RECLAMATION
*Managing Water in the West*

**Final Environmental Assessment**

# Shafter-Wasco Irrigation District 5-Year Warren Act Agreement for Kern River Water

**EA-17-024**

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

**December 2017**

# Mission Statements

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

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

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# Section 1 Introduction

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 August 10, 2017 and August 25, 2017. One comment was received. The comment letter and Reclamation's response to comments is included in Appendix A of Final EA-17-024. Changes between this Final EA and the Draft EA, which are not minor editorial changes, are indicated by vertical lines in the left margin of this document.

## 1.1 Background

The Friant-Kern Canal carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, 4 miles west of Bakersfield (Figure 1). The majority of the canal is concrete lined, and has a maximum carrying capacity of 5,300 cubic feet per second (cfs). However, since construction in 1951 by Reclamation, the Friant-Kern Canal has lost its ability to fully meet its designed conveyance capacity, resulting in restrictions on water deliveries to Friant Division Central Valley Project (CVP) contractors (Reclamation 2011). The reduction in capacity is a result of several factors, including original design limitations, ground subsidence, natural erosion of the canal lining, and changes in water delivery patterns.

From approximately Milepost (MP) 103 to MP 107 of the Friant-Kern Canal, there has been dramatic canal subsidence (Figure 1). The subsidence has caused water capacity issues in this stretch of the canal which has the potential to seriously impact CVP contractors, including but not limited to Shafter-Wasco Irrigation District (Shafter-Wasco).

Shafter-Wasco obtains its CVP water supplies from the Friant-Kern Canal for agricultural use only. They do not have any other long-term surface water supplies. To supplement their water supply portfolio, Shafter-Wasco has purchased 5,000 acre-feet (AF) of Kern River water (hereafter referred to as non-CVP water) from Buena Vista Water Storage District (Buena Vista). In order to receive this non-CVP water, Shafter-Wasco has requested approval from Reclamation to introduce and convey their purchased non-CVP water in the Friant-Kern Canal.

## 1.2 Need for the Proposed Action

Shafter-Wasco needs to insure they receive a steady water supply to support their existing agricultural lands. Due to the current subsidence issue having the potential to reduce water deliveries from the Friant-Kern Canal, Shafter-Wasco has purchased non-CVP water that can be introduced below the area of impact (below MP 107 of the Friant-Kern Canal; Figure 1).

