

RECLAMATION

Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

Addition of North-Kern Water Storage District to the Friant-Kern Canal Groundwater Pump-in Program

FONSI-14-051

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the South-Central California Area Office of the Bureau of Reclamation (Reclamation), has determined that an environmental impact statement is not required for the approval of the introduction of up to 10,000 acre-feet (AF) of North-Kern Water Storage District's (North-Kern) groundwater into the Friant-Kern Canal (FKC) as part of the FKC Groundwater Pump-in Program. This Findings of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-14-051, *Addition of North-Kern Water Storage District to the Friant-Kern Canal Groundwater Pump-in Program*, and is hereby incorporated by reference.

Background

North-Kern, a non-CVP contractor located adjacent to the FKC in Kern County, has requested approval from Reclamation to participate in the FKC Groundwater Pump-in Program, in order to convey groundwater to the Cross Valley Canal for delivery to four westside Kern County water districts via the California Aqueduct (Aqueduct).

Proposed Action

Reclamation proposes to approve the introduction of up to 10,000 AF of North-Kern's groundwater into the FKC as part of the FKC Groundwater Pump-in Program. The up to 10,000 AF is included in the cumulative total (50,000 AF per year) allowed under the FKC Groundwater Pump-in Program. All introduced water would be pumped from existing electric pumps. No ground disturbance would be required for introduction or conveyance of this water.

North-Kern's non-CVP water would be conveyed through the FKC to the Cross Valley Canal for delivery to the following westside Kern County water districts via the California Aqueduct:

- Belridge Water Storage District (Belridge)
- Berrenda Mesa Water District (Berrenda Mesa)
- Lost Hills Water District (Lost Hills)
- Wheeler Ridge-Maricopa Water Storage District (Wheeler Ridge-Maricopa)

All delivery schedules would be coordinated with the Kern County Water Agency and the California Department of Water Resources (DWR) and approved by Reclamation prior to the introduction of groundwater into the FKC.

The period of introduction and conveyance would be September 2014 through August 2015.

Environmental Commitments

North-Kern, Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa will implement the environmental protection measures listed in Table 2-1 of EA-14-051 to reduce environmental consequences associated with the Proposed Action. Environmental consequences for resource areas assume the measures specified would be fully implemented.

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the quality of the human environment is supported by the following findings:

Findings

As described in Section 3.1 of EA-14-051, Reclamation analyzed the affected environment and determined that the Proposed Action does not have the potential to cause direct, indirect, or cumulative adverse effects to the following resources: cultural resources, Indian Sacred Sites, Indian Trust Assets, Land Use, socioeconomic resources, environmental justice, air quality or global climate.

Water Resources

The introduction of up to 10,000 AF of North-Kern's non-CVP water into the FKC would be within the 50,000 AF limit placed on the FKC Groundwater Pump-in Program. As North-Kern is located within the Friant Division and groundwater pumping would be within the limit placed on the FKC Groundwater Pump-in Program, no additional impacts to groundwater resources would occur beyond what was previously analyzed and approved. The delivery of the non-CVP water to the four westside Kern County water districts would beneficially improve their limited water supplies potentially requiring less groundwater pumping in an overdrafted area.

Introduction, conveyance, and storage 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. In addition, deliveries of this water would be coordinated with the Kern County Water Agency and DWR prior to introduction into the FKC in order to prevent potential impacts to local and state facilities and operations.

All waters introduced, conveyed, and stored within federal facilities must meet Reclamation water quality standards. If, through monitoring, the groundwater pumped by North-Kern fails to meet the criteria for discharging non-CVP water into federal facilities, the water would not be introduced until subsequent testing has demonstrated that the water quality has been met by the criteria as outlined in Reclamation's then current water quality standards (see Appendix A for Reclamation's current water quality standards). Therefore, there would be no adverse impacts to water quality as a result of the Proposed Action.

The conveyance of non-CVP water would utilize existing facilities and would not require new infrastructure, modifications of existing facilities, or ground disturbing activities. The non-CVP 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.

