RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Westlands Water District 5-year Warren Act Contract for Kings River Flood Flows in the San Luis Canal

EA-17-023

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

July 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.

Contents

Section 1 Introduction

1.1 Background

Depending on hydrologic conditions, seasonal flood flows from the Kings River have reached the Mendota Pool via the Fresno Slough. Historically, the Kings River Water Association (Water Association) entered into agreements with water users, such as Westlands Water District (Westlands) that have access to the Mendota Pool and Fresno Slough for diversion of the Kings River flood flows.

Westlands has an agreement with the Water Association for Kings River flood flows and is able to take the flood flows off the Fresno Slough via laterals 6-1 and 7-1 (Figure 1). However, many of the parcels that could be serviced by these two laterals within Westlands have been retired. Therefore, in 2011 Westlands requested approval from the Bureau of Reclamation (Reclamation) to convey up to 50,000 acre-feet per year (AFY) of Kings River flood flows (hereafter referred to as Non-Project water) in the San Luis Canal over a 5-year period. Reclamation analyzed the proposal in Environmental Assessment (EA)-11-002 (Reclamation 2012). Based on specific environmental commitments, including water quality requirements, Reclamation determined that the conveyance of up to 50,000 AFY of Non-Project water in the San Luis Canal over a 5-year period would not significantly affect the quality of the human environment and a Finding of No Significant Impact (FONSI) was signed on January 26, 2012. FONSI/EA-11-002 is hereby incorporated by reference.

Reclamation subsequently executed a 5-year Warren Act Contract with Westlands for introduction of the Non-Project water into the San Luis Canal. However, due to recent hydrological conditions (i.e. severe drought over the last several years) introduction of the Non-Project water only occurred twice during the current wet hydrologic year (March and April 2017).

As Westlands 5-year Warren Act Contract expired at the end of June 2017, Westlands has requested a new 5-year Warren Act Contract that would allow the continued conveyance of up to 50,000 AFY of Non-Project water in the San Luis Canal when it is available.

1.2 Need for the Proposed Action

Westlands needs a means to convey Non-Project water to their distribution system in order to provide supplemental surface water to agricultural lands within their service area boundary.

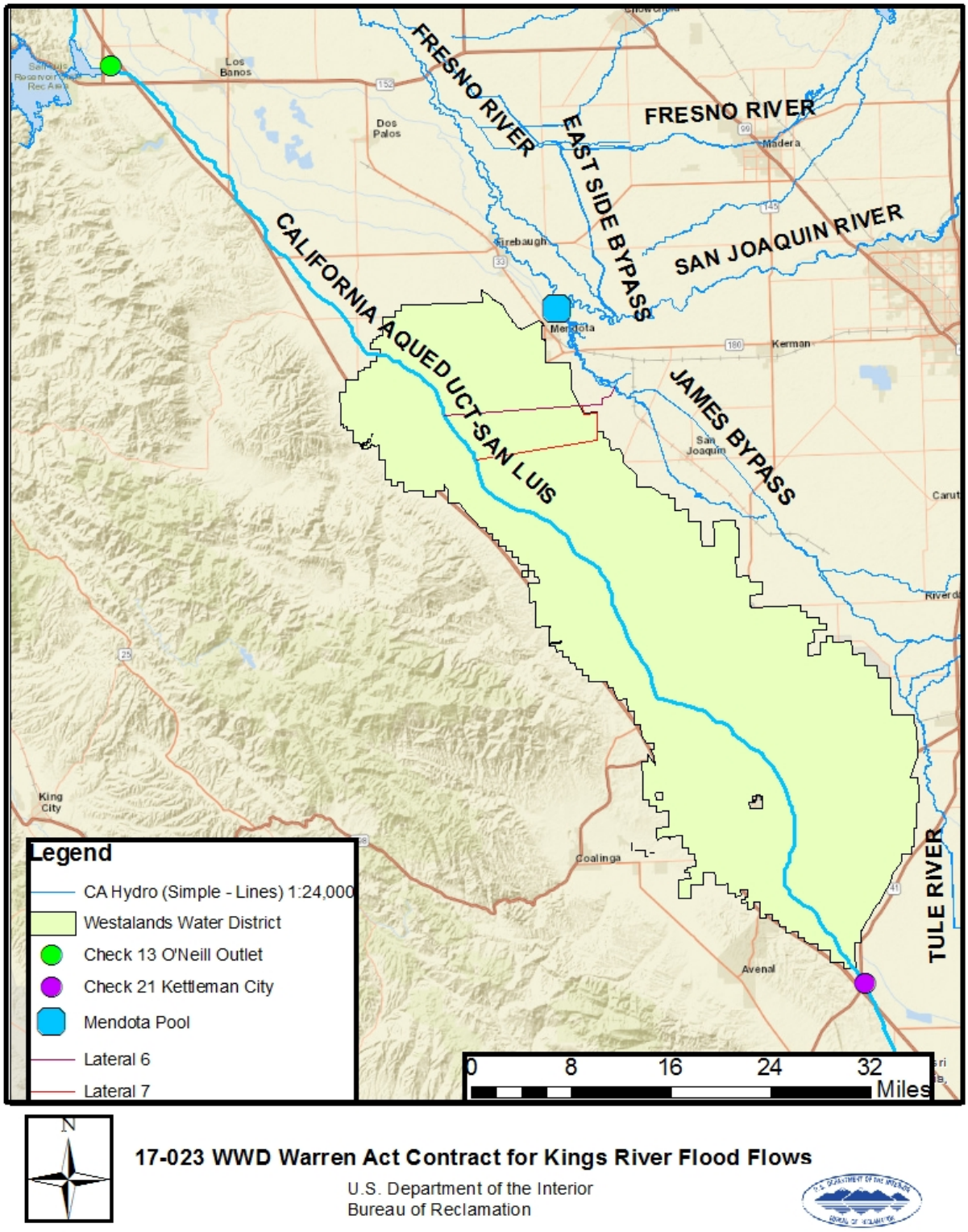

Figure 1 Proposed Action Area

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 execute a new 5-year Warren Act contract with Westlands and after June 30, 2017 Non-Project water would no longer be allowed to be conveyed in the San Luis Canal.

2.2 Proposed Action

Reclamation proposes to execute a new 5-year Warren Act Contract with Westlands, which would allow the district to continue to convey up to 50,000 AFY of available Non-Project water in the San Luis Canal for use in-district.

Non-Project water would be introduced into the San Luis Canal at Milepost (MP) 113.00 (Lateral 6-1) and/or MP 115.43 (Lateral 7-1). The water would then be conveyed and diverted into Westlands existing turnouts along the San Luis Canal, including the Pleasant Valley Canal system and any approved existing temporary agricultural diversions used within Westlands service area.

The Non-Project water would only be introduced into the San Luis Canal when there is excess capacity, as determined by Reclamation in coordination with the California Department of Water Resources (DWR).

2.2.1 Environmental Commitments

Westlands shall implement the following environmental protection measures to avoid and/or reduce environmental consequences associated with the Proposed Action (Table 1).

Table 1 Resource Protection Measures

Resource	Protection Measure
Water Resources	The water would only be used for irrigation purposes on lands established within Westland's service area boundary and in accordance with Federal Reclamation law and guidelines.
Water Resources	Non-Project water must meet Reclamation's then-current water quality requirements (Appendix A). Westlands shall monitor and report water quality to Reclamation on a monthly basis.
Various Resources	Water would not be used to place untilled or new lands into production, or to convert

Resource	Protection Measure
	undeveloped land to other uses.
Various Resources	No new construction or modification of existing facilities may occur in order to complete the Proposed Action.
Various 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.

Environmental consequences for resource areas assume the measures specified would be fully implemented.