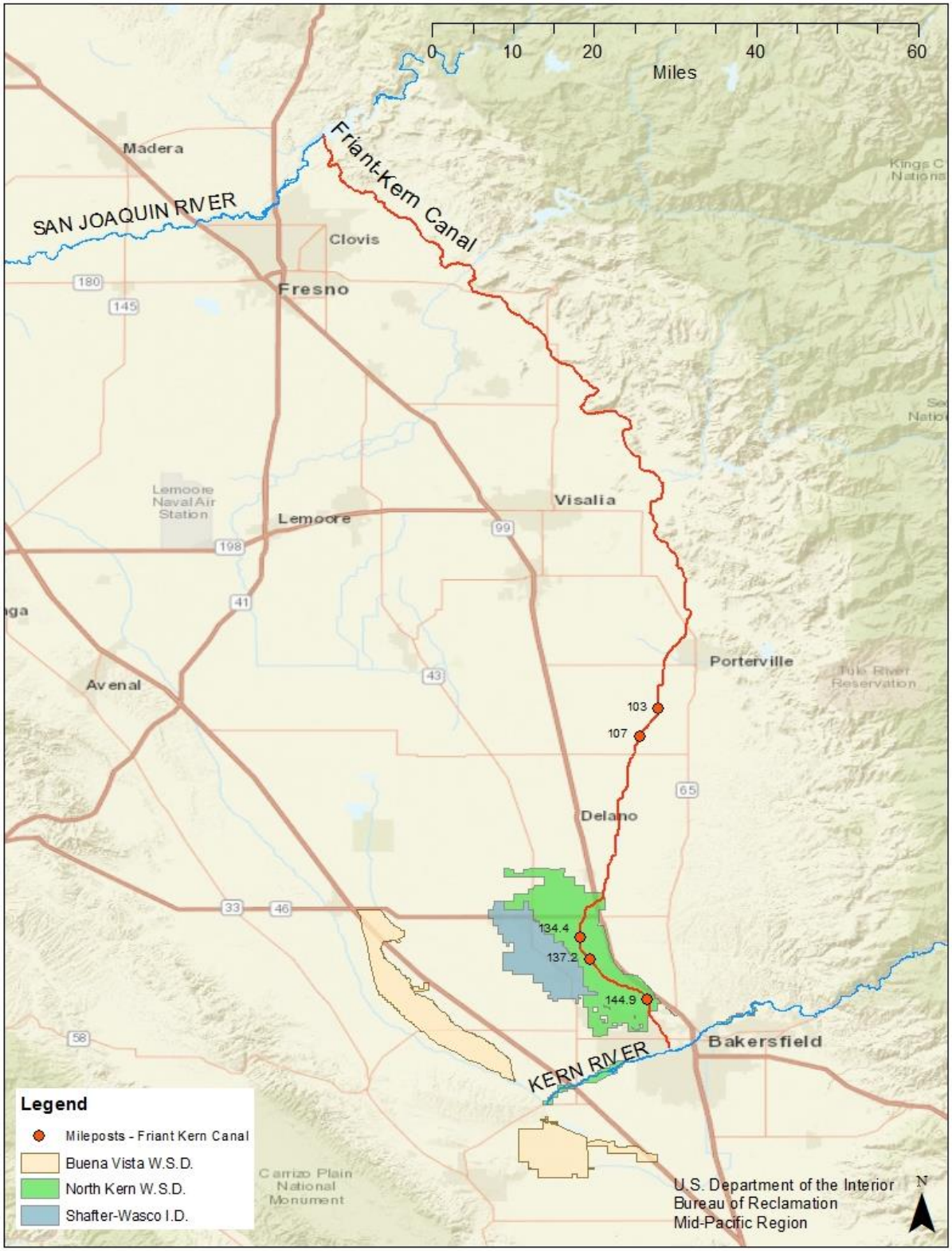


Figure 1 Regional Location Map

# Section 2 Alternatives Including the Proposed Action

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

## 2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not approve the 5-year Warren Act agreement with Shafter-Wasco for the annual introduction and conveyance of up to 5,000 AF of their purchased non-CVP water supplies from Buena Vista. Shafter-Wasco would continue to receive their allocated CVP water supplies; however, due to subsidence impacts along the canal, water supply availability may be restricted when it is needed. This situation would potentially require land fallowing if groundwater resources could not meet demands in-district. Increased demands in the area of impact would also affect the availability of CVP water supplies for other CVP contractors within and south of the subsidence area (below MP 107 of the Friant-Kern Canal) as demands compete and excess capacity is reached.

## 2.2 Proposed Action

Reclamation proposes to issue a 5-year Warren Act agreement to Shafter-Wasco for the introduction and conveyance of up to 5,000 AF per year (AFY) of the non-CVP water purchased from Buena Vista. The North Kern Water Storage District's (North Kern) conveyance system will transport the non-CVP water from the Kern River to the Beardsley-Lerdo Canal, and then to a lateral that connects at MP 144.9 of the Friant-Kern Canal (Figure 2). This section of the Beardsley-Lerdo Canal is upstream of the section used to convey North Kern's produced water. Shafter-Wasco would then take this water through their interconnections with North Kern at MP 134.4 and MP 137.2 on the Friant-Kern Canal by reverse flow when there is no downstream demand.

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

No ground disturbance or modification of existing facilities would be needed in order to convey water under the Proposed Action.

