sierra Nevada yellow-legged frog ( <i>Rana sierriae</i> )	PE, PX	NE	Does not occur in Proposed Action Area.
Yosemite toad ( <i>Bufo canorus</i> )	PT, PX	NE	Does not occur in Proposed Action Area.
<b>REPTILES</b>			
blunt-nosed leopard lizard ( <i>Gambelia sila</i> )	E	NE	No ground disturbance or land conversion as a result of the Proposed Action.
giant garter snake ( <i>Thamnophis gigas</i> )	T	NE	Presumed extirpated from the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.
<b>BIRDS</b>			
California condor ( <i>Gymnogyps californianus</i> )	E, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.
least Bell's vireo ( <i>Vireo bellii pusillus</i> )	E	NE	Could fly over the Proposed Action Area during migration; no ground disturbance or land conversion as a result of the Proposed Action.
southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	E, X	NE	Could fly over the Proposed Action Area during migration; no ground disturbance or land conversion as a result of the Proposed Action.
western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	T	NE	No ground disturbance or land conversion as a result of the Proposed Action.
western yellow-billed cuckoo ( <i>Coccyzus americanus occidentalis</i> )	PT	NE	Could fly over the Proposed Action Area during migration; no ground disturbance or land conversion as a result of the Proposed Action.
<b>MAMMALS</b>			
giant kangaroo rat ( <i>Dipodomys ingens</i> )	E	NE	Irrigated agriculture does not provide suitable habitat for this species. No change in land use as a result of the Proposed Action.

Species	Status <sup>1</sup>	Effects <sup>2</sup>	Summary basis for ESA determination
fisher ( <i>Martes pennanti</i> )	C	NE	Does not occur in Proposed Action Area.
Fresno kangaroo rat ( <i>Dipodomys nitratoides exilis</i> )	E, X	NE	Does not occur in Proposed Action Area
Sierra Nevada bighorn sheep ( <i>Ovis canadensis californiana</i> )	E	NE	Does not occur in Proposed Action Area.
Tipton kangaroo rat ( <i>Dipodomys nitratoides nitratoides</i> )	E	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Buena Vista Lake shrew ( <i>Sorex ornatus relictus</i> )	E, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.
San Joaquin kit fox ( <i>Vulpes macrotis mutica</i> )	E	NE	There are multiple CNDDB-recorded occurrences of San Joaquin kit fox in and near the action area. No ground disturbance or land conversion as a result of the Proposed Action.
<b>PLANTS</b>			
Bakersfield cactus ( <i>Opuntia treleasei</i> )	E	NE	No ground disturbance or land conversion as a result of the Proposed Action.
California jewelflower ( <i>Caulanthus californicus</i> )	E	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Greene's tuctoria ( <i>Tuctoria greenei</i> )	E	NE	No ground disturbance or land conversion as a result of the Proposed Action.
hairy Orcutt grass ( <i>Orcuttia pilosa</i> )	E, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Hartweg's golden sunburst ( <i>Pseudobahia bahiifolia</i> )	E	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Hoover's spurge ( <i>Chamaesyce hooveri</i> )	T, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Keck's checker-mallow ( <i>Sidalcea keckii</i> )	E, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Kern mallow ( <i>Eremalche kernensis</i> )	E	NE	Not documented in the Proposed Action Area, and no ground disturbance or land conversion as a result of
Mariposa pussy-paws ( <i>Calyptidium pulchellum</i> )	T	NE	Does not occur in Proposed Action Area.
Palmate-bracted bird's-beak ( <i>Cordylanthus palmatus</i> )	E	NE	A few occurrences about 3 miles east of WWD on Mendota Wildlife Area. No change in land use as a result of the Proposed Action.
Ramshaw sand-verbena ( <i>Abronia alpina</i> )	C	NE	Does not occur in Proposed Action Area.
San Benito evening-primrose ( <i>Camissonia benitensis</i> )	T	NE	Does not occur in Proposed Action Area.
San Joaquin adobe sunburst ( <i>Pseudobahia peirsonii</i> )	T	NE	No ground disturbance or land conversion as a result of the Proposed Action.
San Joaquin woolly-threads ( <i>Monolopia congdonii</i> )	E	NE	Multiple occurrences along western border of WWD. No change in land use as a result of the Proposed Action.