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	No construction or modification of facilities is proposed. Pumping may be necessary to move water under the Proposed Action, but power usage would be within the typical range for the facilities involved. No air emissions are anticipated outside normal operational fluctuations.
Cultural Resources	As the Proposed Action would facilitate the flow of water through existing facilities to existing users and no construction or modification of these 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 Code of Federal Regulations Part 800.3(a)(1). See Appendix B 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 would not result in emissions of greenhouse gases as water would move in existing facilities without the aid of combustible engines. 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 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

Reclamation requested an official species list for the entire Proposed Action Area from the U.S. Fish and Wildlife Service (USFWS) on May 22, 2017, by accessing their database: https://ecos.fws.gov/ipac/ (USFWS 2017). Reclamation further queried the California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB) for records of Federally listed species within 10 miles of the project location (CNDDB 2017). The two lists, in addition to other information within Reclamation's files were combined to create the following list (Table 3). There is no proposed or designated critical habitat in the Proposed Action Area. The Western Burrowing Owl and Swainson's Hawk, and other raptors, such as Red-tailed Hawks, and White-tailed Kites, may also use the Proposed Action Area, for foraging and nesting.

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*	FT, X	NE	**Absent**. Species no longer occurs on the valley floor.
California tiger salamander *Ambystoma californiense*	FT, X	NE	**Absent**. Vernal pool and other breeding ponds are absent in the Proposed Action Area.
Birds			
California Condor *Gymnogyps californianus*	FE, X	NE	**Absent.** Roosting and foraging habitat is lacking in the Proposed Action Area.
California Least Tern *Sterna antillarum brownii*	FE, X	NE	**Present.** Recorded at the Lemoore Naval Air Station using sewage ponds in small numbers (last record was from 2010). The Proposed Action would not change the availability of foraging habitat, or water quality in the foraging habitat.
Western Snowy Plover *Charadrius alexandrinus nivosus*	FT, X	NE	**Absent.** Not known from the Proposed Action Area, and suitable habitat is lacking.
Western Yellow-billed Cuckoo *Coccyzus americanus*	FT, PX	NE	**Possible.** Foraging and nesting habitat (large stands of cottonwood/willow riparian forest) are lacking, but it is possible that birds could fly overhead enroute to or from breeding habitat along the Sacramento River. The Proposed Action would not interfere with their migration.
Fish			
delta smelt *Hypomesus transpacificus*	FT, X	NE	**Absent**. The Proposed Action would not change pumping or water quality within the Sacramento-San Joaquin Delta.
Central Valley steelhead *Oncorhynchus mykiss*	FT, X	NE	**Absent**. The Proposed Action would not change pumping or water quality within the Sacramento-San Joaquin Delta, or impact stream habitat used by the steelhead.
Invertebrates			
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT, X	NE	**Possible**. There may be elderberry shrubs present near Mendota Pool, but the Proposed Action would not involve any land use change or construction.
vernal pool fairy shrimp *Branchinecta lynchi*	FT, X	NE	**Absent**. There is no vernal pool or other seasonal wetland habitat in the Proposed Action Area.
vernal pool tadpole shrimp *Lepidurus packardi*	FE, X	NE	**Absent**. There is no vernal pool habitat in the Proposed Action Area.

Species	Status[1]	Effects[2]	Potential to occur and summary basis for ESA determination [3]
Mammals			
Buena Vista Lake shrew *Sorex ornatus relictus*	FE, X	NE	**Absent**. There is critical habitat very near, but outside the southeastern part of Westlands. The species' range does not quite extend into the Proposed Action Area.
Fresno kangaroo rat *Dipodomys nitratoides exilis*	FE, X	NE	**Absent**. There was a population of San Joaquin kangaroo rats at Lemoore Naval Air Station that was genetically intermediate between both the Fresno and Tipton kangaroo rat, but this population has been extirpated in the last few years. This was the last known population within Wesltands.
giant kangaroo rat *Dipodomys ingens*	FE	NE	**Absent**. The Proposed Action Area is outside of the species' current range, which lies in the hills to the west.
San Joaquin kit fox *Vulpes macrotis mutica*	FE	NE	**Present**. There are a number of records of kit foxes in the Proposed Action Area, and they are known to forage in agricultural lands, when those lands are near more natural habitat (Warrick et al. 2007). However, the Proposed Action would not result in any land use change or involve any construction.
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	FE	NE	**Absent**. There was a population of San Joaquin kangaroo rats at Lemoore Naval Air Station that was genetically intermediate between both the Fresno and Tipton kangaroo rat, but this population has been extirpated in the last few years. This was the last known population within Wesltands.
Plants			
California jewelflower *Caulanthus californicus*	FE	NE	**Absent**. This species once occurred within Westlands, but was extirpated by habitat conversion many years ago.
palmate-bracted bird's beak *Cordylanthus palmatus*	FE	NE	**Absent**. This species may have historically had suitable habitat within Wesltands, but no longer.
San Joaquin woolly-threads *Monolopia congdonii*	FE	NE	**Possible.** There are records of this species in Westlands, and some small fragments of suitable habitat may persist, especially on the western edge. However, the Proposed Action would not involve any land use change or construction.
Reptiles			
blunt-nosed leopard lizard *Gambelia sila*	FE	NE	**Possible.** There are records of this species in Westlands, and some small fragments of suitable habitat may persist, especially on the western edge. However, the Proposed Action would not involve any land use change or construction.
giant garter snake *Thamnophis gigas*	FT	NE	**Present**. The giant garter snake occurs in small numbers at Mendota Pool. However, the Proposed Action would not change the amount of habitat available, and would not impact water quality, due to the source of the water and the water quality restrictions in the environmental commitments.

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, this Non-Project water would not be conveyed in the San Luis Canal. There would be no impacts to biological resources since conditions would remain the same as existing conditions.

Proposed Action

Under the Proposed Action, there would be no land conversion or construction, and no change in the availability or quality of aquatic habitat at the Mendota Pool. As a result, there would be no effect on unlisted migratory birds, the California Least Tern, valley elderberry longhorn beetle, San Joaquin woolly-threads, San Joaquin kit fox, giant garter snake, or blunt-nosed leopard lizard. If the Western Yellow-billed Cuckoo migrates overhead during the Proposed Action, it would not be impacted. No other Federally protected species occur in the Proposed Action Area.

With implementation of the environmental requirements included in Table 1 and based upon the nature of this action, Reclamation has determined there would be 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 no take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cumulative Impacts

As the Proposed Action would not result in any direct or indirect impacts to biological resources, it would not contribute cumulatively to any impacts on those resources.

3.3 Water Resources

3.3.1 Affected Environment

The affected environment is the same as described in Section 3.3 of EA-11-002 (Reclamation 2012), which is incorporated by reference into this EA. Rather than repeating the same information, the affected environment and environmental consequences section in this EA will focus on updates or changes.

Water Quality in the San Luis Canal

As described previously, Non-Project water under the current Warren Act Contract has only been introduced into the San Luis Canal during March and April of 2017 (Table 4).

Table 4 Sampling results of Kings River Water at Westlands Lateral 7

Constituents of Concern	Bromide	Chloride	Conductivity	Nitrate as NO3	Sulfate	TDS	Arsenic	Boron	Manganese	Selenium
MCL	Not Regulated	500 mg/L	1,600 µS/cm	45 mg/L	500 mg/L	1,000 mg/L	10 µg/L	0.7 mg/L	0.05 mg/L	2 µg/L
3/9/2017	0.045	1.1	71	1.6	3	56	<2.0	<0.10	0.038	<2.0
3/16/2017	<0.0050	1.1	73	1.4	2.9	55	<2.0	<0.10	0.033	<2.0
3/23/2017	<0.0050	1.1	63	1.6	2.7	50	<2.0	<0.10	0.039	2.8
3/30/2017	<0.0050	1	62	1.6	2.7	56	<2.0	<0.10	0.061	<2.0
4/20/2017	<0.0050	<1.0	55	<1.0	2.1	50	<2.0	<0.10	0.041	<2.0
5/18/2017	<0.0050	<1.0	39	<1.0	1.2	36	<2.0	<0.10	0.04	<2.0
6/15/2017	<0.0050	<1.0	38	<1.0	1.8	46	<2.0	<0.10	0.037	<2.0

It should be noted that the water quality results in Table 4 are not the same as the source water as they travelled from their watershed through the Fresno Slough and/or Mendota Pool and then through Lateral 7-1 before entering the San Luis Canal.

Concentrations of all constituents of concern in Lateral 7-1 remained below the Maximum Contaminant Levels (MCL) in parts per billion (ppb)[1] except on one sampling date where selenium exceeded 2 ppb (Table 4). Under Reclamation's current requirements, the maximum acceptable concentration for selenium in the San Luis Canal is 2 ppb, based on the monthly average limit specified in the Water Quality Plan for the Sacramento River and San Joaquin River for Grasslands wetlands water supply channels (Central Valley Regional Water Quality Control Board 2011). The current limit for selenium in the lower San Luis Canal downstream of Lateral 7-1 is 5 ppb (four-day average). Conductivity and total dissolved solids (TDS) measurements recorded during the flood flows, also, exhibited no measurable effects on the water quality in the San Luis Canal. Flood flows were monitored weekly for the first month and monthly after the flood flows decreased (Table 4).

Reclamation and the San Luis & Delta-Mendota Water Authority continuously monitor water quality within the San Luis Canal. Table 5 includes a summary of monthly water quality sampling results for constituents of concern taken in 2017 from the San Luis Canal at Check 13/O'Neill Outlet (located upstream of Lateral 7-1 as shown in Figure 1). The results in Table 5 demonstrate that baseline water quality in the San Luis Canal upstream of the introductory points for the Non-Project water is of slightly lesser quality than the Non-Project water at Lateral 7-1.

Table 5 Sampling results of San Luis Canal Water Check 13, O'Neill Outlet

Constituents of Concern	Bromide	Chloride	Conductivity	Nitrate as NO3	Sulfate	TDS	Arsenic	Boron	Manganese	Selenium
MCL	Not Regulated	500 mg/L	1,600 µS/cm	45 mg/L	500 mg/L	1,000 mg/L	0.01 mg/L	0.7 mg/L	0.05 mg/L	2 µg/L
1/17/2017	0.1	37.0	307	4.2	32	180	0.001	0.2	0.007	<1.0
2/14/2017	0.07	28.0	268	3.2	30	163	0.001	0.1	0.021	<1.0
3/14/2017	0.05	20	204	2	22	117	0.001	0.1	0.005	<1.0
4/18/2017	0.08	28	226	1.5	19	128	0.001	<0.1	0.007	<1.0

Table 6 includes a summary of monthly water quality sampling results for constituents of concern taken in 2017 from the San Luis Canal at Check 21/Kettleman City (located downstream of Lateral 7-1 as shown in Figure 1). These results indicate that water quality in the canal did not change substantially after introduction of the Non-Project water. However, in April 2017 constituents of concern did increase, but based on the sampling results at Lateral 7-1 (Table 4), the increase is not attributable to the addition of Kings River flood flows.

Table 6 Sampling results of San Luis Canal Water at Check 21, Kettleman City

Constituents of Concern	Bromide	Chloride	Conductivity	Nitrate as NO3	Sulfate	TDS	Arsenic	Boron	Manganese	Selenium
MCL	Not Regulated	500 mg/L	1,600 µS/cm	45 mg/L	500 mg/L	1,000 mg/L	0.01 mg/L	0.7 mg/L	0.05 mg/L	2 µg/L
1/17/2017	0.11	40	304	3.1	27	181	0.001	0.1	<0.005	<1.0
2/14/2017	0.07	29	265	3.2	30	161	0.001	0.1	<0.005	<1.0

[1] Parts per billion is the number of units of mass of a contaminant per 1,000 million units of total mass also known as micrograms per liter (µg/L).

Constituents of Concern	Bromide	Chloride	Conductivity	Nitrate as NO3	Sulfate	TDS	Arsenic	Boron	Manganese	Selenium
3/14/2017	0.05	20	209	2.2	22	NA	0.001	0.1	<0.005	<1.0
4/18/2017	0.14	49	326	2	24	NA	0.002	0.1	<0.005	<1.0

A summary of all monthly water quality sampling results taken in 2016 and 2017 can be found in Appendix C. Raw data from the water quality sampling of the San Luis Canal is available upon request.

3.3.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not execute a new 5-year Warren Act Contract with Westlands to allow the continued conveyance of up to 50,000 AFY of its acquired Non-Project water in the San Luis Canal. Westlands would still be able to convey this water in its laterals; however, as the majority of land serviced by these laterals are retired, the benefit of this supplemental water supply would not be fully realized as Westlands would not be able to optimize its acquired supplemental water supply when it is available for use.

Kings River flood flows would continue to be able to be diverted by those with water rights to the water, those that have agreements with the Water Association to take flood flows, and/or continue to flow out to the Delta.

Proposed Action

The Proposed Action would allow the continued conveyance of up to 50,000 AFY of Westlands acquired Non-Project water in the San Luis Canal over the next five years. Westlands would only divert the Kings River flood flows from the Fresno Slough and/or Mendota Pool when such water is available during flood conditions.

Similar to the No Action Alternative, Kings River flood flows would continue to be diverted by those with water rights to the water (first right to divert), those that also have agreements with the Water Association, and/or continue to flow out to the Delta consistent with the Water Association's management of the Kings River flood flows.

Introduction and conveyance of Non-Project water in the San Luis Canal is dependent on available capacity and operational constraints; therefore, the Proposed Action would not interfere with the normal operations of Federal or State facilities nor would it impede Reclamation or DWR's obligations to deliver water to other contractors or to local fish and wildlife habitat.

The conveyance of Non-Project water would utilize existing facilities and would not require new infrastructure, modifications of existing facilities, or ground disturbing activities. The Non-Project water would be used for existing purposes and no native or untilled land (fallow for three years or more) would be cultivated with this water.

In addition, all waters introduced and conveyed within federal facilities must meet Reclamation's then-current water quality standards. If, through monitoring, the Non-Project 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. As described above, previous introductions of the Non-Project has met Reclamation's requirements and been of better quality than baseline conditions in the San Luis Canal. Reclamation anticipates this would be similar during future introductions. Therefore, no adverse impacts to water quality is anticipated 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 the 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 San Luis Canal is limited, and if many water actions were scheduled to take place concurrently they could cumulatively compete for space. However, Non-Project water would only be allowed to enter the San Luis Canal for conveyance if excess capacity is available. As such, the Proposed Action would not limit the ability of other users to make use of the facilities.

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.

As the flood flows would be consistent with the Water Association's overall management of Kings River flood flows there would be no cumulatively adverse impacts to flood control management.

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Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation intends to provide the public with an opportunity to comment on the Draft FONSI and Draft EA during a 15-day public review period.

4.2 List of Agencies and Persons Consulted

Reclamation consulted with DWR on the current 5-year Warren Act contract that allowed Westlands to divert flood flows through June 30, 2017. Reclamation and Westlands are pursuing another 5-year Warren Act contract for the proposed diversions covered in EA-11-002 and this EA.

Reclamation has also coordinated with the following regarding the Proposed Action:

- Westlands Water District
- Kings River Water Association

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Section 5 References

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