Biological Resources

Although there are some natural, undeveloped lands located on the edges of the four Kern County water districts and along the Aqueduct, which may provide suitable habitat for federally listed species, a large portion of the Action area consists of active farmlands that no longer provide suitable habitat for federally listed species. No natural lands, or fallowed lands that have been untilled for three or more consecutive years, would be converted as a result of the Proposed Action. The land use patterns of cultivated and fallowed fields that could provide suitable

habitat for listed species or birds protected under the Migratory Bird Treaty Act would also not be changed as a result of the Proposed Action. No ground disturbance, construction, or alteration of natural stream courses would be required to complete the Proposed Action. There is no designated critical habitat within the Action area, so none would be affected by the Proposed Action. With the implementation of the provided avoidance measures, Reclamation has determined that the Proposed Action would result in *No Effect* to listed species or designated critical habitat under the Endangered Species Act (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.). As such, no consultation with the U.S. Fish and Wildlife Service or National Marine Fisheries Service is necessary.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action or No Action alternative when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. To determine whether cumulatively significant impacts are anticipated from the Proposed Action or the No Action alternative, the incremental effect of both alternatives were examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area.

Water Resources

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 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.

Capacity in the FKC is limited, and if many water actions were scheduled to take place concurrently they could cumulatively compete for space. However, non-CVP water would only be allowed to enter the FKC 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 introduction of North-Kern's

non-CVP water is required to be coordinated with Kern County Water Agency and DWR prior to introduction into the FKC, consequently there would be no cumulative impacts to these facilities or their operations.

As North-Kern is located within the Friant Division and groundwater pumping would be within the limit placed on the FKC Groundwater Pump-in Program, no additional cumulative impacts to groundwater resources would occur beyond what was previously analyzed and approved.

Biological Resources

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

RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Addition of North-Kern Water Storage District to the Friant-Kern Canal Groundwater Pump-in Program

EA-14-051



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

September 2014

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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Appendix B	Reclamation's Cultural Resources Determination
Appendix C	Reclamation's Indian Trust Assets Determination

Section 1 Introduction

1.1 Background

In 2014, due to ongoing drought conditions and reduced water supplies, Friant Division Central Valley Project (CVP) contractors requested approval from the Bureau of Reclamation (Reclamation) to pump cumulatively up to 50,000 acre-feet (AF) of groundwater into the Friant-Kern Canal (FKC) over a two-year period (referred to as the FKC Groundwater Pump-in Program). Reclamation analyzed the two-year FKC Groundwater Pump-in Program in Environmental Assessment (EA)-14-011 (Reclamation 2014). Based on specific environmental commitments required for the FKC Groundwater Pump-in Program, including water quality requirements, Reclamation determined that the cumulative introduction, storage, and conveyance of up to 50,000 acre-feet (AF) per year of groundwater would not significantly affect the quality of the human environment and a Findings of No Significant Impact (FONSI) was executed on May 2, 2014. Both EA and FONSI (Reclamation 2014) are hereby incorporated by reference.

North-Kern Water Storage District (North-Kern), a non-CVP contractor located adjacent to the FKC in Kern County, has requested approval from Reclamation to participate in the FKC Groundwater Pump-in Program, in order to convey groundwater to the Cross Valley Canal for delivery to four westside Kern County water districts via the California Aqueduct (Aqueduct).

1.2 Need for the Proposed Action

The State of California is currently experiencing unprecedented water management challenges due to severe drought and regulatory actions. Both the State and Federal water projects are forecasting very low storage conditions in all major reservoirs. As a result, CVP and State Water Project (SWP) contractors need to find alternative sources of water to meet existing demands.

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 introduction of North-Kern's groundwater into the FKC. Kern County water districts would either need to find alternative water supplies or fallow existing crops. The existing FKC Groundwater Pump-in Program would continue as previously analyzed in EA-14-011.

2.2 Proposed Action

Reclamation proposes to approve the introduction of up to 10,000 acre-feet (AF) of North-Kern's groundwater into the FKC as part of the FKC Groundwater Pump-in Program. The up to 10,000 AF is included in the cumulative total (50,000 AF per year) allowed under the FKC Groundwater Pump-in Program. All introduced water would be pumped from existing electric pumps. No ground disturbance would be required for introduction or conveyance of this water.

North-Kern's non-CVP water would be conveyed through the FKC to the Cross Valley Canal for delivery to the following westside Kern County water districts via the Aqueduct (see Figure 2-1):

- Belridge Water Storage District (Belridge)
- Berrenda Mesa Water District (Berrenda Mesa)
- Lost Hills Water District (Lost Hills)
- Wheeler Ridge-Maricopa Water Storage District (Wheeler Ridge-Maricopa)

All delivery schedules would be coordinated with the Kern County Water Agency and the California Department of Water Resources (DWR) and approved by Reclamation prior to the introduction of groundwater into the FKC.

The period of introduction and conveyance would be September 2014 through August 2015.