Species	Status <sup>1</sup>	Effects <sup>2</sup>	Summary basis for ESA determination
San Joaquin Valley Orcutt grass ( <i>Orcuttia inaequalis</i> )	T, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.
Springville clarkia ( <i>Clarkia springvillensis</i> )	T	NE	Does not occur in Proposed Action Area.
succulent owl's-clover ( <i>Castilleja campestris</i> ssp. <i>succulenta</i> )	T, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.
<p>1 Status= Listing of Federally special status species  E: Listed as Endangered  NMFS: Species under the Jurisdiction of the National Oceanic &amp; Atmospheric Administration Fisheries Service  T: Listed as Threatened  P: Proposed for listing or designation  C: Candidate for listing  X: Critical Habitat designated for this species</p> <p>2 Effects = Effect determination  NE: No Effect from the Proposed Action to federally listed species</p>			

### 3.4.2 Environmental Consequences

#### **No Action**

Under the No Action Alternative, Reclamation would not permit the introduction of the pumped groundwater into federal facilities. The contractors would need to find alternative supplies of water, provide for alternative conveyance path(s), and/or temporarily take land out of production. If this were to occur, there might be some fallowed fields that could temporarily be used by the San Joaquin kit fox and the Tipton kangaroo rat. However, the fields would likely be disced so often that denning and burrowing would be unlikely to occur, and the value of the fallowed fields to those species would be low.

#### **Proposed Action**

Under the Proposed Action, Federally listed or proposed or candidate species, and critical habitat would not be affected, nor would any migratory birds. Many of the species and their critical habitat do not occur in the Proposed Action Area. The FKC is not used by any Federally listed or proposed aquatic species. For those that do occur in the Proposed Action Area, the restriction to only allow ground disturbance within-already disturbed areas would reduce the chance of encountering a Federally listed or proposed species, of affecting a primary constituent element of critical habitat, or of impacting a migratory bird. Nonetheless, some potential would exist, and so in cases involving ground disturbance, a preconstruction survey would need to be provided to Reclamation. If the results of the survey indicated that there would be no impact to protected biological resources, the work could proceed. Otherwise, separate environmental analysis would be needed. With the above limitations and based upon the nature of this action Reclamation has determined there would be No Effect to listed species or designated critical habitat under the Endangered Species Act (16 U.S.C. §1531 et. seq.).

#### **Cumulative Impacts**

As the Proposed Action would not result in any direct or indirect impacts to Federally listed, proposed, or candidate species, or critical habitat, it would not contribute cumulatively to any impacts to these resources.

## 3.5 Socioeconomic Resources

### 3.5.1 Affected Environment

The covered districts are located in Fresno, Kern, Kings and Tulare Counties. According to 2012 Census estimates, all four counties have lower per capita income, greater unemployment and higher rates of poverty than California as a whole. See Table 3-6, below.

**Table 3-6 Economic Data, 2012**

County	Per Capita Income	Unemployment Rate	Poverty Rate
Fresno County	\$20,391	15.7%	24.8%
Kern County	\$20,216	14.0%	22.5%
Kings County	\$18,566	16.5%	20.7%
Tulare County	\$18,021	13.6%	24.8%
California	\$29,551	11.4%	15.3%

Source: Census Bureau 2012 , Census Bureau 2013

### 3.5.2 Environmental Consequences

#### **No Action**

Under the No Action Alternative, Reclamation would not permit the contractors to discharge pumped groundwater into the FKC. Growers would have to find alternative supplies of water, provide for alternative conveyance path(s), and/or temporarily take land out of production. Agriculture is a major contributor to the area's economy, so this would have a disproportionate negative impact on employment and wages in the Central Valley.

