

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Transfer of Up To 2,500 Acre-Feet of Tulare Irrigation District's Central Valley Project Water to Wutchumna Water Company

EA-18-029



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

August 2018

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.

Contents

	Page
Section 1 Introduction	1
1.1 Background	1
1.2 Need for the Proposed Action.....	1
Section 2 Alternatives Including the Proposed Action	3
2.1 No Action Alternative.....	3
2.2 Proposed Action.....	3
2.2.1 Environmental Commitments	3
Section 3 Affected Environment and Environmental Consequences.....	5
3.1 Resources Eliminated from Further Analysis	5
3.2 Biological Resources	6
3.2.1 Affected Environment.....	6
3.2.2 Environmental Consequences	7
No Action.....	7
Proposed Action.....	7
Cumulative Impacts	8
3.3 Water Resources	8
3.3.1 Affected Environment.....	8
Tulare Irrigation District	8
Wutchumna Water Company.....	8
3.3.2 Environmental Consequences	8
No Action.....	8
Proposed Action.....	9
Cumulative Impacts	9
Section 4 Consultation and Coordination.....	11
4.1 Public Review Period.....	11
4.2 List of Agencies and Persons Consulted.....	11
Section 5 References	13
Figure 1 Proposed Action Area.....	2
Table 1 Environmental Commitments	3
Table 2 Resources Eliminated from Further Analysis	5
Table 3 Federally Listed Threatened and Endangered Species	6
Appendix A Cultural Resources Determination	

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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 July 27, 2018 and August 10, 2018. No comments were received during this period. Changes between this Final EA and the Draft EA which are not editorial and minor in nature are indicated by a line in the left margin of this document.

1.1 Background

Tulare Irrigation District (Tulare) is a Central Valley Project (CVP) contractor located within the central San Joaquin Valley, south of Fresno, California (Figure 1). Tulare was organized September 21, 1889 with a coverage area of 32,500 acres. The so-called “Kaweah Lands” were annexed in January of 1948 and Tulare now encompasses about 70,000 acres. The entire district lies within Tulare County and provides surface water to approximately 230 farms. The Mediterranean-like climate – including hot, dry, and sunny summers and mild, moist winters – in combination with the alluvial soils and flat or gently sloping terrain makes the southern San Joaquin Valley desirable for farming and ranching. Tulare County exports millions of dollars of agricultural commodities annually.

The Wutchumna Water Company (Wutchumna) is a California Corporation with pre-1914 appropriative water rights to Kaweah River waters. Wutchumna has diverted, on average, about 60,000 acre-feet per year from the Kaweah River since the 1800’s. Tulare maintains a stockholder agreement with Wutchumna, receiving approximately 25% of this Kaweah River water.

In efforts to ensure delivery of late-season irrigation waters, Tulare has requested approval of Reclamation for a transfer of up to 2,500 acre-feet of CVP water to Wutchumna and, in turn, receive up to 2,500 acre-feet of Wutchumna’s Kaweah River water supply. Because Tulare already takes delivery of Kaweah River water, currently-existing facilities can be operated to convey the transferred water through non-CVP facilities. The transferred water will be used to irrigate permanent crops.

1.2 Need for the Proposed Action

The proposed transfer of CVP water from Tulare to Wutchumna is needed in order to meet irrigation demands for permanent crops in the late irrigation season of 2018 (September through November). The proposed transfer would supplement Wutchumna water supplies that would otherwise not meet the stockholder irrigation demands. The purpose of the proposed transfer of CVP water is for the cost-effective and timely delivery of water to agricultural lands without affecting water deliveries to CVP contractors or other agencies. Wutchumna is unable to store

adequate water supply for these late-season irrigation demands, and the delivery of CVP water to Wutchumna for these late-season demands will help irrigate permanent crops.