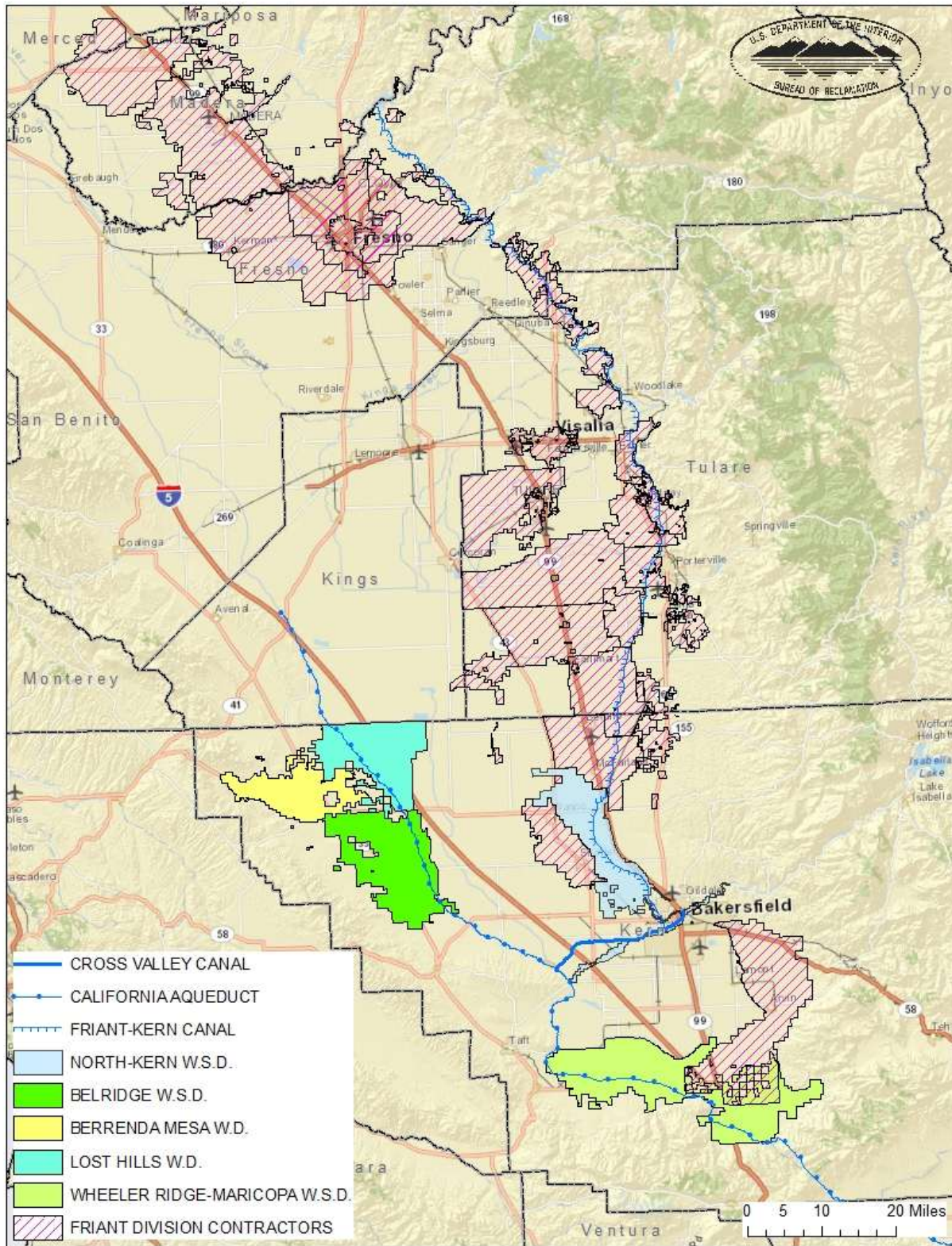


Figure 2-1 Proposed Action Area

2.2.1 Environmental Commitments

North-Kern, Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa 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.

Table 2-1 Environmental Protection Measures and Commitments

Resource	Protection Measure
Biological Resources	No native or untilled land (fallow for three consecutive years or more) may be cultivated with this water without additional environmental analysis and approval.
	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.
	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).
Water Resources	Water from each well must meet water quality standards prior to introduction. If testing from any individual well indicates that its water does not meet then-current standards, it would not be allowed to discharge into the FKC until water quality concerns are addressed.
Various Resources	Use of the water shall comply with all federal, state, local, and tribal law, and requirements imposed for protection of the environment and Indian Trust Assets.
	No land conversions may occur as a result of the Proposed Action.
	No new construction or modification of existing facilities may occur in order to complete the Proposed Action.