#### **Proposed Action**

The Proposed Action would provide a source of water to support agriculture, which is the Central Valley's primary source of economic activity. This would provide direct benefits to growers from crop sales, as well as indirect benefits to area businesses which provide agricultural supplies and services.

#### **Cumulative Impacts**

The Proposed Action would provide a source of water to support agriculture in a time of shortage. Because of agriculture's importance to the area's economy, any impacts, either positive or negative, tend to have a disproportionate and cumulative effect on employment and wages. Several similar water-moving actions have been authorized or are currently under review. Cumulatively they are expected to provide a benefit to the area's economic well-being.

## 3.6 Environmental Justice

### 3.6.1 Affected Environment

The covered districts are located in Fresno, Kern, Kings and Tulare Counties. According to Census Bureau estimates, the demographic makeup of the counties is similar to California's, with several exceptions. In particular, the percentage of the population who identify as Hispanic or Latino is higher than the statewide average. Some counties also have smaller Asian and/or

Black/African-American populations than California as a whole. See Table 3-7 below for more information.

**Table 3-7 Demographic Data, 2012**

	<b>Total Population</b>	<b>White (not Hispanic)</b>	<b>Black or African American</b>	<b>American Indian</b>	<b>Asian</b>	<b>Native Hawaiian/ Pacific Islander</b>	<b>Hispanic or Latino</b>
Fresno County	947,895	77.5%	5.9%	3.0%	10.4%	0.3%	51.2%
Kern County	856,158	83.0%	6.3%	2.7%	4.8%	0.3%	50.3%
Kings County	151,364	81.4%	7.5%	3.0%	4.3%	0.3%	52.0%
Tulare County	451,977	88.4%	2.2%	2.8%	4.0%	0.2%	61.8%
California	37,999,878	73.7%	6.6%	1.7%	13.9%	0.5%	38.2%

Source: Census Bureau 2013

### **3.6.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, Reclamation would not permit the CVP contractors located in the Friant Division to discharge pumped groundwater into the FKC. Growers would have to find alternative supplies of water, provide for alternative conveyance path(s), and/or temporarily take land out of production. Farm laborers often come from minority and low-income communities. Therefore reductions in agricultural productivity would have a disproportionate, adverse impact on those communities.

#### ***Proposed Action***

The Proposed Action would support agriculture by making additional supplies of water available to support existing crops. Since farm laborers often come from minority and low-income communities, supporting farm employment is a benefit to those disadvantaged groups.

#### ***Cumulative Impacts***

The Proposed Action would provide a source of water to support agriculture in a time of shortage. Because of agriculture's importance to the area's economy, any impacts, either positive or negative, tend to have a disproportionate and cumulative effect on employment and wages. Farm laborers often come from low-income and minority populations, and they are therefore disproportionately affected by these trends. Several similar water-moving actions have been authorized or are currently under review. Cumulatively they are expected to provide a benefit to the economic well-being of disadvantaged groups.

## **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 EA during a 7 day public review period.

### **4.2 Endangered Species Act (16 U.S.C. § 1531 et seq.)**

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

Reclamation has determined that the Proposed Action would not affect any Federally listed or proposed species or any critical habitat. Therefore, consultation with either the Service or NMFS is not required. The Service will be sent a copy of the EA and FONSI when they are released for public review. Based upon the nature of this action Reclamation has determined there would be No Effect to listed species or designated critical habitat under the Endangered Species Act (16 U.S.C. §1531 et. seq.).