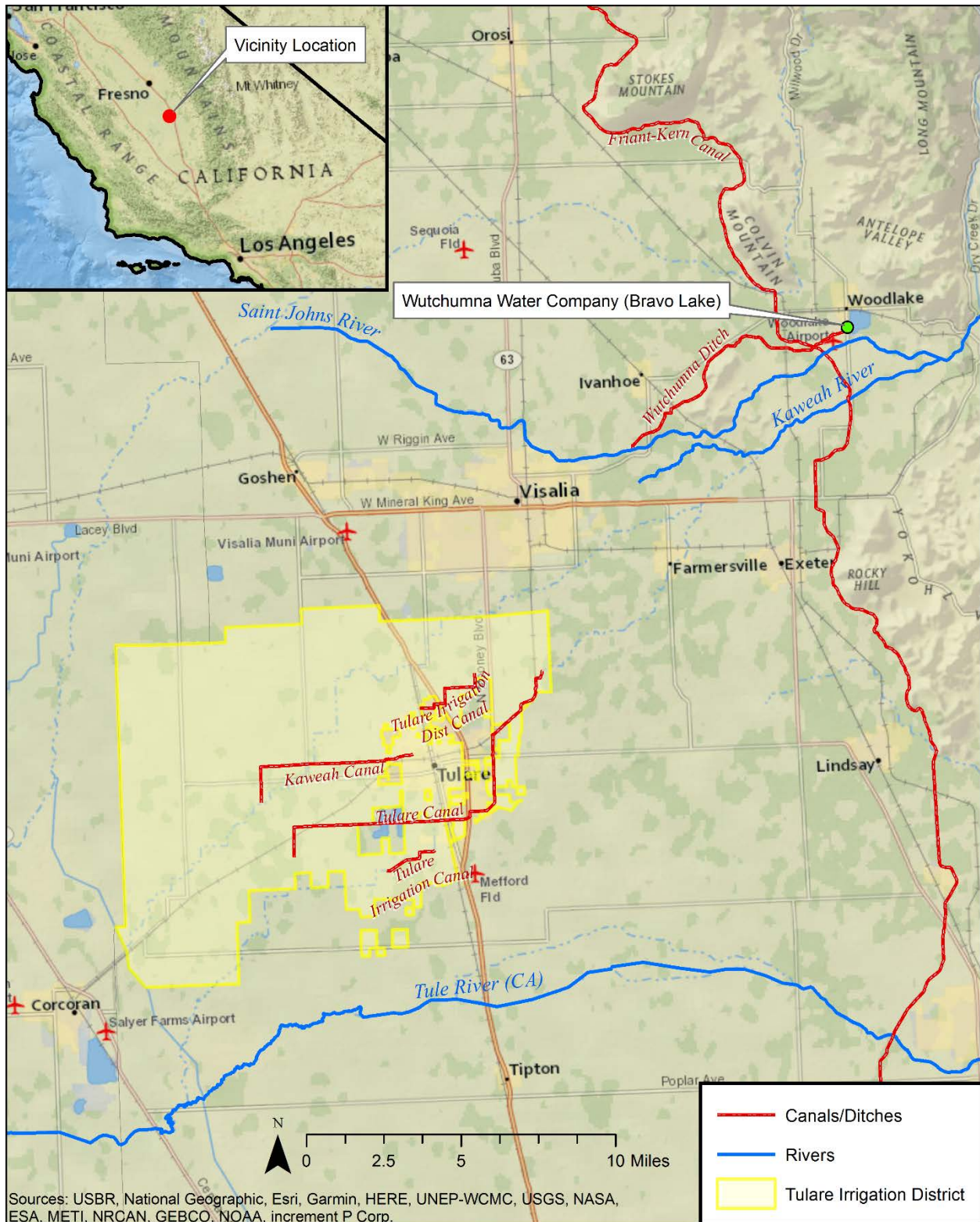


Figure 1 Proposed Action Area

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 one-time transfer of up to 2,500 acre-feet of Tulare CVP water supply to Wutchumna for late-season irrigation demands during the 2018 contract year. Reclamation would continue to deliver CVP water to Tulare in accordance with the existing contract.

2.2 Proposed Action

Reclamation proposes to approve the one-time transfer of up to 2,500 acre-feet of CVP water from Tulare to Wutchumna for late-season irrigation deliveries. This transfer will occur within existing facilities and will not require any construction activities. In return, up to 2,500 acre-feet of Wutchumna's Kaweah River water will be redirected to Tulare using existing in-district water delivery infrastructure. Tulare already has its own rights and facilities to take Kaweah River water. The water delivered to Wutchumna will be used on existing farmland that would normally receive Kaweah River water and/or groundwater. This transfer facilitates irrigation demands on permanent crops – primarily citrus – during the end of the 2018 irrigation season. Without this transfer, there is a potential for loss of crops among the Wutchumna land owners.

2.2.1 Environmental Commitments

Tulare and Wutchumna must implement the following environmental protection measures to avoid environmental consequences associated with the Proposed Action (Table 1).