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.

The only difference between the Proposed Action analyzed in this EA and the action analyzed in the EA for the FKC Groundwater Pump-in Program (EA-14-011) is the addition of North-Kern to the FKC Groundwater Pump-in Program and the conveyance of the introduced groundwater to Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa via the Cross Valley Canal and the Aqueduct. Therefore, the affected environment and environmental consequences section in this EA will focus on those changes and will not repeat information included in EA-14-011 as it is incorporated by reference into this EA.

3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action does 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 not involve physical changes to the environment or construction activities that could impact 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.
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.
Land Use	The introduced groundwater would be used for existing agricultural purposes within Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa, supporting current land uses. No conversion of undeveloped/native land would occur.
Socioeconomic Resources	The Proposed Action would have beneficial impacts on socioeconomic resources within Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa as the exchanged water would be used to help sustain existing crops and maintain farming. There would be no adverse socioeconomic impacts within North Kern as water needs would still be met and agricultural practices would be unchanged.
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.
Air Quality	No construction or modification of facilities would be done in order to introduce or convey the non-CVP water to Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa. The non-CVP water would be moved either via gravity or electric

Resource	Reason Eliminated
	pumps which would not produce emissions that impact air quality. The generating power plant that produces the electricity to operate the electric pumps does produce emissions that impact air quality; however, the generating power plant is required to operate under permits issued by the air quality control district. As the Proposed Action would not change the emissions generated at the generating power plant, no additional impacts to air quality would occur and a conformity analysis is not required pursuant to the Clean Air Act.
Global Climate	The Proposed Action would not require additional electrical production beyond baseline conditions and would therefore not contribute to additional greenhouse gas emissions. 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. Current data are not yet clear on the hydrologic changes and how they will affect the San Joaquin Valley. 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.

3.2 Water Resources

3.2.1 Affected Environment

The FKC Groundwater Pump-in Program EA (EA-14-011) included an analysis of the FKC as well as groundwater resources and subsidence trends within the Friant Division service area. As this would be the same for North Kern, which is located within the Friant Division service area, it is not repeated here.

North Kern Water Storage District

North Kern's primary source of surface water is the Kern River, whose waters have been utilized under a schedule of long-standing diversion rights. This supply has occasionally been supplemented by water from Poso Creek, which transverses the northern portion of the district. Poso Creek contributes to the underlying groundwater supply primarily through infiltration. In addition, North Kern has intermittently purchased and diverted "surplus" CVP water from Millerton Lake. Groundwater is used to satisfy all irrigation water requirements in excess of available surface water supplies.

Historically, North Kern's annual Kern River water supplies have ranged from less than 10,000 AF to nearly 400,000 AF. As a result of this highly variable water supply, North Kern has developed an extensive groundwater recharge and extraction program using the groundwater reservoir to regulate its water supplies as part of its conjunctive use practices. North Kern has successfully operated this program for over 50 years.

Westside Kern County Water Agency Districts

Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa are members of the Kern County Water Agency, the local contracting entity for the SWP. Each district has a contract with the California Department of Water Resources (DWR) for firm SWP Table A water delivered from the Aqueduct.

Groundwater Resources These four westside Kern County water districts are located within the Kern County subbasin. The Kern County subbasin, with a surface area of approximately 1,945,000 acres, is one of seven subbasins designated by DWR within the Tulare Lake

Hydrologic Region (DWR 2006). The Kern County groundwater subbasin has been identified as being critically overdrafted (DWR 2005) in large part due to the heavy reliance on groundwater pumping for irrigation. The basin is essentially a closed basin, with principal drainages from the Kings, Kaweah, Tule, and Kern Rivers (DWR 2005). These streams are the principal source of natural recharge to the underlying groundwater basin with applied irrigation also being a large contributor.

State Water Project

The SWP is a water storage and delivery system of reservoirs, aqueducts, powerplants and pumping plants. The SWP stores and distributes water to 29 urban and agricultural water suppliers in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and Southern California (DWR 2014a). Due to current hydrologic conditions, DWR allocated zero percent to its water contractors on January 31, 2014. This was increased to five percent on April 18, 2014, although water supplies would not be available to contractors until September (DWR 2014b).