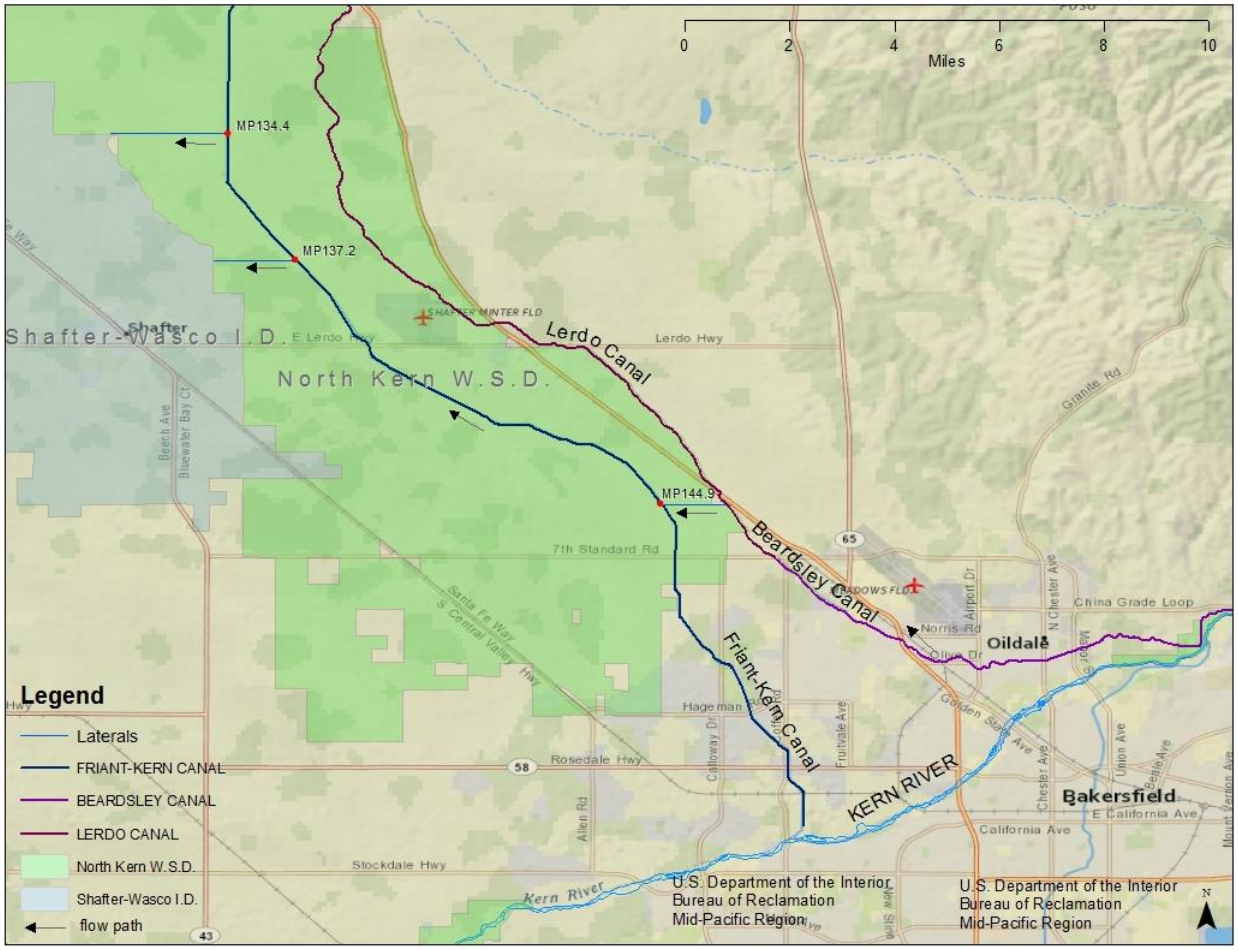


Figure 2 Water Pathway to the Friant-Kern Canal

### 2.2.1 Environmental Commitments

Shafter-Wasco shall implement the following environmental protection measures to avoid environmental consequences associated with the Proposed Action (Table 1).

Table 1 Environmental Protection Measures and Commitments

| Resource | Protection Measure |
|---|---|
| Various Resources | The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses. |
| Various Resources | No new construction or modification of existing facilities may occur in order to complete the Proposed Action. |
| Water Resources | Non-CVP water must meet Reclamation's then current water quality standards prior to introduction into the Friant-Kern Canal (Appendix B). If testing indicates that the water does not meet Reclamation's requirements, it may not be introduced into the Friant-Kern Canal until water quality concerns are addressed. |
| Water Resources | As per North Kern's California Regional Water Quality Control Board Central Valley Region Waste Discharge Requirement Order R5-2017-0089 (WDR), no municipal and domestic water sources would be conveyed were produced water is also transported. |

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

# Section 3 Affected Environment and Environmental Consequences

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

## 3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action did not have the potential to cause direct, indirect, or cumulative adverse effects to the resources listed in Table 2.

Table 2 Resources Eliminated from Further Analysis

| Resource | Reason Eliminated |
|---|---|
| Air Quality | The Proposed Action does not include construction of new facilities or modification to existing facilities. There would be no additional electrical production beyond baseline conditions; therefore, there would be no impact to air quality and a determination of general conformity under the Clean Air Act is not required. |
| 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 C for Reclamation's determination. |
| Environmental Justice | The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease nor would it disproportionately impact economically disadvantaged or minority populations. |
| Global Climate Change | The Proposed Action does not include construction of new facilities or modification to existing facilities. There would be no additional electrical production beyond baseline conditions. As such, there would be no additional impacts to global climate change. Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. It is anticipated that climate change would result in more short-duration high-rainfall events and less snowpack runoff in the winter and early spring months by 2030 compared to recent historical conditions (Reclamation 2016). However, the effects of this are long-term and are not expected to impact CVP operations within the two-year window of this action. Further, CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility. |
| 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. |

# 3.2 Biological Resources

## 3.2.1 Affected Environment

The Proposed Action area includes Buena Vista and Shafter-Wasco's service areas, North Kern's conveyance system, the Friant-Kern Canal, and the Kern River.

Reclamation requested an official species list from the United States Fish and Wildlife Service (Service) for the Proposed Action area on June 13, 2017 via the Service's website, http://ecos.fws.gov/ipac, (Consultation Code: 08ESMF00-2017-SLI-2314). The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) was also queried for records of protected species in or near the Proposed Action area (CNDDB 2017). The information collected above, in addition to information within Reclamation's files, was combined to create the following table (Table 3).

Table 3 Federally Listed Threatened and Endangered Species

| Species | Status[1] | Effects[2] | Potential to occur and summary basis for ESA determination [3] |
|---|---|---|---|
| **Amphibians** | | | |
| California red-legged frog *Rana draytonii* | T | NE | **Absent.** There are no records of this species in or near the Proposed Action area and there is no designated Critical Habitat for this species in the Proposed Action area. The Proposed Action would have *No Effect* on this species. |
| **Birds** | | | |
| Southwestern willow flycatcher *Empidonax traillii extimus* | E | NE | **Unlikely.** This species is known to occur along the Kern River upstream of the Proposed Action area; however, the portion of the Kern River in the Proposed Action area is comprised of developed areas that are unlikely to provide suitable habitat for this species. The Proposed Action would have *No Effect* on this species. |
| Western snowy plover *Charadrius alexandrinus nivosus* | T | NE | **Unlikely.** There are records of this species near the Proposed Action area; however there does not appear to be suitable habitat for this species in the Proposed Action area. There is no designated Critical Habitat for this species in the Proposed Action area. The Proposed Action would have *No Effect* on this species. |
| Yellow-billed cuckoo *Coccyzus americanus* | T | NE | **Absent.** There is a historical record of this species in the Proposed Action area; however, this species is now extirpated from the Proposed Action area due to habitat loss. There is no designated or proposed Critical Habitat for this species in the Proposed Action area. The Proposed Action would have *No Effect* on this species. |
| **Fish** | | | |
| Delta smelt *Hypomesus transpacificus* | T | NE | **Absent.** This species does not occur in the Proposed Action area, and there is no designated Critical Habitat for this species in the Proposed Action area. The Proposed Action would have *No Effect* on this species. |
| **Invertebrates** | | | |
| Vernal pool fairy shrimp *Branchinecta lynchi* | T | NE | **Absent.** There are no records of this species in or near the Proposed Action area and there is no Critical Habitat for this species in the Proposed Action area. The Proposed Action would have *No Effect* on this species. |

| Species | Status[1] | Effects[2] | Potential to occur and summary basis for ESA determination [3] |
|---|---|---|---|
| **Mammals** | | | |
| Buena Vista Lake ornate shrew<br>*Sorex ornatus relictus* | E, X | NE | **Possible.** There are records of this species in the Proposed Action area; however, there is no Critical Habitat for this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species or its critical habitat. |
| Giant kangaroo rat<br>*Dipodomys ingens* | E | NE | **Present.** There are records of this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |
| San Joaquin kit fox<br>*Vulpes macrotis mutica* | E | NE | **Present.** There are multiple records of this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |
| Tipton kangaroo rat<br>*Dipodomys nitratoides nitratoides* | E | NE | **Present.** There are multiple records of this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |
| **Plants** | | | |
| Bakersfield cactus<br>*Opuntia treleasei* | E | NE | **Present.** There are records of this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |
| California jewelflower<br>*Caulanthus kernensis* | E | NE | **Absent.** This species is not present within the Proposed Action area. The Proposed Action would have *No Effect* on this species. |
| Kern mallow<br>*Eremalche kernensis* | E | NE | **Present.** There is a record of this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |
| San Joaquin wooly-threads<br>*Monolopia congdonii* | E | NE | **Present.** There is a record of this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |
| **Reptiles** | | | |
| Blunt-nosed leopard lizard<br>*Gambelia silus* | E | NE | **Present.** There are records of this species in the Proposed Action area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |

| Species | Status[1] | Effects[2] | Potential to occur and summary basis for ESA determination [3] |
|---|---|---|---|
| Giant garter snake *Thamnophis gigas* | T | NE | **Present.** There are records of this species in the Proposed Action Area. The Proposed Action would not alter or convert any areas of suitable habitat for this species, and would not involve any ground disturbance or construction. The Proposed Action would have *No Effect* on this species. |

1 Status = Status of federally protected species protected under the ESA.
E: Listed as Endangered
T: Listed as Threatened
X: Critical Habitat designated for this species
2 Effects = ESA Effect determination
NE: No Effect anticipated from the Proposed Action to federally listed species or designated critical habitat
3 Definition of Occurrence Indicators
Present: Species recorded in area and suitable habitat present.
Possible: Species recorded in area and habitat suboptimal.
Unlikely: Species recorded in or near area but habitat marginal or lacking entirely.
Absent: Species not recorded in study area and suitable habitat absent.

### 3.2.2 Environmental Consequences

#### *No Action*

Under the No Action alternative, Shafter-Wasco would have to rely on their CVP water supplies from the Friant-Kern Canal until the canal reaches excess capacity. Shafter-Wasco may need to fallow some of their lands under the No Action alternative if they are unable to receive some of their allocated CVP water due to the capacity issues in the Friant-Kern Canal. If agricultural lands are fallowed, there is some potential for federally protected species to temporarily move through, or forage in, the fallowed areas. Newly fallowed fields may provide temporary low quality habitat, but it is unlikely that federally listed species would move into these areas.

#### *Proposed Action*

The Proposed Action would involve the diversion of 30 cfs of water from the Kern River, for delivery to Shafter-Wasco, for up to 90 days per year over a 5-year period. Flows in the Kern River are significantly higher this year than they have been in the last several years due to increased precipitation and run-off. The Kern River downstream of the Beardsley-Lerdo Canal diversion point supports a narrow-band of low quality remnant riparian habitat in some areas, and is bordered by development (i.e. oil fields, shopping centers, agricultural orchards, etc.). Large portions of the Kern River several miles downstream of the Beardsley-Lerdo diversion point go dry in most years. Buena Vista Lake Shrews have been observed at the Kern Fan Water Recharge Area west of Bakersfield, and may still present in this area (CNDDB 2017). However, the Kern River typically goes dry miles upstream of this area, so the diversion of water for the Proposed Action would not affect the habitat in this area and would therefore have *No Effect* on Buena Vista Lake Shrews.

The Proposed Action would not involve any construction or changes in land use. The water involved in the Proposed Action would be used to support existing uses within Shafter-Wasco and would not be used to convert fallowed lands or lands that have been untilled for three or more years. No native lands would be cultivated as a result of the Proposed Action. With the implementation of the environmental commitments included in Table 1, Reclamation has determined that the Proposed Action would result in *No Effect* to proposed or listed species or

Critical Habitat under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et seq.), and there would be *No Take* of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

#### *Cumulative Impacts*

As the Proposed Action is not expected to result in any direct or indirect impacts to biological resources, there would be no cumulative impacts.

## 3.3 Water Resources

### 3.3.1 Affected Environment

The affected environment for the Proposed Action includes Buena Vista and Shafter-Wasco's service area, North Kern's conveyance system, the Friant-Kern Canal, and the Kern River.

#### *Buena Vista Water Storage District*

Buena Vista is located in the southern San Joaquin Valley in Kern County. The district has an average allocation of about 158,000 AF per year (AFY) of surface water from the Kern River. Additional water supplies include annual (21,300 AF) and surplus (3,750 AF) State Water Project contract allocations from the California Department of Water Resources via the Kern County Water Agency, and groundwater pumping. Buena Vista's average annual water supply from actual diversions, pumping, and storage release is approximately 185,000 AF (Buena Vista 2009). The district does not directly supply any municipal and industrial water.

#### *Shafter-Wasco Irrigation District*

Shafter-Wasco was formed in 1937 and is located in Kern County about 20 miles northwest of Bakersfield. Shafter-Wasco entered into a long-term renewable contract with Reclamation in 1955 for 50,000 AFY of Friant Division CVP Class 1 and 39,600 AFY of Friant Division CVP Class 2 water supply. Shafter-Wasco obtains its CVP water supplies from two turnouts on the Friant-Kern Canal at MP 134.4 and MP 137.2 for agricultural use only. They do not have any other long-term surface water supplies.

#### *North Kern Water Storage District Conveyance System*

The Beardsley Canal is an irrigation canal operated by North Kern that originates on the Kern River at the Beardsley Weir. The Beardsley Canal becomes the Lerdo Canal at Seventh Standard Road near Oildale, and discharges into Poso Creek. The Beardsley-Lerdo Canal serves as a significant source of agricultural water supply to North Kern, who have a turnout that connects to the Friant-Kern Canal at MP 144.9 (Lateral 8-1).

The Beardsley-Lerdo Canal historically received water of excellent quality, typically from the Kern River. However, downstream of Lateral 8-1, the canal is intermittently used to transport produced water to North Kern.

#### *Friant-Kern Canal*

The Friant-Kern Canal conveys water supplies stored in Millerton Lake from the San Joaquin River to water districts in Fresno, Tulare, and Kern Counties. The canal extends 152 miles south from Friant Dam in Fresno County to the Kern River in Kern County four miles west of

Bakersfield. The Friant-Kern Canal is a part of the CVP and annually delivers about seven million AF of water for agricultural, urban, and wildlife purposes. This water is considered to be of good quality because it originates as snow melt from the Sierra Nevada. Water quality standards for the Friant-Kern Canal are listed in Table 4.

The flow of the Friant-Kern Canal can be reversed by pumps when there is no downstream demand.

***Kern River***

The Kern River provides drainage for the southern Sierra Nevada Mountains. The U.S. Army Corp of Engineers operates Isabella Dam on the Kern River to serve agricultural, hydroelectric and flood control uses. Flows downstream of the dam are monitored and managed by the Kern River Watermaster. This water is considered to be of good quality because it originates from the Sierra Nevada as snowmelt. Water quality from the Kern River is listed in Table 4.

Table 4 Water Quality

| Constituent | Units[1] | Friant-Kern Canal Standards[2] | Kern River Water[3] |
|---|---|---|---|
| PRIMARY | | | |
| Aluminum | mg/L | 1 | 6.91 |
| Antimony | mg/L | 0.006 | ND[4] |
| Arsenic | mg/L | 0.01 | 0.011 |
| Asbestos | MFL | 7 | ND[5] |
| Barium | mg/L | 1 | 0.129 |
| Beryllium | mg/L | 0.004 | ND |
| Cadmium | mg/L | 0.005 | ND |
| Chromium (total) | mg/L | 0.05 | 0.005 |
| Cyanide | mg/L | 0.150 | ND[6] |
| Fluoride | mg/L | 2 | 0.20 |
| Mercury | mg/L | 0.002 | ND[6] |
| Nitrate and Nitrite | mg/L | 10 | 1.66 |
| Nitrite (as N) | mg/L | 1 | ND |
| Nickel | mg/L | 0.100 | ND |
| Selenium | mg/L | 50 | ND |
| Thallium | mg/L | 0.002 | ND |
| OTHER CONSTITUENTS | | | |
| Bicarbonate | mg/L | - | 87.8 |
| Calcium | mg/L | - | 18.4 |
| Chloride | mg/L | 500 | 6.27 |
| Color | Units | 15 | 150 |
| Copper | mg/L | 1 | ND |
| Foaming Agent (MBAS) | mg/L | 0.5 | ND[6] |
| Hardness (as $CaCO_3$) | mg/L | - | 67.3 |
| Iron | mg/L | 0.3 | 4.58 |
| Magnesium | mg/L | - | 5.18 |
| Manganese | mg/L | 0.50 | 0.155 |
| Odor | Ton | 3 | 8 |
| pH | | - | 7.92 |
| Silver | mg/L | 0.1 | ND |

| Constituent | Units[1] | Friant-Kern Canal Standards[2] | Kern River Water[3] |
|---|---|---|---|
| Sodium | mg/L | - | 13.9 |
| Specific Conductance | uS/cm | 1600 | 222 |
| Sulfate | mg/L | 500 | 17.9 |
| TDS | mg/L | 1000 | 164 |
| Turbidity | NTU | 5 | 61.0 |
| Zinc | mg/L | 5 | ND |

1 Units: mg/L = milligrams per liter, MFL = million fibers per liter, µS/cm = micro Siemens per centimeter, NTU = nephelometric turbidity units.
2 Data from the Appendix A 2008 Policy for Accepting Non-Project Water into the Friant-Kern and Madera Canals, but may change during the life of the project.
3 Water Quality Data from Kern River water on January 10, 2017, unless otherwise noted.
4 ND = not detected
5 Water Quality Data from Kern River water on July 16, 2016.
6 Water Quality Data from Kern River water on April 5, 2017.