Table 1 Environmental Commitments

Resources	Protection Measure
Biological Resources	No native lands or untilled lands that have been fallow for three consecutive years or more may be cultivated with the waters described in the Proposed Action.
Biological Resources	The Proposed Action cannot alter the flow regime of natural waterways or natural watercourses such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as to have a detrimental effect on fish or wildlife or their habitats.
Biological Resources	The Proposed Action shall not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the Migratory Bird Treaty Act (MBTA).

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

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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 2.

Table 2 Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Air Quality	The conveyance of water under the Proposed Action would occur with or without the Proposed Action and is therefore part of the existing conditions. No new construction or new facilities would be needed under the Proposed Action to approve the transfer of water between Tulare and Wutchumna. As there would be no change from existing conditions, a conformity analysis is not required and there would be no impact to air quality as a result of the Proposed Action.
Cultural Resources	There would be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action would facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities would occur as part of the Proposed Action. Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1). See Appendix A for Reclamation's determination.
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, or increased risk of flood, drought, or disease. The Proposed Action would not disproportionately impact economically disadvantaged or minority populations, as there would be no changes to existing conditions.
Global Climate Change	<p>Recently, the U.S. Global Research Program (USGRP) concluded in its Climate Science Special Report (2017) that "Many lines of evidence demonstrate that it is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century." The USGRP also concludes that "Global climate is projected to continue to change over this century and beyond. The magnitude of climate change beyond the next few decades will depend primarily on the amount of greenhouse (heat trapping) gases emitted globally and on the remaining uncertainty in the sensitivity of the Earth's climate to those emissions (very high confidence)."</p> <p>Reclamation developed a global climate model in 2016 for the Sacramento and San Joaquin Basins. The model predicts increased temperatures, increased precipitation, increased runoff, and reduced snowpack at higher latitudes during the 21st century.</p> <p>The Proposed Action does not include construction of new facilities or modification to existing facilities. As such, there would be no additional impacts to global climate change. Global climate change is expected to have some effect on the snow pack of the Sierra Nevada and the runoff regime. It is anticipated that climate change would result in more short-duration high-rainfall events and less snowpack runoff in the winter and early spring months by 2030 compared to recent historical conditions (Reclamation 2016, pg 16-26). However, the effects of this are long-term and are not expected to impact CVP operations the current contract year, which is the duration of this Proposed Action. Further, CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations</p>

Resource	Reason Eliminated
	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.
Land Use	Water delivered to Wutchumna by Tulare under the Proposed Action would be conveyed through existing facilities and would be used for irrigation on existing, permanent crops. The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses. Therefore, there would be no change in land use under the Proposed Action.
Recreation	The Proposed Action would not impact recreational resources, as none exist within the Action area.
Socioeconomics	The Proposed Action would have beneficial impacts on the socioeconomic resources, as the transferred water would be used to help sustain existing crops and maintain farming.

3.2 Biological Resources

3.2.1 Affected Environment

The Proposed Action Area consists of canals and actively farmed lands. These lands have little or no value for Federally listed species.

Reclamation requested an official species list for the entire Action area from the U.S. Fish and Wildlife Service (USFWS) on July 19, 2018, by accessing their database: <https://ecos.fws.gov/ipac/> (USFWS 2018). Reclamation further queried the California Department of Fish and Wildlife, California Natural Diversity Database (CNDDDB) for records of protected species within 10 miles of the project location (CNDDDB 2018). The two sources, in addition to other information within Reclamation's files were combined to create the following list (Table 3). No critical habitat occurs in the Proposed Action Area. Not shown in the table because they are not Federally listed are the Western Burrowing Owl and Swainson's Hawk. Both of these species are protected under the Migratory Bird Treaty Act, and known to occur in the Proposed Action Area.

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 tiger salamander (<i>Ambystoma californiense</i>)	T, X	NE	Absent: Not expected to occur in actively farmed lands. Critical habitat is outside the Proposed Action Area.
California red-legged frog (<i>Rana draytonii</i>)	T, X	NE	Absent: No longer occurs in this part of its historical range. Critical habitat is outside the Proposed Action Area.
Fish			
delta smelt (<i>Hypomesus transpacificus</i>)	T, X	NE	Absent: The Proposed Action Area does not include the Sacramento-San Joaquin Delta, which is where this species occurs and where critical habitat is designated.
Invertebrates			
Conservancy fairy shrimp (<i>Branchinecta conservatio</i>)	E, X	NE	Absent: Not expected to occur in actively farmed lands. Critical habitat is outside the Proposed Action Area.