California Aqueduct The Aqueduct is a feature of the SWP and is operated by DWR. Water is exported from the Sacramento-San Joaquin River Delta at the Clifton Court Forebay through the Harvey O. Banks pumping plant and is pumped into the Aqueduct. The Aqueduct extends to the O'Neill Forebay where water can be pumped into San Luis Reservoir. The segment of the Aqueduct between the O'Neill Forebay and the State Highway 41 bridge is a joint-use facility between DWR and Reclamation, and is known also as the San Luis Canal. Water deliveries in this section are made to both federal and state water contractors. The Aqueduct continues south from State Highway 41 bridge to southern California.

Cross Valley Canal

The Cross Valley Canal was constructed in the mid-1970s by CVP Cross Valley contractors¹, Kern County Water Agency, Cawelo Water District, and Rosedale-Rio Bravo Water Storage District. The canal was expanded by Kern County Water Agency, Arvin-Edison Water Storage District, and Kern Delta Water District in 2008. The Cross Valley Canal is 17 miles long and allows for water to be conveyed between the Aqueduct and the FKC. Water in the canal can flow in either direction. To flow east from the Aqueduct to the FKC water is lifted through a series of six pump stations with a maximum capacity of 1,312 cubic feet per second (cfs). Water flows west in the canal by gravity with a maximum capacity of 500 cfs. There are five 24-inch pipelines that connect the Cross Valley Canal to the FKC that were installed by the Kern-Tulare Water District. Each pipe has a capacity of about 15 cfs. In 2008, an Intertie with a 500 cfs capacity was constructed between the Cross Valley Canal and the FKC. The Intertie allows water to flow from the Cross Valley Canal to the FKC for delivery to turnouts along the FKC. Water can also flow from the FKC into the Cross Valley Canal through the Intertie.

¹ County of Fresno (including its subcontractors: Fresno County Service Areas #5, #10, and #14 and Fresno County Water Works #34), Hills Valley Irrigation District, Kern-Tulare Water District (previously combined with Rag Gulch Water District), Lower Tule River Irrigation District, Pixley Irrigation District, Tri-Valley Water District, and County of Tulare (including its subcontractors: Alpaugh Irrigation District, Atwell Island Water District, City of Lindsay, Smallwood Vineyards, Hills Valley Irrigation District, Saucellito Irrigation District, Stone Corral Irrigation District, Strathmore Public Utilities District, Styrotek, Inc., and City of Visalia).

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not approve the addition of up to 10,000 AF of North-Kern's groundwater into the FKC for conveyance to Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa. There would be no impacts to the FKC or CVP operations.

As SWP contractors received a five percent allocation for the 2014 Contract Year, surface water supplies would continue to be minimal. Additional water supply needs within these districts would need to be met from other sources, such as purchasing surface water supplies or from additional groundwater pumping, if available. Additional groundwater pumping would exacerbate an already overdrafted area.

As groundwater would not be conveyed to the Cross Valley Canal or the Aqueduct, no impacts would occur to these facilities or operations.

Groundwater pumping, up to 50,000 AF, would continue to be pumped by CVP contractors as part of the FKC Groundwater Pump-in Program. No additional impacts would occur.

Proposed Action

The introduction of up to 10,000 AF of North-Kern's non-CVP water into the FKC would be within the 50,000 AF limit placed on the FKC Groundwater Pump-in Program. As North-Kern is located within the Friant Division and groundwater pumping would be within the limit placed on the FKC Groundwater Pump-in Program, no additional impacts to groundwater resources would occur beyond what was previously analyzed and approved. The delivery of the non-CVP water to the four westside Kern County water districts would beneficially improve their limited water supplies potentially requiring less groundwater pumping in an overdrafted area.

Introduction, conveyance, and storage 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. In addition, deliveries of this water would be coordinated with the Kern County Water Agency and DWR prior to introduction into the FKC in order to prevent potential impacts to local and state facilities and operations.

All waters introduced, conveyed, and stored within federal facilities must meet Reclamation water quality standards. If, through monitoring, the groundwater pumped by North-Kern fails to meet the criteria for discharging non-CVP water into federal facilities, the water would not be introduced until subsequent testing has demonstrated that the water quality has been met by the criteria as outlined in Reclamation's then current water quality standards (see Appendix A for Reclamation's current water quality standards). Therefore, there would be no adverse impacts to water quality as a result of the Proposed Action.

The conveyance of non-CVP water would utilize existing facilities and would not require new infrastructure, modifications of existing facilities, or ground disturbing activities. The non-CVP 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.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action or No Action alternative when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. To determine whether cumulatively significant impacts are anticipated from the Proposed Action or the No Action alternative, the incremental effect of both alternatives were examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area.