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# **Appendix A    Guidelines for Accepting Non- Project Water in Friant Division Facilities**

# RECLAMATION

*Managing Water in the West*

## **Guidelines for Accepting Non-Project Water in Friant Division Facilities – Central Valley Project Water Quality Monitoring Requirements - 2014**



Friant-Kern Canal in Tulare County (Credit: Ted Holzem, Mintier & Associates)



U.S. Department of the Interior  
Bureau of Reclamation  
Mid-Pacific Region

Revised: 21 March 2014

United States Bureau of Reclamation  
South-Central California Area Office  
and  
Friant Water Authority

Guidelines for Accepting Non-Project Water in Friant Division Facilities  
Water Quality Monitoring Requirements - 2014

This document describes the approval process, implementation procedures, and responsibilities of a Contractor requesting permission from the U.S. Bureau of Reclamation (Reclamation) to introduce non-project water into the Friant Division of the Central Valley Project (CVP), including Millerton Lake, Friant Dam, Friant-Kern Canal, and Madera Canal. These guidelines are intended to ensure that water quality is protected and that domestic and agricultural water users are not adversely impacted. The conveyance of non-project water shall not in any way limit the ability of either Reclamation or the Friant Water Authority (Authority) to operate and maintain the facilities for their intended purposes nor shall it adversely impact existing contracts or any other agreements. The conveyance of non-project water into the Friant Division facilities will be permissible only when there is excess capacity in the system as determined by the Authority and Reclamation.

The Contractor shall be responsible for securing other requisite Federal, State or local permits, and shall be responsible for all costs associated with the measurement of water quality in each source of non-project water..

Reclamation, in cooperation with the Authority, will consider all proposals to convey non-project water based upon water quality criteria and implementation procedures established in this document. Table 1 is a summary of baseline sampling to be conducted by Reclamation. Table 2 provides a summary of the water quality monitoring program. Table 3 is a list of constituents to be measured in each source of non-project water with maximum contaminant levels. Table 4 is a list of analytical laboratories recommended by Reclamation. Table 5 is a list of turnouts along the Friant-Kern Canal to municipal and industrial customers.

This document is subject to review and modification by Reclamation and the Authority.

**A. Types of Non-Project Water**

These guidelines recognize three types of non-project water with distinct requirements for water quality monitoring.

1. **“Type A” Non-Project Water**

This is water that meets California drinking water standards (Title 22)<sup>1&2</sup>, plus other constituents

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1. Title 22. The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 4010-4037), and Administrative Code (Sections 64401 et seq.), as amended.

of concern recommended by the California Department of Health Services. Type A water must be tested every year for the full list of constituents listed in Table<sup>3</sup>. No in-prism (within the Canal) monitoring is required to convey Type A water.

## 2. “Type B” Non-Project Water

This is water that generally complies with Title 22, but may exceed the Maximum Contaminant Level (MCL) for certain inorganic constituents of concern to be determined by Reclamation and the Authority. This water may be discharged into the Friant Division for short durations, generally not to exceed 60 consecutive days.-. Type B water shall be tested every three years for the full list of constituents in Table 2, and more frequently for specified constituents of concern. Water from the rivers that cross the Friant-Kern Canal and groundwater from wells beside the canal are Type B non-project water.

Type B water may not be pumped into the Friant-Kern Canal within a half-mile upstream of a delivery point to a CVP Municipal and Industrial contractor<sup>3</sup>.

The introduction of Type B water into the Friant-Kern and Madera Canals will require regular in-prism monitoring to confirm that the CVP water delivered to downstream customers is suitable in quality for their needs. The location, frequency, and parameters will be determined by Reclamation and the Authority on a case-by-case basis.

In general, this monitoring will consist of frequent field measurements<sup>4</sup> of water in the canal upstream and downstream of each pump-in while pumping occurs. Instream field measurements will be conducted by Reclamation or Authority staff. Supplemental lab analyses may be needed as well. The cost of in-stream water quality analyses will be handled by Reclamation.

## 3. “Type C” Non-Project Water

Type C Water is non-project water that originates in the same source as CVP water but that has not been appropriated by the United States. No water quality analyses are required to convey Type C water through the Friant-Kern or Madera Canals because it is physically the same as CVP water. For example, non-project water from a tributary within the upper San Joaquin River watershed, such as the Soquel Diversion from Willow Creek above Bass Lake, is Type C water.