Species	Status ¹	Effects ²	Potential to occur and summary basis for ESA determination ³
vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	T, X	NE	Absent: Not expected to occur in actively farmed lands. Critical habitat is outside the Proposed Action Area.
vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	E, X	NE	Absent: Not expected to occur in actively farmed lands. Critical habitat is outside the Proposed Action Area.
Mammals			
Fresno kangaroo rat (<i>Dipodomys nitratooides exilis</i>)	E, X	NE	Absent: Not expected to occur in actively farmed lands. Critical habitat is outside the Proposed Action Area.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	E	NE	Possible: Known from the area and can use farmed lands if they are near better habitat (Warrick et al. 2007).
Tipton kangaroo rat (<i>Dipodomys nitratooides nitratooides</i>)	E	NE	Absent: Not expected to occur in actively farmed lands.
Plants			
California jewelflower (<i>Caulanthus californicus</i>)	E	NE	Absent: No longer occurs in this part of its historical range.
San Joaquin adobe sunburst (<i>Pseudobahia peirsonii</i>)	T	NE	Absent: Not expected to occur in actively farmed lands.
Reptiles			
blunt-nosed leopard lizard (<i>Gambelia silus</i>)	E	NE	Absent: Not expected to occur in actively farmed lands.
giant garter snake (<i>Thamnophis gigas</i>)	T	NE	Absent: No longer occurs in this part of its historical range.

1 Status = Status of federally protected species protected under the ESA.

E: Listed as Endangered

T: Listed as Threatened

X: Critical Habitat designated for this species

2 Effects = ESA Effect determination

NE: No Effect anticipated from the Proposed Action to federally listed species or designated critical habitat

3 Definition of Occurrence Indicators

Possible: Species recorded in area and habitat suboptimal.

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

3.2.2 Environmental Consequences

No Action

Under the No Action, there would be no impact to Federally listed species or migratory birds. Only the San Joaquin kit fox, Western Burrowing Owl, and Swainson's Hawk may occur in the Proposed Action Area, and they would continue to use the agricultural lands. San Joaquin kit foxes may forage but not den in agricultural lands. Western Burrowing Owls may forage and nest in agricultural lands, where populations of California ground squirrels (*Otospermophilus beecheyi*) occur. Swainson's Hawks may nest and forage where there are suitable trees for nesting and open fields that support rodents (such as alfalfa fields, etc.). These uses would be expected to continue.

Proposed Action

Under the Proposed Action, as with the No Action Alternative, there would be no impacts to Federally listed species or migratory birds. The Proposed Action would involve no construction and only serve to support existing land uses (per the commitments listed earlier in this document for biological resources), and therefore would not result in the conversion of any habitat.

Cumulative Impacts

As the Proposed Action would have no direct or indirect impacts on Federally listed species or critical habitat, or migratory birds, it would not contribute cumulatively to any impacts to these resources.

3.3 Water Resources

3.3.1 Affected Environment

The Action Area includes currently existing water supplies and infrastructure, including the Tulare turnout on the Friant-Kern Canal and the Wutchumna Ditch.

Tulare Irrigation District

Tulare's water supply is derived from precipitation, pumping the underground reservoir, surface diversions of runoff from pre-1914 water rights from the Kaweah River and its tributaries, and three surface diversions of the Friant-Kern Canal. Rainfall on the valley floor averages 6.22 inches annually, which qualifies the area as a desert (less than eight inches annually). The surrounding foothills average 10-12 inches annually. Two-thirds of the rainfall occurs through the months of January to April.

Tulare is a Friant Division Repayment Contractor with contracted supplies of Class 1 and Class 2 water. Class 1 water is that supply from behind Friant Dam that is made available through the Friant-Kern Canal as a dependable water supply during most irrigation seasons. Class 2 water is that supply that becomes available in addition to the supply of Class 1 water and which, because of the uncertainty as to the availability and time of occurrence, is undependable in character and furnished only if and when it is available. Tulare has a contracted supply of up to 30,000 acre-feet per year of Class 1 and up to 141,000 acre-feet per year of Class 2 CVP water supply.

Wutchumna Water Company

Wutchumna is located within the Friant Division Place of Use and has a water distribution system that is connected with Tulare's, which will allow for CVP water to be utilized by Wutchumna. The water to be used will be diverted from the San Joaquin River at Friant Dam and conveyed through the Friant-Kern Canal to the Tulare turnout. There it will be transported through Tulare facilities to the Wutchumna Ditch, which spans from Bravo Lake to a discharge point at Cutler Park into the St. John's River – a distance of about eight miles. Along the route there are 16 turnouts and two distributary canals of different sizes. Wutchumna holds water in Bravo Lake, a small storage facility which it owns. As much runoff water as can physically be accommodated is held within this system to maximize availability to stockholders. However, the water which Wutchumna delivers is often characterized as "un-storable," meaning the opportunity to take water is limited by its instant availability.

3.3.2 Environmental Consequences

No Action

Under the No Action alternative, Wutchumna stakeholders would need to find some other means to meet their late-season irrigation demands. Should no other water be found, Wutchumna stakeholders would likely experience crop damages.

Proposed Action

The farmers must compete in a highly variable and fluctuating market. These factors contribute to decisions by farmers to determine which crops to grow, when the water is needed for the type of crops, and how much water is available. The Proposed Action does not contribute to an increase or decrease in water supplies, as it is a one-for-one transfer of water supplies between Wutchumna and Tulare.

The Proposed Action would not affect Contractor operations and would not change the existing diversion points or operations for other contractors. The transferred water would not interfere with other CVP, Tulare, and or Wutchumna deliveries. The 2,500 acre-feet would remain in the Kaweah Basin, utilized within the Friant Place of Use boundary as established by the State Water Resources Board. No additional water supplies would be diverted from rivers based on historical amounts. No new disturbances of aquatic ecosystems, including estuarine and freshwater open water or palustrine habitat, riparian habitat, or floodplains would occur. Wutchumna utilizing CVP waters delivered through a transfer with Tulare for late-season irrigation is a change only in the timing of water delivery and is limited to 2,500 acre-feet.

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 since Reclamation and CVP contractors have been working on various drought-related and water management projects, including this one, in order to better manage limited water supplies due to variable hydrologic conditions and regulatory requirements. This and similar projects would have a cumulatively beneficial effect on water supply availability.

As in the past, hydrologic 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. Landowners irrigate and grow crops based on these conditions and factors, and numerous water service actions are approved and executed each year to facilitate water needs. It is likely that over the course of the Proposed Action, districts will request various water service actions, such as transfers, exchanges, and Warren Act contracts (conveyance and storage of non-CVP water in CVP facilities). Each water transaction involving Reclamation undergoes environmental review prior to approval.

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, there would be no cumulative impacts to existing facilities or other contractors.

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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 July 27, 2018 and August 10, 2018. No comments were received during the 15-day public review period.

4.2 List of Agencies and Persons Consulted

Reclamation has consulted with the following regarding the Proposed Action:

- Tulare Irrigation District
- Wutchumna Water Company

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Section 5 References

Bureau of Reclamation (Reclamation). 2016. Record of Decision and Environmental Impact Statement for the Coordinated Long-Term Operation of the Central Valley Project and State Water Project. Mid-Pacific Region Bay-Delta Office. Sacramento, CA.

California Natural Diversity Database (CNDDDB). 2018. Government version. Updated July 2018.

United States Fish and Wildlife Service (USFWS). 2018. Species list for 18-029. July 19, 2018. <https://ecos.fws.gov/ipac/>

U.S. Global Research Program (USGRP). 2017. Executive summary. In: Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC. pp. 12-34. Website: <https://science2017.globalchange.gov/chapter/executive-summary/>.

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

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Appendix A: Reclamation's Cultural Resource Determination

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

MP-153 Tracking Number: 18-SCAO-143

Project Name: Transfer of Up to 2,500 Acre-Feet of Tulare Irrigation District's Central Valley Project Water to Wutchumna Water Company

NEPA Document: EA-18-029

NEPA Contact: Brian Lopez, Natural Resource Specialist

MP 153 Cultural Resources Reviewer: Scott Williams, Archaeologist



Date: July 23, 2018

Reclamation proposes to approve the one-time transfer of up to 2,500 acre-feet of CVP water from Tulare to Wutchumna for late-season irrigation deliveries. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such properties be present, pursuant to the NHPA Section 106 regulations codified at 36 CFR § 800.3(a)(1).

Reclamation has no further obligations under NHPA Section 106, pursuant to 36 CFR § 800.3(a)(1).

This transfer will occur within existing facilities and will not require any construction activities. In return, up to 2,500 acre-feet of Wutchumna's Kaweah River water will be redirected to Tulare using existing in-district water delivery infrastructure. No new construction or facility modification is anticipated for this action. Tulare already has its own rights and facilities to take Kaweah River water. The water delivered to Wutchumna will be used on existing farmland that would normally receive Kaweah River water and/or groundwater.

This document is intended to convey the completion of the NHPA Section 106 process for this undertaking. I concur with item 8 that this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01) (43 CFR 46.215 (g)). 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.