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 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.

Capacity in the FKC is limited, and if many water actions were scheduled to take place concurrently they could cumulatively compete for space. However, non-CVP water would only be allowed to enter the FKC 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 introduction of North-Kern's non-CVP water is required to be coordinated with Kern County Water Agency and DWR prior to introduction into the FKC, consequently there would be no cumulative impacts to these facilities or their operations.

As North-Kern is located within the Friant Division and groundwater pumping would be within the limit placed on the FKC Groundwater Pump-in Program, no additional cumulative impacts to groundwater resources would occur beyond what was previously analyzed and approved.

3.3 Biological Resources

3.3.1 Affected Environment

The Action area includes the North-Kern, the FKC, the Cross-Valley Canal, a portion of the Aqueduct, Belridge, Berrenda Mesa, Lost Hills, and Wheeler Ridge-Maricopa.

Special-Status Species

Reclamation requested an official species list from the U.S. Fish and Wildlife Service on September 22, 2014 via the Sacramento field office's website,

http://www.fws.gov/sacramento/es/spp_list.htm (Document number:140922115314). The list is for the following 7 ½ minute U.S. Geologic Survey quadrangles which are overlapped by the Action area: Pastoria Creek, Grapevine, Pleito Hills, Tejon Ranch, Weed Patch, Mettler, Tejon Hills, Conner, Millux, Conner SW, Coal Oil Canyon, Mouth of Kern, Pentland, Oil Center, Oildale, Rosedale, Stevens, Gosford, East Elk Hills, Tupman, Lokern, Belridge, West Elk Hills, Carneros Rocks, McFarland, Famoso, Pond, Wasco NW, Wasco SW, Wasco, Lost Hills NW, Lost Hills, Semitropic, Antelope Plain, Emigrant Hill, Shale Point, Blackwells Corner, Sawtooth Ridge, Orchard Peak, Lone Tree Well, Avenal Gap, and West Camp. The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDDB) was also queried for records of protected species near the Action area (CNDDDB 2014). The information collected above, in addition to information within Reclamation's files, was combined to determine the likelihood of protected species occurrence within the action area.

Table 3-2 Special Status Species with the Potential to Occur in the Action Area

Species	Status ¹	Effects ²	Occurrence in the Study Area ³
INVERTEBRATES			
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T	NE	Possible. There are no CNDDDB-recorded occurrences of this species within the Action area (CNDDDB 2014). The Proposed Action would not involve any ground-disturbing activities or conversion of vernal pool habitat. There would be No Effect to this species.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	NE	Present. There is one CNDDDB-recorded occurrence of this species along the Kern River in North-Kern (CNDDDB 2014). The Proposed Action would have no effect on this species' host plant, the elderberry, and would not result in the conversion of suitable habitat. There would be No Effect to this species.
FISH			
Delta smelt <i>Hypomesus transpacificus</i>	T	NE	Absent. Suitable estuarine habitat for this species is not present in the action area. No waterways within this species' range would be affected by the Proposed Action. There would be No Effect to this species.
AMPHIBIANS			

California tiger salamander, Central population <i>Ambystoma californiense</i>	T	NE	Possible. There are no CNDDDB-recorded occurrences of this species within the Action area (CNDDDB 2014). A majority of the action area consists of agricultural lands that do not provide suitable habitat for this species. The Proposed Action would not involve any ground-disturbance and would not result in the conversion of suitable habitat. There would be No Effect to this species.
Critical Habitat, California tiger salamander, Central population <i>Ambystoma californiense</i>	X	NE	Absent. There is no designated critical habitat for this species within the Action area.
California red-legged frog <i>Rana draytonii</i>	T	NE	Absent. This species is believed to be extirpated from the Action area (U.S. Fish and Wildlife Service 2002). The Proposed Action would not involve any ground disturbance and would not result in the conversion of any suitable habitat. There would be No Effect to this species.
Critical Habitat California red-legged frog <i>Rana draytonii</i>	X	NE	Absent. There is no designated critical habitat for this species within the Action area.
REPTILES			
Blunt-nosed leopard lizard <i>Gambelia sila</i>	E	NE	Present. There are several CNDDDB-recorded occurrences of this species throughout the action area (CNDDDB 2014). A majority of the Action area consists of agricultural lands, which do not provide suitable habitat for this species. The Proposed Action would not involve any ground disturbance or conversion of suitable habitat. There would be No Effect to this species.
Giant garter snake <i>Thamnophis gigas</i>	T	NE	Possible. This species has not been observed south of the Mendota Wildlife Area since it was listed in 1993 (U.S. Fish and Wildlife Service 2012). The Proposed Action would not involve any ground disturbance, alteration of waterways, or conversion of natural habitat. There would be No Effect to this species.
BIRDS			
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	T	NE	Present. There are two CNDDDB-recorded occurrences of this species in Lost Hills (CNDDDB 2014). The Proposed Action would not involve any ground disturbance or conversion of suitable habitat. There would be No Effect to this species.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	E	NE	Possible. There are no CNDDDB-records of this species within the Action area (CNDDDB 2014). This species nests in riparian habitats along rivers, streams or other wetlands. The Proposed Action would not alter any waterways or result in the conversion of habitat. There would be No Effect to this species.
California condor <i>Gymnogyps californianus</i>	E	NE	Possible. There are no CNDDDB-recorded occurrences of this species in the Action area (CNDDDB 2014). A majority of the Action area consists of agricultural lands that do not provide suitable nesting habitat for this species. The Proposed Action would not result in the conversion of habitat. There would be No Effect to this species.