## **B. Authorization**

The Warren Act (Act of February 21, 1911, ch. 141, 36 Stat. 925), as supplemented by Section 305 of Public Law 102-250, authorizes Reclamation to contract for the carriage and storage of non-project water when excess capacity is available in Federal water facilities.

43 USC § 523 - Storage and transportation of water for irrigation districts, etc.

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<sup>2</sup> <http://www.cdph.ca.gov/certlic/drinkgwater/Pages/Lawbook.aspx>

<sup>3</sup> See Table 5.

<sup>4</sup> Field measurements of salinity (specific conductance), pH, and turbidity.

*Whenever in carrying out the provisions of the reclamation law, storage or carrying capacity has been or may be provided in excess of the requirements of the lands to be irrigated under any project, the Secretary of the Interior, preserving a first right to lands and entrymen under the project, is authorized, upon such terms as he may determine to be just and equitable, to contract for the impounding, storage, and carriage of water to an extent not exceeding such excess capacity with irrigation systems operating under section 641 of this title, and individuals, corporations, associations, and irrigation districts organized for or engaged in furnishing or in distributing water for irrigation.*

*Water so impounded, stored, or carried under any such contract shall be for the purpose of distribution to individual water users by the party with whom the contract is made: Provided, however, That water so impounded, stored, or carried shall not be used otherwise than as prescribed by law as to lands held in private ownership within Government reclamation projects.*

*In fixing the charges under any such contract for impounding, storing, or carrying water for any irrigation system, corporation, association, district, or individual, as herein provided, the Secretary shall take into consideration the cost of construction and maintenance of the reservoir by which such water is to be impounded or stored and the canal by which it is to be carried, and such charges shall be just and equitable as to water users under the Government project.*

*No irrigation system, district, association, corporation, or individual so contracting shall make any charge for the storage, carriage, or delivery of such water in excess of the charge paid to the United States except to such extent as may be reasonably necessary to cover cost of carriage and delivery of such water through their works.*

The terms of this document are also based on the requirements of the Clean Water Act (33 U.S.C. 1251 et seq.), the Safe Drinking Water Act of 1974 (P.L. 93-523, amended 1986) and Title XXIV of the Reclamation Projects Authorization and Adjustments Act of 1992 (P.L. 102-575, 106 Stat 4600). Water quality standards are based on Title 22 of the California Health and Safety Code.

## **C. General Requirements for Discharge of Non-Project Water**

### **1. Contract Requirements**

A Contractor wishing to discharge non-project water in the Friant Division Facilities must first execute a contract with Reclamation. The contract may be negotiated with Reclamation's South Central California Area Office (SCCAO) in Fresno.

### **2. Pump-in Facility Licensing**

Each pump-in facility must be approved by Reclamation and the Authority under a License for Erection and Maintenance of Structures which may be obtained from the SCCAO.

### **3. Prohibition When the Canal is Empty**

Non-project shall not be conveyed in the canals of the Friant Division (Friant-Kern Canal or Madera Canal) during periods when the canal is not conveying CVP water (i.e., de-watered for maintenance).

### **4. Prohibition when Minimum CVP Flows Occur**

Non-project water shall not be conveyed in the canals of the Friant Division when flows of less than 500 cfs are being released from Friant Dam into the Madera Canal or less than 1000 cfs being released from Friant Dam into the Friant-Kern Canal.

## **D. Non-Project Discharge, Water Quality, and Monitoring Program Requirements**

### **1. General Discharge Approval Requirements**

Each source of non-project water must be correctly sampled, completely analyzed, and approved by Reclamation prior to introduction into Friant Division facilities. The Contractor shall pay the cost of collection and analyses of the non-project water required under this policy<sup>5</sup>.

### **2. Water Quality Sampling and Analyses**

Each source of Type A and B non-project water must be tested for the complete list of constituents of concern and bacterial organisms listed in Table <sup>3</sup>. Reclamation will provide a Quality Assurance Project Plan (QAPP) that will describe the protocols and methods for sampling and analysis of Type B non-project water.

### **3. Water Quality Reporting Requirements**

Water quality analytical results must be reported to the Contracting Officer for review.

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5. Reclamation will pay for the collection and analyses of CVP water to be collected at Friant Dam, San Joaquin River below Friant Dam, and Friant-Kern Canal near its terminus in Kern County..



#### 4. Type B Water Quality Monitoring

More analyses of Type B water may be required while it is being pumped into the Friant Division; the frequency and parameters to be monitored will be determined by Reclamation.

The monitoring may include field measurements and grab samples water in the canal upstream and downstream of the Contractor's discharge point into the Friant Division.. The location of samples, and the duration and frequency of sampling, and the list of constituents to be analyzed, will be specified by Reclamation and may be changed upon review of measured trends. Field measurements will be conducted by Reclamation or Authority staff.

#### **E. Control of Water Quality in the Friant Division**

The CVP water will be considered impaired if the conveyance of the Contractor's non-project water is degrading the quality of CVP water.

Instream Change in Water Quality Caused by the Conveyance of Non-Project Water	Impairment
Non-Project water causes increase in turbidity in the canal (Field test)	Increase in turbidity of more than 20 NTU between the upstream and downstream samples for more than five consecutive days
	Downstream sample exceeds 40 NTU
Non-Project water causes an increase in salinity in the canal (Field test)	Increase in salinity of more than 50 $\mu\text{S}/\text{cm}$ specific conductance between upstream and downstream samples for five consecutive days
	Salinity of downstream sample exceeds 250 $\mu\text{S}/\text{cm}$

Reclamation, in consultation with the Authority, will direct the Contractor to stop the discharge of non-project water from this source into the Friant Division.

#### **F. Baseline Water Quality Analysis**

Every six months, Reclamation will collect samples of water from the San Joaquin River below Friant Dam or Friant-Kern Canal near Friant Dam, and from the canal near its terminus in Kern County (Table 1). These samples will be analyzed for Table 3 constituents to identify the baseline quality of water in the canal. No direct analysis within the Madera Canal will be conducted at this time.

#### **G. Water Quality Data Review and Management**

All non-project water quality data must be sent to Reclamation for review, verification, and approval. These data will be entered into a database to be maintained by Reclamation. All field notes and laboratory water quality analytical reports will be kept by the Authority. All water quality data will be available upon request to the Contractor and other interested parties.

## Definitions

### CVP or Project water

Water that has been appropriated by the United States for the Friant Division of the CVP. The source of Project water in the Friant Division is the San Joaquin River watershed.

### Non-project water

Water that has not been appropriated by the United States for the Friant Division of the CVP. This includes groundwater, and surface water from other streams and rivers that cross the Friant-Kern and Madera Canals, such as Wutchumna Ditch, Kings River, Kaweah River, St Johns River, etc..

### Maximum Contaminant Level

This is the maximum concentration of a constituent that can occur in each source of non-project water before it is pumped into a facility of the Friant Division. Concentration is usually reported in milligrams per liter (parts per million) or micrograms per liter (parts per billion).

### Non-project discharge system

The pipe and pumps from which non-project water crosses federal property into a facility of the Friant Division.

### Title 22

The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 4010-4037), and Administrative Code (Sections 64401 et seq.), as amended.

### Type A water

This is non-project water that meets California drinking water standards. This water must be tested every year for the full list of Title 22 constituents. No in-stream monitoring is required to convey Type A water in the Friant Division.

### Type B water

This is non-project water that has constituents that may exceed the California drinking water standards. This water must be tested every three years for the full list of Title 22 constituents. Field monitoring will be required of water upstream and downstream of each discharge point.

### Type C water

This is non-project water from the same watershed as Project water that has not been appropriated by the United States for the Central Valley Project. No water quality analyses are required to convey this water in the Friant-Kern Canal.

Table 1. Baseline Sampling Locations  
Table 2. Water Quality Monitoring Schedule  
Table 3. Water Quality Constituents  
Table 4a. Approved Laboratory List  
Table 4b. Approve Laboratory Matrix  
Table 5. Municipal and Industrial Turnouts from the Friant-Kern Canal

Revised: 21 March 2014 scc-107

## **Appendix B    Cultural Resources Determination**

# **CULTURAL RESOURCE COMPLIANCE**

## **Reclamation Division of Environmental Affairs**

### **MP-153**

**MP-153 Tracking Number:** 14-SCAO-138

**Project Name:** Friant Kern Canal Groundwater Pump-In Program

**NEPA Document:** EA-14-011

**NEPA Contact:** Ben Lawrence, Natural Resource Specialist

**MP 153 Cultural Resources Reviewer:** William Soule, Archaeologist

**Date:** 03/19/2014

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Reclamation proposes to issue Warren Act Contracts (WAC) to five Friant Division contractors: Delano-Earlimart Irrigation District, Lindsay-Strathmore Irrigation District, Orange Cove Irrigation District, Saucelito Irrigation District, and Terra Bella Irrigation District. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such historic properties be present, pursuant to the National Historic Preservation Act (NHPA) Section 106 regulations codified at 36 CFR Part 800.3(a)(1).

Each WAC would be for 10,000 AF of groundwater, for a total of 50,000 AF per year considered under this action. The water would be discharged to the Friant-Kern Canal from various discharge locations, to be used for agricultural purposes. No new permanent facilities would be authorized under this action. However, some existing discharge facilities whose licenses have expired would have their license renewed. Also some locations are proposed to have new temporary discharge points (i.e. hoses over the canal embankment or suspended from canal bridges).

After reviewing the materials submitted by SCAO, I concur with a determination in EA-14-011 for this action which states that neither the proposed action nor the no action alternative have the potential to cause effects to historic properties pursuant to the NHPA Section 106 regulations codified at 36 CFR Part 800.3(a)(1). With this determination, Reclamation has no further NHPA Section 106 obligations. This memorandum is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

CC: Cultural Resources Branch (MP-153), Anastasia Leigh – Regional Environmental Officer (MP-150)

## **Appendix C    Indian Trust Assets Determination**



Lawrence, Benjamin &lt;blawrence@usbr.gov&gt;

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## Request for Determinations, EA 14-011, Friant-Kern Canal Groundwater Pump-In Program

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**RIVERA, PATRICIA** <privera@usbr.gov>

Wed, Mar 19, 2014 at 10:04 AM

To: "Lawrence, Benjamin" &lt;blawrence@usbr.gov&gt;, Kristi Seabrook &lt;kseabrook@usbr.gov&gt;

Ben,

I reviewed the proposed action to issue Warren Act Contracts to five Friant Division contractors: Delano-Earlimart Irrigation District, Lindsay-Strathmore Irrigation District, Orange Cove Irrigation District, Saucelito Irrigation District, and Terra Bella Irrigation District. Each WAC would be for 10,000 AF of groundwater, for a total of 50,000 AF per year considered under this action. The water would be discharged to the Friant-Kern Canal at various locations, to be used for agricultural purposes.

Existing discharge facilities whose licenses have expired would have their license renewed. Also some locations are proposed to have new temporary discharge points (i.e. hoses placed over the canal embankment or suspended from canal bridges). Future new, permanent discharge points are also being considered, and we'd like to look at the most efficient/expedient way of approaching those future installations as well.

The proposed action does not have a potential to impact Indian Trust Assets.

Patricia Rivera  
Native American Affairs Program Manager  
US Bureau of Reclamation  
Mid-Pacific Region  
2800 Sacramento, California 95825  
(916) 978-5194

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Kristi this is admin. Please long in. Have great day! On travel so will be checking emails when get an opportunity so please keep up your reviews-thanks so much