## 3.3.2 Environmental Consequences

### *No Action*

Under the No Action Alternative, demand in the impacted area would not be offset and Shafter-Wasco, as well as other CVP contractors within and south of the subsidence area (below MP 107 of the Friant-Kern Canal), would only be able to rely on groundwater resources or their CVP water supplies from the Friant-Kern Canal until the canal reaches excess capacity.

### *Proposed Action*

Under the Proposed Action, Reclamation would annually approve the introduction of up to 5,000 AF of Shafter-Wasco's non-CVP water into the Friant-Kern Canal when excess capacity is available, as determined by Reclamation. The water would be used by Shafter-Wasco's landowners to meet existing agricultural demands. All water would be used for existing purposes to offset potential reduced deliveries from the Friant-Kern Canal. By receiving the non-CVP water, Shafter-Wasco's allocated CVP water would be rescheduled for a time when demand is lower, preventing excess capacity issues in the Friant-Kern Canal. Therefore, the Proposed Action would provide a beneficial impact to water resources for CVP contractors within and south of the subsidence impacted area, including Shafter-Wasco.

Kern River water is allocated for use under Buena Vista's water rights, and has been made available to Shafter-Wasco because this water is in excess of their needs. The Proposed Action does not represent a new diversion of water, or a new water right, but an alternate use for an existing supply.

The Kern River water purchased from Buena Vista originates as snow in the Kern River watershed, and is generally of very high quality (see Table 4). Under the Proposed Action, this water would be conveyed through a portion of the Beardsley-Lerdo Canal upstream of any produced water, as per North Kern's WDR, to the Friant-Kern Canal. The non-CVP water is required to meet Reclamation's then current water quality standards prior to the introduction in the Friant-Kern Canal. If, through monitoring, the non-CVP water fails to meet these standards, the water would not be introduced until subsequent testing has demonstrated that the water quality has met the criteria outlined in Reclamation's then current water quality standards.

No facilities would be constructed or modified for the Proposed Action. Based on these findings, there would be no adverse impacts as a result of the Proposed Action.

***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 water management projects, including this one, in order to better manage limited water supplies due to current and future hydrologic conditions as well as regulatory requirements. This and similar projects would have a cumulatively beneficial effect on water supplies.

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 customers' demands and 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 during a drought, more districts will request exchanges, transfers, and Warren Act contracts (conveyance of non-Project water in federal facilities) due to hydrologic conditions. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

Capacity in the Friant-Kern Canal is limited, and if several water actions were scheduled to take place concurrently then they could cumulatively compete for space. However, non-CVP water would only be allowed to enter the Friant-Kern Canal for conveyance if excess capacity is available. As such, the Proposed Action would not limit the ability of CVP contractors to make use of the facilities. In addition, the introduction of the non-CVP water would allow Shafter-Wasco to reduce demands within the area affected by subsidence by rescheduling receipt of their available water supplies to a later time when there is less demand, reducing the chance for excess capacity issues for itself and other CVP contractors. This would provide a cumulatively beneficial impact to available water supplies.

The Proposed Action and other similar projects would not hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Since the Proposed Action would not involve construction or modification of facilities, nor interfere with CVP operations, there would be no cumulative impacts to existing facilities or other contractors.

# 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 between August 10, 2017 and August 25, 2017. One comment was received. The comment letter and Reclamation's response to comments is included in Appendix A.

## 4.2 List of Agencies and Persons Consulted

Reclamation and Shafter-Wasco are coordinating the Proposed Action with Buena Vista Water Storage District, North Kern, and the Kern River Watermaster.

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# Section 5 References

Buena Vista (Buena Vista Water Storage District). 2009. BV8 State Water Project Turnout Project (formerly the Outlet Canal Reoperation Project). Challenge Grant Technical Proposal submitted to Reclamation. Buttonwillow, CA. September.

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