Swainson's Hawk <i>Buteo swainsoni</i>	MBTA	NT	Present. There are CNDDDB records of this species in Belridge and North-Kern (CNDDDB 2014). Some of the agricultural lands in the action area may provide suitable foraging habitat for this species. The Proposed Action would not involve any construction or changes in land use. There would be No Take of this species.
Burrowing owl <i>Athene cunicularia</i>	MBTA	NT	Present. There are several CNDDDB records of this species in and near the Action area. This species may forage or den in the action area. The Proposed Action would not involve any ground disturbance or changes in land use. There would be No Take of this species.
Mountain Plover <i>Charadrius montanus</i>	MBTA	NT	Present. There are CNDDDB records of this species in Berrenda Mesa and Lost Hills (CNDDDB 2014). Portions of the Action area may provide suitable winter foraging habitat for this species. The Proposed Action would not involve any construction, ground disturbance, or changes in land use. There would be No Take of this species.
Tri-colored blackbird <i>Agelaius tricolor</i>	MBTA	NT	Present. There are CNDDDB records of this species in Lost Hills, Wheeler-Ridge Maricopa, and along the Cross Valley Canal and Aqueduct (CNDDDB 2014). The Proposed Action would not involve any construction and would not result in land use changes. There would be No Take of this species.
White-Faced Ibis <i>Plegadis chihi</i>	MBTA	NT	Possible. There is one CNDDDB record of this species in Lost Hills, and one extirpated record along the Aqueduct (CNDDDB 2014). A majority of the Action area consists of agricultural lands which do not provide suitable marsh habitat for this species. The Proposed Action would not involve any construction, alteration of waterways, or land use change. There would be No Take of this species.
MAMMALS			
Giant kangaroo rat <i>Dipodomys ingens</i>	E	NE	Present. There are CNDDDB records of this species in Belridge and along the Aqueduct (CNDDDB 2014). The Proposed Action would not involve any ground disturbance or conversion of suitable habitat. There would be No Effect to this species.
Tipton kangaroo rat <i>Dipodomys nitratooides nitratooides</i>	E	NE	Present. There are several CNDDDB records of this species throughout the Action area (CNDDDB 2014). The Proposed Action would not involve any ground disturbance or conversion of suitable habitat. There would be No Effect to this species.
Buena Vista Lake shrew <i>Sorex ornatus relictus</i>	E	NE	Present. There are CNDDDB records of this species in North-Kern, along the Aqueduct, and just north of Wheeler Ridge-Maricopa (CNDDDB 2014). The Proposed Action would not involve any ground disturbance or conversion of suitable habitat. There would be No Effect to this species.

