

Final Environmental Assessment

Tule River Water Warren Act Agreement

EA-14-039



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.

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Section 1 Introduction

The Bureau of Reclamation (Reclamation) provided the public with an opportunity to comment on the Draft Finding of No Significant Impact (FONSI) and Draft Environmental Assessment (EA) between from July 22 to August 6, 2014. One comment letter from Arvin-Edison Water Storage District (Arvin-Edison) was received. The comment letter and Reclamation's response to comments are included in Appendix A. Changes from the draft EA which are not editorial and minor in nature are indicated by a line in the left margin.

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 received unprecedented initial 0 percent 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.

In order to continue meeting their customers' needs, affected contractors are pursuing a range of additional water supplies, such as transfers, pumped groundwater and other surface water sources. Terra Bella Irrigation District (Terra Bella) has acquired 5,000 acre-feet (AF) of non-CVP Tule River water from Lower Tule River Irrigation District and Porterville Irrigation District. They would like to deliver this water to their customers for agricultural use by way of the federal Friant-Kern Canal (FKC), from Milepost (MP) 97.36 to a turnout at MP 103.64. Terra Bella has requested a Warren Act agreement from the Bureau of Reclamation (Reclamation) for conveyance of this non-CVP water in the FKC. The location of the participating districts is shown in Figure 1-1.

1.2 Need for the Proposed Action

Terra Bella does not have adequate water supplies to meet the needs of their customers. The purpose of the Proposed Action is to provide a conveyance mechanism to deliver supplemental supplies to support existing crops within the district.

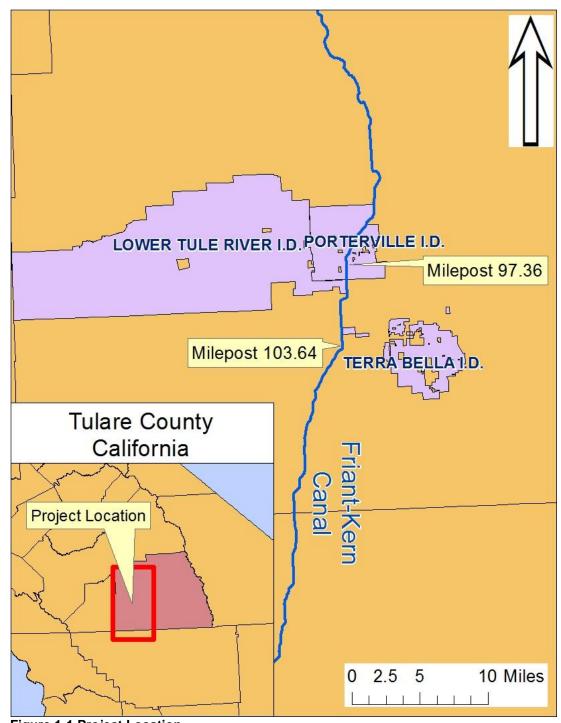


Figure 1-1 Project Location

Section 2 Alternatives Considered

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

If no action were taken, Terra Bella's non-CVP water would not be conveyed in the FKC. The District would have to find an alternate water supply, or use another conveyance method to deliver this non-CVP water to their customers' crops. If no other source or conveyance mechanism were found, fallowing of cropland could be necessary.

2.2 Proposed Action

Reclamation proposes to issue a Warren Act agreement to Terra Bella under Article 18 of its Repayment Contract. Under the proposed agreement, the district would introduce up to 5,000 AF of non-CVP Tule River water into the FKC through September of 2014.

Under the Proposed Action, Tule River water would be released from storage in Success Reservoir into the Tule River channel, and diverted 5 miles downstream at the Poplar Ditch head gate in Porterville. The water would then be conveyed 5.5 miles in Poplar Ditch to the downstream side of the FKC near Highway 190 (see Figure 2-1), where it would be contained and stored in a temporary pumping station installed by Terra Bella until they are ready to pump the water for introduction into the FKC. The temporary pumping station would be placed in the paved area between the ditch and FKC at MP 97.36 outside of Reclamation rights-of- way (see Appendix A). No ground disturbance would be needed for the installation of the temporary pumping facility. Water pumped into the FKC would flow to MP 103.64, where Terra Bella would take it at their existing turnout.

2.2.1 Environmental Commitments

Terra Bella shall implement the following environmental protection measures to reduce environmental consequences associated with the Proposed Action (Table 2-1). Environmental consequences for resource areas assume the measures specified would be fully implemented. Copies of all reports and monitoring shall be submitted to Reclamation.

Table 2-1 Environmental Protection Measures and Commitments

Resource	Protection Measure
Air Quality	All pumps to be used shall meet the applicable emission standards set by the San
	Joaquin Valley Air Pollution Control District (SJVAPCD).
Water Quality	Non-CVP water must meet water quality standards prior to approval for conveyance (see Appendix D). If testing indicates that water does not meet then-current standards, it may not be introduced into the FKC until water quality concerns are addressed.
Land Use/Biology	The non-CVP water involved in these actions must not be used to cultivate native or untilled land (fallow for three consecutive years or more).

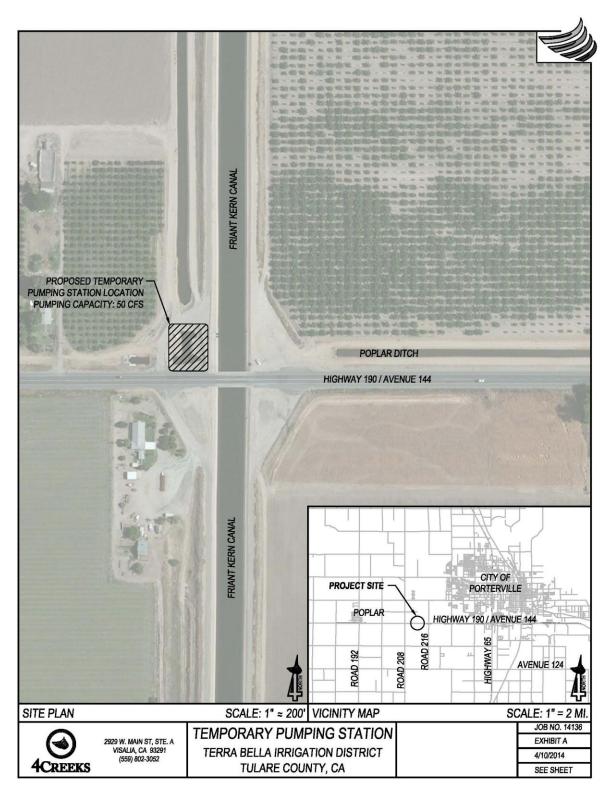


Figure 2-1 Proposed Temporary Pumping Station

Section 3 Affected Environment and Environmental Consequences

This section analyzes 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	The Proposed Action would facilitate the flow of water through existing facilities to existing users. As no construction or modification of facilities would be needed in order to complete 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.				
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. See Appendix C for Reclamation's determination.				
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-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.

Terra Bella Irrigation District

Terra Bella is located in Tulare County, about 75 miles southeast of Fresno and about 8 miles south of Porterville. Terra Bella is comprised of 13,962 acres, of which 11,165 are irrigated. In 1950, Terra Bella entered into a long-term contract with Reclamation for 29,000 AF per year of Class 1 water. Terra Bella does not have any other long-term surface water supplies, and their deep well system is barely adequate to support small winter demands. Currently, Terra Bella owns and operates 10 wells. There are no significant privately-owned grower or landowner wells in the district.

In order to manage limited supplies, Terra Bella has developed groundwater banking arrangements with other districts. In years when surplus water is available, Terra Bella transfers water to other districts for direct use, resale, or percolation through recharge basins. This water is later returned during dry years to allow Terra Bella to continue to produce crops.

3.2.2 Environmental Consequences

No Action

If no action were taken, the non-CVP Tule River water would not be conveyed in the FKC. Terra Bella would have to find an alternate water supply, or use another conveyance method to deliver this non-CVP water to their customers' crops.

Proposed Action

The Proposed Action would allow non-CVP water to be conveyed in the FKC when excess capacity is available. This would allow the water to be delivered to Terra Bella's service area for agricultural use. There would be no modification of the FKC, and the capacity of the facility would remain the same.

Introduction and conveyance of non-CVP water is dependent on available capacity and operational constraints; therefore, the Proposed Action would not interfere with the normal operations of federal facilities nor would it impede any CVP obligations to deliver water to other contractors or to local fish and wildlife habitat.

The total quantity of water conveyed in the FKC under the Proposed Action would be limited to 5,000 AF. The water pumped into the FKC by Terra Bella would be delivered by way of the canal (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 FKC must meet water quality standards prior to approval for conveyance (see Appendix D). If testing shows that the water does not meet then-current standards, Terra Bella 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.

Cumulative Impacts

Reclamation has reviewed existing or foreseeable projects in the same geographic area that could affect or could be affected by the Proposed Action as Reclamation and CVP contractors have been working on various drought-related projects, including this one, in order to manage limited

water supplies due to current hydrologic conditions and regulatory requirements. This and similar projects would have a cumulative beneficial effect on water supply during this critically dry year.

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drive requests for water service actions. Water districts provide water to their customers based on available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and a myriad of water service actions are approved and executed each year to facilitate water needs. It is likely that in 2014, more districts will request exchanges, transfers, and Warren Act contracts (conveyance of non-CVP water in CVP facilities) due to hydrologic conditions. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

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, Friant Water Authority and Reclamation actively operate the canal 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 for conveyance in the FKC. Therefore the Proposed Action is not anticipated to cause conflicts or other cumulative impacts to FKC operations.

3.3 Land Use

3.3.1 Affected Environment

Terra Bella is located in Tulare County, 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 Tulare County are milk, grapes, cattle, navel oranges and silage corn (California Farm Bureau Federation 2012).

No Action

If no action were taken, Reclamation would not permit conveyance of the non-CVP Tule River water in the FKC. Terra Bella would have to find an alternate conveyance mechanism, or secure another source of water. If no alternate way could be found to deliver supplemental water, land could be taken out of agricultural production.

Proposed Action

Under the Proposed Action, non-CVP water would be conveyed to Terra Bella to maintain current land uses by supporting existing crops. A temporary pumping station would be required, but it would be located on an existing paved area and would not have any long-term impact on land use.

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-form.cfm, on July 11, 2014 (document number: 140711010427). The list is for the following U.S. Geological Survey 7½-minute topographic quadrangles, which are overlapped by the Proposed Action Area: Fountain Springs, Ducor, Success Dam, Cairns Corner, Woodville, Porterville, Tulare, Taylor Weir, Tipton, and Corcoran (Service 2014). 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 construction area associated with the Proposed Action (CNDDB 2014). A summary table (Table 3-2) was created from the Service species list, CNDDB records, and additional information within Reclamation's files.

Table 3-2 Federal Protected Species List and Effects Determination for the Proposed Action.

Listed Species	Status ¹	ESA Effects ²	Summary basis for Effects determination				
Amphibians							
California red-legged frog (Rana draytonii)	Т	NE	Not documented in the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.				
California tiger salamander, central population (Ambystoma californiense)	Т	NE	Not documented in the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.				
Birds							
California condor (<i>Gymnogyps californianus</i>)	Е	NE	No ground disturbance or land conversion as a result of the Proposed Action.				
Southwestern willow flycatcher (Empidonax traillii extimus)	Е	NE	Could fly over the Proposed Action Area during migration, but habitat is lacking.				
FISH							
Delta smelt (Hypomesus transpacificus)	Т	NE	No waterways within the species' range would be affected by the Proposed Action.				
INVERTEBRATES							
Conservancy fairy shrimp (Branchinecta conservatio)	E	NE	Not documented in the Proposed Action Area, and no ground disturbance or land conversion as a result of the Proposed Action.				
Valley elderberry longhorn beetle (Desmocerus californicus dimorphus)	Т	NE	Known from grazed lands and riparian habitats, but no ground disturbance or land conversion as a result of the Proposed Action.				
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	T, X	NE	Not documented in the Proposed Action Area, and no ground disturbance or				

Listed Species	Status ¹	ESA Effects ²	Summary basis for Effects determination			
			land conversion as a result of the Proposed Action.			
MAMMALS						
San Joaquin kit fox (Vulpes macrotis mutica)	E	NE	Although suitable habitat may be present, no land use change, conversion of cultivated or fallowed fields, construction or modification of existing facilities would occur as a result of the Proposed Action.			
Tipton kangaroo rat (Dipodomys nitratoides nitratoides)	E	NE	Suitable habitat not present. Not documented in the Proposed Action Area.			
PLANTS						
California jewelflower (Caulanthus californicus)	Е	NE	No ground disturbance or land conversion as a result of the Proposed Action.			
Keck's checker-mallow (Sidalcea keckii)	E, X	NE	No ground disturbance or land conversion as a result of the Proposed Action.			
San Joaquin adobe sunburst (Pseudobahia peirsonii)	Т	NE	No ground disturbance or land conversion as a result of the Proposed Action.			
Springville clarkia (Clarkia springvillensis)	Т	NE	No ground disturbance or land conversion as a result of the Proposed Action.			
REPTILES						
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	E	NE	No land use change, conversion of cultivated or fallowed fields, construction or modification of existing facilities would occur as a result of the Proposed Action. Agricultural lands do not provide suitable habitat.			
Giant garter snake (Thamnophis gigas)	Т	NE	Presumed extirpated from the Proposed Action Area. No land use change, adverse water quality changes, conversion of cultivated or fallowed fields, construction or modification of existing facilities would occur as a result of the Proposed Action.			

¹ Status= Federally protected species under section 7 of the Endangered Species Act (ESA).

3.4.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not allow non-CVP water to be conveyed in the FKC to Terra Bella. The District would need to find alternative supplies of water and/or temporarily take land out of production. If land was removed from production, there might be some fallowed fields that could temporarily be used by the San Joaquin kit fox. However, the

E: Listed as Endangered.

T: Listed as Threatened.

X: Critical Habitat designated for this species.

² ESA Effects = Effect determination for Endangered Species Act Analysis

NE: No Effect from the Proposed Action to federally listed species

fields would likely be disked so often that denning would be unlikely to occur, and the value of the fallowed fields would be low.

Proposed Action

Under the Proposed Action, federally listed, proposed or candidate species, and critical habitat protected under the Endangered Species Act (ESA; 16 USC § 1531 et seq.) would not be affected. Migratory birds protected under the Migratory Bird Treaty Act (MBTA; 16 USC § 703-712) also would not be affected. Many of the species and their critical habitat do not occur in the Proposed Action Area (Table 3-2). Most of the habitat types required by species protected by the ESA do not occur in the Action area. The Proposed Action would not involve the conversion of any native habitat or land fallowed and untilled for three or more years. There would be no change in land use patterns of cultivated or fallowed fields that do have some value to listed species or to birds protected under the MBTA. Non-CVP water would not reach streams containing listed fish species; therefore there would be no effects to fish. No critical habitat would be affected by the Proposed Action. Based upon the reasons described above, Reclamation has determined there would be No Effect to listed species or designated critical habitat under the ESA and No Take of birds protected by the MBTA. As such, no consultation with the Service or the National Marine Fisheries Service is required.

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

Terra Bella is located in Tulare County. According to 2012 Census estimates, Tulare County has lower per capita income, greater unemployment and a higher poverty rate than California as a whole. See Table 3-3, below.

Table 3-3 Economic Data, 2012

County	Per Capita Income	Unemployment Rate	Poverty Rate			
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

If no action were taken, Reclamation would not allow conveyance of the non-CVP Tule River water in the FKC. Terra Bella would have to find an alternate conveyance mechanism, or secure another source of water. If no alternate way could be found to deliver supplemental water, land could be taken out of agricultural production. Agriculture is an important part of the area's economy, so this would have an adverse effect on socioeconomic conditions.

Proposed Action

Under the Proposed Action, non-CVP water would be conveyed to Terra Bella to maintain current land uses by supporting existing crops. This would support agriculture, which is a benefit to the area's economy.

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

Terra Bella is located in Tulare County. According to Census Bureau estimates, the percentage of people living in the county who identify as Hispanic or Latino is higher than the percentage for California as a whole. The market for seasonal workers on local farms also draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America, increasing populations within these small communities during peak harvest periods. The percentage of those who identify as Black/African-American or Asian is also lower than the statewide average. See Table 3-4 below for more information.

Table 3-4 Demographic Data, 2012

	Total Population	White (not Hispanic)	Black or African American	American Indian	Asian	Native Hawaiian/ Pacific Islander	Hispanic or Latino
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

If no action were taken, Reclamation would not allow conveyance of the non-CVP Tule River water in the FKC. Terra Bella would have to find an alternate conveyance mechanism, or secure another source of water. If no alternate way could be found to deliver supplemental water, land could be taken out of agricultural production. Since farm laborers tend to come from disadvantaged communities, this would have a disproportionate adverse impact on those populations.

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 provided the public with an opportunity to comment on the Draft FONSI and Draft EA during a 15 day public review period. One comment letter was received from Arvin-Edison. The comment letter and Reclamation's response to comments is included in Appendix A.

Section 5 Preparers and Reviewers

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Section 6 References

- California Farm Bureau Federation. 2012. County Farm Bureaus. Website: http://www.cfbf.com/. Accessed March 2014.
- U.S. Census Bureau (Census Bureau). 2012. American Community Survey. Website: http://www.census.gov/acs/www/. Accessed March 2014.
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