Critical Habitat Buena Vista Lake shrew <i>Sorex ornatus relictus</i>	X	NE	Absent. There is a small area of critical habitat north of Wheeler Ridge-Maricopa, but there is no designated critical habitat within the Action area.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E	NE	Present. The Action area is located near the core population of San Joaquin kit foxes, and there are several CNDDDB records of this species throughout the Action area (U.S. Fish and Wildlife Service 2010). The Proposed Action would not involve any ground disturbance or conversion of suitable habitat. There would be No Effect to this species.
PLANTS			
California jewelflower <i>Caulanthus californicus</i>	E	NE	Possible. There are some CNDDDB records of this species within the action area, but all are listed as “extirpated” or “potentially extirpated” (CNDDDB 2014). The Proposed Action would not involve any conversion of habitat or changes in land use. There would be No Effect to this species.
Kern mallow <i>Eremalche kernensis</i>	E	NE	Present. There are CNDDDB records of this species in Lost Hills, Belridge, and Wheeler Ridge-Maricopa (CNDDDB 2014). The Proposed Action would not involve any conversion of habitat or changes in land use. There would be No Effect to this species.
San Joaquin woolly-threads <i>Monolopia congdonii</i>	E	NE	Possible. There are CNDDDB records in Lost Hills, Belridge and North-Kern, but all are listed as “possibly extirpated” (CNDDDB 2014). The Proposed Action would not involve any conversion of habitat or changes in land use. There would be No effect to this species.
Bakersfield Cactus <i>Opuntia basilaris</i> var. <i>treleasei</i>	E	NE	Present. There are CNDDDB records of this species in Wheeler Ridge-Maricopa and in North-Kern (CNDDDB 2014). The Proposed Action would not involve conversion of habitat or changes in land use. There would be No Effect to this species.
¹ Status= Listing of Federally special status species E: Listed as Endangered MBTA: Protected under the Migratory Bird Treaty Act T: Listed as Threatened X: Critical Habitat designated for this species ² Effects = Effect determination NE: No Effect from the Proposed Action to federally listed species NT: No Take would occur from the Proposed Action to migratory birds ³ Definition Of Occurrence Indicators Absent: Species not recorded in Action area and/or habitat requirements not met Possible: Species has the potential to occur in the Action area Present: Species recorded in or near Action area and habitat present			

3.3.2 Environmental Consequences

No Action

Under the No Action Alternative, the four Kern County water districts would need to find alternative water supplies or fallow existing crops. If crops are fallowed, there is a potential for some federally protected species to temporarily move through, or forage in, the fallowed areas.

Fallowed lands would likely continue to be disced, so it is unlikely that burrowing species, like the San Joaquin kit fox and Tipton kangaroo rat, would den or burrow in these areas. Newly fallowed fields may provide temporary low quality or marginal habitat for federally listed species.

Proposed Action

Although there are some natural, undeveloped lands located on the edges of the four Kern County water districts and along the Aqueduct, which may provide suitable habitat for federally listed species, a large portion of the Action area consists of active farmlands that no longer provide suitable habitat for federally listed species. No natural lands, or fallowed lands that have been untilled for three or more consecutive years, would be converted as a result of the Proposed Action. The land use patterns of cultivated and fallowed fields that could provide suitable habitat for listed species or birds protected under the Migratory Bird Treaty Act would also not be changed as a result of the Proposed Action. No ground disturbance, construction, or alteration of natural stream courses would be required to complete the Proposed Action. There is no designated critical habitat within the Action area, so none would be affected by the Proposed Action. With the implementation of the provided avoidance measures, Reclamation has determined that the Proposed Action would result in *No Effect* to listed species or designated critical habitat under the Endangered Species Act (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.). As such, no consultation with the U.S. Fish and Wildlife Service or National Marine Fisheries Service is necessary.

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.

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 7-day public review period.

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Section 6 References

Bureau of Reclamation (Reclamation). 2014. *Friant-Kern Canal Groundwater Pump-in Program Warren Act Agreements* (Final FONSI/EA-14-011). South-Central California Area Office. Fresno, CA. Website:

http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=17022 .

California Department of Water Resources (DWR). 2014a. California State Water Project Overview. Website: <http://www.water.ca.gov/swp/>.

California Department of Water Resources (DWR). 2014b. SWPAO – Water Deliveries. Website: <http://www.water.ca.gov/swpao/deliveries.cfm>.

California Department of Water Resources (DWR). 2006. California Groundwater Bulletin 118 2003: http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-22.14.pdf.

California Department of Water Resources (DWR). 2005. *California Water Plan Update Volume 3 – Regional Reports; Chapter 8: Tulare Lake Hydrologic Region*. California Department of Water Resources. September 2005.

California Natural Diversity Database (CNDDB). 2014. California Department of Fish and Game's Natural Diversity Database, July 2014.

U.S. Fish and Wildlife Service (USFWS). 2012. Giant Garter Snake (*Thamnophis gigas*) 5 Year Review: Summary and Evaluation. Sacramento, California.

U.S. Fish and Wildlife Service (USFWS). 2010. San Joaquin Kit Fox (*Vulpes macrotis mutica*) 5 Year Review: Summary and Evaluation. Sacramento, California.

U.S. Fish and Wildlife Service (USFWS). 2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon.