RECLAMATION

Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

San Luis & Delta-Mendota Water Authority 2015 Delta-Mendota Canal Reverse Flow Project

FONSI-15-020

U.S. Department of the Interior
Bureau of Reclamation

May 2015

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor 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.

BUREAU OF RECLAMATION
South-Central California Area Office, Fresno, California

FONSI-15-020

San Luis & Delta-Mendota Water Authority 2015 Delta-Mendota Canal Reverse Flow Project

Prepared by: Rain L. Emerson
Supervisory Natural Resources Specialist

Date

Concurred by: Ned M. Gruenhagen, Ph.D.
Wildlife Biologist

Date

Approved by: Michael Jackson, P.E.
Area Manager

Date

Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act 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 installation of a 75 cubic feet per second (cfs) temporary pumping plant at milepost (MP) 54.41 on the Delta-Mendota Canal (Check Structure No. 10) in order to reverse flow Central Valley Project (CVP) and non-CVP water previously stored in San Luis Reservoir. This draft Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-15-020, *San Luis & Delta-Mendota Water Authority 2015 Delta-Mendota Canal Reverse Flow Project*, and is hereby incorporated by reference.

Background

The State of California is currently experiencing unprecedented water management challenges due to severe drought in recent years. On January 17, 2014, the Governor proclaimed a Drought State of Emergency (State of California 2014). On December 22, 2014, provisions within this proclamation were extended until May 31, 2016. On April 1, 2015, following the lowest snowpack ever recorded in California and the ongoing drought, the Governor proclaimed a second Drought State of Emergency and directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent (State of California 2015). On April 23, 2015 the State Water Resources Control Board issued curtailment notices to junior water rights holders in the San Joaquin River watershed. The curtailment notices require junior water rights holders to stop diverting water from the watershed in order to allow it to flow to more senior water-right holders, as required by state law (State of California 2015).

In order to address impacts of the severe drought and forecasted pumping restrictions at the C.W. "Bill" Jones Pumping Plant this summer, the San Luis & Delta-Mendota Water Authority (Authority), Reclamation's non-federal operating entity for the San Luis Unit and Delta Division of the CVP, has proposed to install a temporary pumping plant at milepost (MP) 54.41 on the Delta-Mendota Canal (Check Structure No. 10) in order to reverse flow CVP and non-CVP water previously stored in San Luis Reservoir to the following CVP contractors located north of O'Neill Forebay along the Delta-Mendota Canal (see Figure 1): Byron-Bethany Irrigation District (Byron-Bethany), Banta-Carbona Irrigation District (Banta-Carbona), City of Tracy, Del Puerto Water District (Del Puerto), Patterson Irrigation District (Patterson), West Stanislaus Irrigation District (West

Stanislaus), San Luis Water District (San Luis), and Central California Irrigation District (CCID).

Proposed Action

Reclamation proposes to approve the installation of a 75 cfs temporary pumping plant at MP 54.41 on the Delta-Mendota Canal (Check Structure No. 10) in order to reverse flow CVP and non-CVP water previously stored in San Luis Reservoir to Byron-Bethany, Banta-Carbona, City of Tracy, Del Puerto, Patterson, West Stanislaus, San Luis, and CCID. Specific details of the installation, operation, and maintenance of the temporary pumping facility are included in Section 2.2 of EA-15-020.

Environmental Commitments

The Authority and CVP contractors receiving this water shall implement the environmental protection measures listed in Table 1 of EA-15-020 in order to avoid or reduce environmental consequences associated with the Proposed Action. Environmental consequences for resource areas assume the measures specified would be fully implemented.

Findings

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:

Resources Eliminated from Detailed Analysis

As described in Table 2 of EA-15-020, 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: air quality, environmental justice, global climate change, Indian Sacred Sites, Indian Trust Assets, land use, or socioeconomic resources.

Water Resources

Under the Proposed Action, previously stored CVP and non-CVP water would be released from San Luis Reservoir into O'Neill Forebay and pumped up the Delta-Mendota Canal for delivery to CVP contractors located north of O'Neill Forebay. This would allow for delivery of stored water supplies based on crop usage demand.

The delivery of CVP and non-CVP water would utilize existing facilities and would not require new infrastructure, modifications of existing facilities, or ground disturbing activities. Only the placement of a temporary pumping facility on the surface of the ground within Reclamation right-of-way will be necessary. CVP and non-CVP water would be used for existing agricultural and municipal

and industrial purposes. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions.

Biological Resources

Based on discussion included in Section 3.3 and the incorporation of environmental protection measures included in Table 1 of EA-15-020, 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.) from the Proposed Action. Therefore, no consultation with the U.S. Fish and Wildlife Service or National Marine Fisheries Service is necessary. Reclamation has also determined that the Proposed Action would have *No Take* of birds protected by the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action 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.

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 since 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 over the course of the Proposed Action, districts will request various water service actions, such as transfers, exchanges, and Warren Act contracts (conveyance of non-CVP water in CVP facilities). 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.

Biological Resources

Biological resources would continue to be affected under either alternative by other types of ongoing activities that are unrelated to the Proposed Action. Potential impacts to biological resources from the implementation of the Proposed Action would occur primarily during installation/removal activities. As these would be short-term and minor, and Authority and Contractors would employ minimization measures to reduce the potential to impact special-status species as described in Table 1, the Proposed Action, when added to other existing and proposed actions, would not contribute to adverse cumulative impacts to wildlife resources.

RECLAMATION

Managing Water in the West

Draft Environmental Assessment

San Luis & Delta-Mendota Water Authority 2015 Delta-Mendota Canal Reverse Flow Project

EA-15-020

U.S. Department of the Interior
Bureau of Reclamation

May 2015

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor 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

THIS PAGE LEFT INTENTIONALLY BLANK

Section 1 Introduction

1.1 Background

The State of California is currently experiencing unprecedented water management challenges due to severe drought in recent years. On January 17, 2014, the Governor proclaimed a Drought State of Emergency (State of California 2014). On December 22, 2014, provisions within this proclamation were extended until May 31, 2016. On April 1, 2015, following the lowest snowpack ever recorded in California and the ongoing drought, the Governor proclaimed a second Drought State of Emergency and directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent (State of California 2015). On April 23, 2015 the State Water Resources Control Board issued curtailment notices to junior water rights holders in the San Joaquin River watershed. The curtailment notices require junior water rights holders to stop diverting water from the watershed in order to allow it to flow to more senior water-right holders, as required by state law (State of California 2015).

Both the State and Federal water projects are forecasting very low storage conditions in all major reservoirs and very low exports at the Delta pumps. Based on hydrologic conditions, Reclamation declared a 0 percent allocation for South-of-Delta Central Valley Project (CVP) agricultural contractors, for the 2014 and 2015 Contract Years (a Contract Year is from March 1 through the last day of February of the following year).

1.2 Need for the Proposed Action

In order to address impacts of the severe drought and forecasted pumping restrictions at the C.W. "Bill" Jones Pumping Plant this summer, the San Luis & Delta-Mendota Water Authority (Authority), Reclamation's non-federal operating entity for the San Luis Unit and Delta Division of the CVP, has proposed to install a temporary pumping plant at milepost (MP) 54.41 on the Delta-Mendota Canal (Check Structure No. 10) in order to reverse flow CVP and non-CVP water previously stored in San Luis Reservoir to the following CVP contractors located north of O'Neill Forebay along the Delta-Mendota Canal (see Figure 1): Byron-Bethany Irrigation District (Byron-Bethany), Banta-Carbona Irrigation District (Banta-Carbona), City of Tracy, Del Puerto Water District (Del Puerto), Patterson Irrigation District, West Stanislaus Irrigation District (West Stanislaus), San Luis Water District (San Luis), and Central California Irrigation District (CCID).

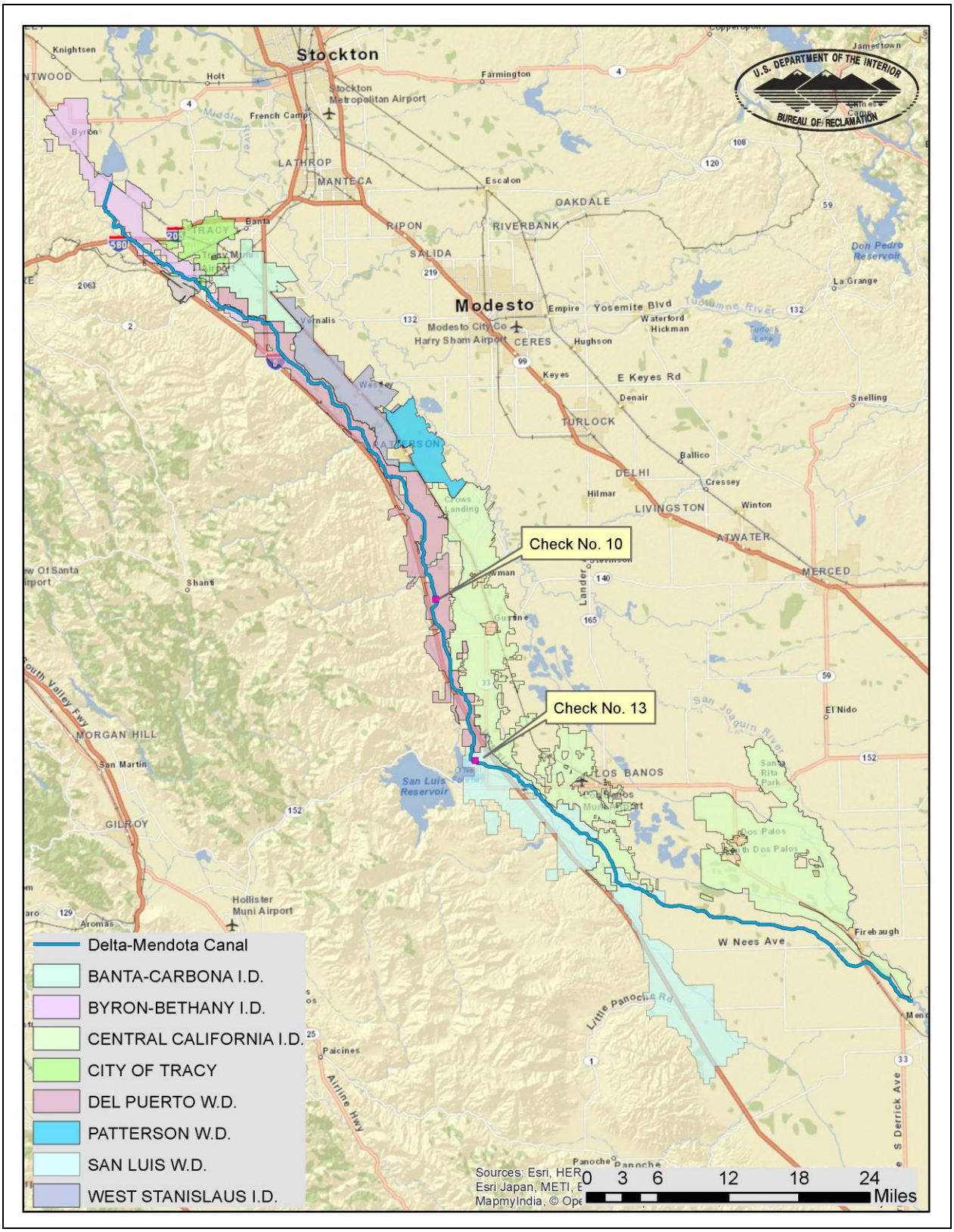

Figure 1 Proposed Action Area

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 installation of a temporary pumping plant at MP 54.41 on the Delta-Mendota Canal (Check Structure No. 10) in order to reverse flow CVP and non-CVP water previously stored in San Luis Reservoir to CVP contractors located north of O'Neill Forebay along the Delta-Mendota Canal. The water stored in San Luis Reservoir would remain in San Luis Reservoir until there is the ability to deliver the water to the CVP contractors.

2.2 Proposed Action

Reclamation proposes to approve the installation of a 75 cubic feet per second (cfs) temporary pumping plant at MP 54.41 on the Delta-Mendota Canal (Check Structure No. 10) in order to reverse flow CVP and non-CVP water previously stored in San Luis Reservoir to the CVP contractors shown in Figure 1.

Installation of the Temporary Pumping Plant

The pumping plant would consist of three 390 horsepower diesel package pumps, three 500 gallon diesel nurse tanks, and approximately 200 feet of 24-inch diameter flanged high density polyethylene piping and associated fittings (see Figure 2). Each pump and nurse tank would be equipped with a properly sized secondary containment system. The pumping plant would be placed aboveground within the Delta-Mendota-Canal's existing operations and maintenance (O&M) right-of-way. No ground disturbance would be required for installation or operation of the pumping plant and associated infrastructure. The approximate footprint of the area for the pumping plant would be 200-feet by 50 feet. A crane and boom truck would be required to set the pumps and pipes in place.

Operation and Maintenance of the Temporary Facilities

The pumping plant would be operated, as needed, from June through August of 2015. During operation, gates at Check Structure No. 10 would be closed, creating one level pool from Check No. 13 to Check No. 10 (see Figure 1). CVP

and previously banked non-CVP water would be released from San Luis Reservoir into O'Neill Forebay and then into the Delta-Mendota Canal near Check No. 13. This water would then be pumped into the upper portion of the Delta-Mendota Canal from Check No. 10 via the temporary pumping plant for delivery to CVP contractors located north of O'Neill Forebay. The upper end of the Delta-Mendota Canal would be operated as normal.

During operation of the temporary pumping plant, Authority staff would conduct daily visits to the plant for visual inspection and to perform any required maintenance. The Authority would contract for fuel delivery from a local company and fuel would be delivered on a daily basis during operation. The Authority may also contract for night security to safeguard the site from vandals.

2.2.1 Environmental Commitments

The Authority and CVP contractors receiving this water shall implement the following environmental protection measures to avoid and/or reduce environmental consequences associated with the Proposed Action (Table 1). Environmental consequences for resource areas assume the measures specified would be fully implemented.

Table 1 Environmental Protection Measures and Commitments

Resource	Protection Measure
Air Quality	Prior to operation of the diesel pumps, the Authority shall acquire all necessary permitting from the San Joaquin Valley Air Pollution Control District and implement any required mitigation related to emission impacts. A copy of the permit and required mitigation, if applicable, will be provided to Reclamation prior to the start of pumping.
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 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).
	A qualified biologist or ornithologist will conduct pre-construction surveys for migratory birds and burrowing owls in the Project Area and for 200 meters upstream and downstream of the temporary pumping plant within 30 days prior to the delivery of pumping equipment or ground disturbing activities, according to the revised California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CDFG 2012), or current guidance. If owl occupied burrows or nesting is present within this area, further review shall be made involving a Reclamation biologist to determine what measures may be available to apply that would allow the Proposed Action to go forward. No action may be allowed that would result in take of a migratory bird, including by disturbing nesting migratory birds during the breeding season (February 1 through August 31). Unless otherwise approved by a Reclamation biologist, a minimum 160-foot-wide buffer shall be placed around owl occupied burrows during the nonbreeding season (September 1 through January 31), and a 250-foot-wide buffer shall be placed around occupied burrows during the breeding season. Ground-disturbing activities shall not occur within the designated buffers without approval of a Reclamation biologist following a site evaluation.
	If installation/removal activities will occur during the nesting season (February 15 to August 15), preconstruction surveys for active Swainson's hawk nests will be conducted in and around all potential

	nest trees if any are present within 0.5 miles of project-related disturbance (including construction-related traffic). These surveys will be conducted in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000), or current guidance. If known or active nests are identified through preconstruction surveys or other means, a ½ mile buffer shall be established around all active nest sites if construction cannot be limited to occur outside the nesting season (February 15 through September 15). Worker awareness training will be conducted to ensure that avoidance measures are being implemented and biological monitoring shall be conducted to ascertain whether activities may occur and take would not result.
	A qualified biologist will conduct pre-construction surveys for San Joaquin kit fox no fewer than 14 days and no more than 30 days prior to the onset of any ground disturbing activity and the results from that survey provided to Reclamation before initiating the project. The Authority and CVP Contractors will implement the U.S. Fish And Wildlife Service (Service) Standardized Recommendations For Protection Of The Endangered San Joaquin Kit Fox Prior To Or During Ground Disturbance (Service 2011). If kit foxes or their dens are detected at any time, all construction activities associated with the project would be halted immediately. The project would be placed on hold until further analysis with Reclamation staff, and if necessary consultation with the Service, is complete. Additionally, all activity to service the temporary pumping system, including fueling shall occur during daylight hours. Vehicle speeds on non-public roadways (e.g. on the Delta-Mendota Canal levee access roadways) shall be 20 Miles Per Hour or less.
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.

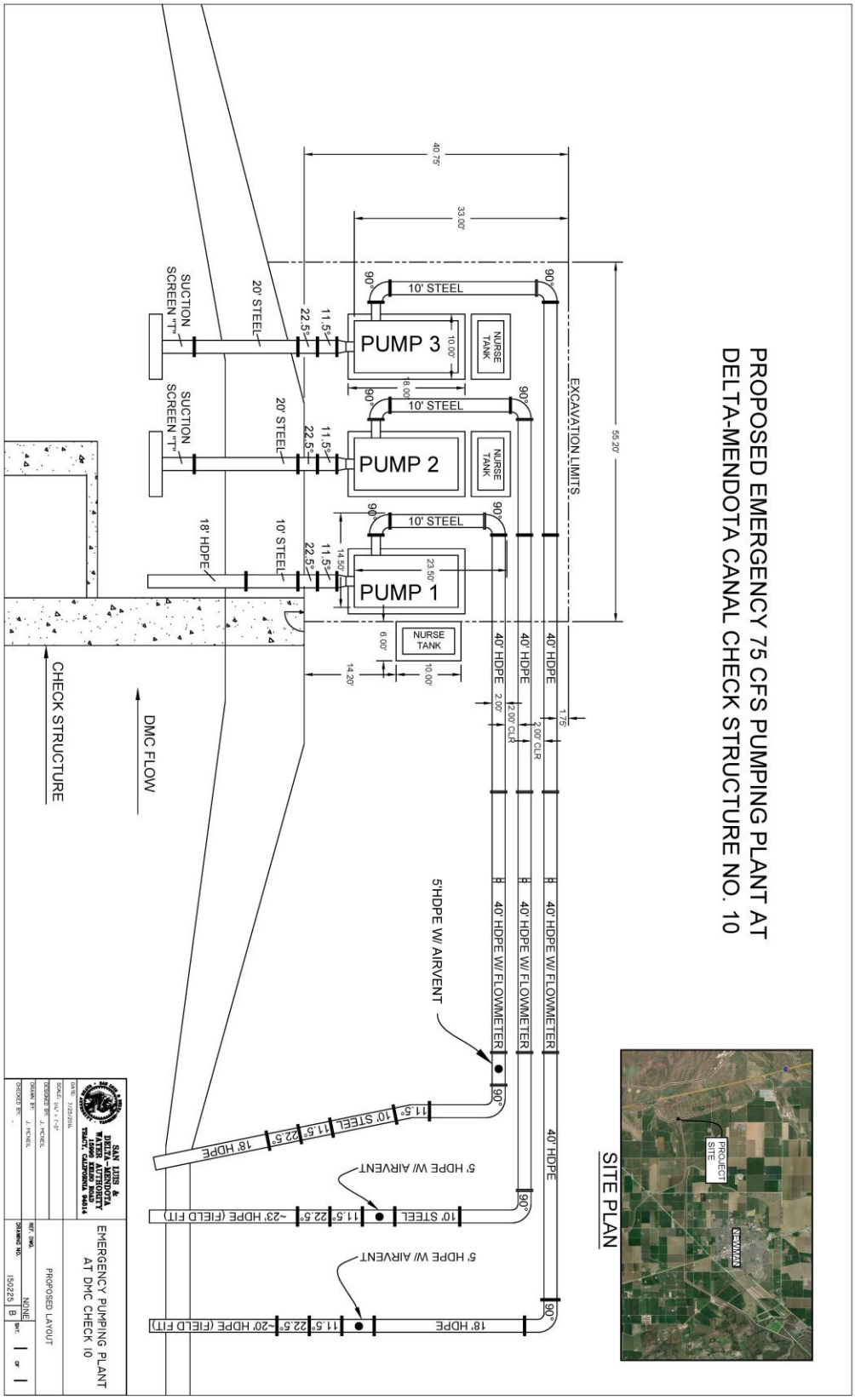

Figure 2 Proposed Temporary Pumping Plant

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 would 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. Although diesel pumps would be used to reverse flow CVP water up the Delta-Mendota Canal from O'Neill Forebay, the San Joaquin Valley Air Pollution Control District requires pumps operated within the air basin to meet strict emission standards. As the pumps are required to meet San Joaquin Valley Air Pollution Control District standards and the Authority will acquire all necessary permits for use of diesel pumps, impacts to air quality would be discountable.
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	The combined greenhouse gas emissions for the temporary pumping facility would not approach the 25,000 tons of carbon dioxide equivalent per year threshold of significance set by the Environmental Protection Agency. The pumps would also have to meet all Joaquin Valley Air Pollution Control District emission standards, which are set such that impacts from regulated emission sources would not cumulatively cause an adverse effect.
Indian Sacred Sites	The Proposed Action would not limit access to or ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area. See Appendix A for Reclamation's determination.
Land Use	None of the recipients of the CVP water would change historic land and water management practices under the Proposed Action. CVP water would move through existing facilities for ongoing agricultural and M&I purposes. The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses.
Socioeconomics	The Proposed Action would have beneficial impacts on socioeconomic resources with the recipient districts as CVP water would be used for ongoing M&I purposes and to help sustain existing crops and maintain farming within the district.

3.2 Water Resources

3.2.1 Affected Environment

Central Valley Project

The CVP is one of the nation's major water conservation developments. It extends from the Cascade Range in the north to the semi-arid but fertile plains along the Kern River in the south. Initial features of the project were built primarily to protect California's Central Valley from crippling water shortages and menacing floods, but the CVP also improves Sacramento River navigation, supplies domestic and industrial water, generates electric power, conserves fish and wildlife, creates opportunities for recreation, and enhances water quality. The CVP serves farms, homes, and industry in California's Central Valley as well as major urban centers in the San Francisco Bay Area; it is also the primary source of water for much of California`s wetlands. In addition to delivering water for farms, homes, factories, and the environment, the CVP produces electric power and provides flood protection, navigation, recreation, and water quality benefits (Reclamation 2015).

As shown in Table 3, south-of-Delta CVP agricultural allocations averaged 39 percent from 2003 to 2015. A 100 percent allocation was only received once in the last 10 years. Over the last five years the average agricultural allocation was 28 percent with a range of 0 to 80 percent. M&I allocations averaged 71 percent between 2006 and 2015. Over the last five years, the average M&I allocation was reduced to 64 percent with a range of 25 to 100 percent.

Table 3 Ten-Year Average South-of-Delta CVP Allocations

Contract Year[1]	Agricultural Allocations (%)[2]	M&I Allocations[2]
2015	0	25[3]
2014	0	50
2013	20	70
2012	40	75
2011	80	100
2010	45	75
2009	10	60
2008	40	75
2007	50	75
2006	100	100
Average	**39**	**71**

[1]A Contract Year is from March 1 of a given year through February 28/29 of the following year.
[2]As percentage of Water Service Contract total or as allocated under M&I Historic use
[3]Health and Safety needs or at least 25 percent of historical use, whichever is greater.
Source: http://www.usbr.gov/mp/cvo/vungvari/water_allocations_historical.pdf and http://www.usbr.gov/newsroom/newsrelease/index.cfm

Delta-Mendota Canal The Delta-Mendota Canal, the second largest of the CVP waterways, was completed in 1951. It includes a combination of both concrete-lined and earth-lined sections and is about 117 miles in length. The canal transports water from the Jones Pumping Plant to the Mendota Pool, which is controlled by a concrete storage dam that was constructed in 1917. The Mendota

Pool is the terminus for the Delta-Mendota Canal and is located at the confluence of the San Joaquin River and the North Fork of the Kings River, approximately 30 miles west of the city of Fresno. The Delta-Mendota Canal is divided into the upper and lower portions. The dividing point is Check 13 near Santa Nella, California. Check 13 is the intake to the O'Neill Forebay and San Luis Reservoir. Capacity in the Delta-Mendota Canal is restricted by the physical limitations of the canal and the pumping limits of the Jones Pumping Plant.

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, CVP and non-CVP water previously stored in San Luis Reservoir would not be reverse flowed up the Delta-Mendota Canal to CVP contractors located north of O'Neill Forebay. Although the water stored in San Luis Reservoir would remain in San Luis Reservoir until there is the ability to deliver the water, the CVP contractors may not receive needed water supplies to meet existing demands and keep crops alive. This would be an adverse impact to water resources for these CVP contractors.

Proposed Action

Under the Proposed Action, previously stored CVP and non-CVP water would be released from San Luis Reservoir into O'Neill Forebay and pumped up the Delta-Mendota Canal for delivery to CVP contractors located north of O'Neill Forebay. This would allow for delivery of stored water supplies based on crop usage demand.

The delivery of CVP and non-CVP water would utilize existing facilities and would not require new infrastructure, modifications of existing facilities, or ground disturbing activities. Only the placement of a temporary pumping facility on the surface of the ground within Reclamation right-of-way will be necessary. CVP and non-CVP water would be used for existing agricultural and municipal and industrial purposes. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions.

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 since 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 over the course of the Proposed Action, districts will request various water service actions, such as transfers, exchanges, and Warren Act contracts (conveyance of non-CVP water in CVP facilities). 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.

3.3 Biological Resources

3.3.1 Affected Environment

Reclamation requested an official species list from the Service on May 4, 2015 via the Sacramento Field Office's website: http://www.fws.gov/sacramento/es_species/lists/es_species_lists-overview.htm (Consultation Code: 08ESMF00-2015-SLI-0432). The list was generated for a defined polygon covering the project area in the vicinity of Check 10 of the Delta-Mendota Canal in Merced County. Reclamation also queried the California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the temporary pumping plant (CNDDB 2015). The Service and California Department of Fish and Wildlife lists, in addition to other information within Reclamation's files, were combined to create the list within Table 4.

Table 4 Special Status Species and Critical Habitat with the Potential to Occur in the Proposed Action Area

Species	Status[1]	Effects[2]	Occurrence in the Study Area
INVERTEBRATES			
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T	NE	**Absent.** There are no CNDDB records of this species within the Proposed Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way. The Proposed Action would not result in the conversion of any potentially suitable habitat for this species. There would be *No Effect* to this species.
Vernal pool fairy shrimp *Branchinecta lynchi*	T	NE	**Absent.** There are no CNDDB records of this species within the Proposed Action Area. No vernal pool habitat would be altered by the Proposed Action, so there would be *No Effect* to this species.
Vernal Pool Tadpole Shrimp *Lepidurus packardi*	E	NE	**Absent.** There are no CNDDB records of this species within the Proposed Action Area. No vernal pool habitat would be altered by the Proposed Action, so there would be *No Effect* to this species.
AMPHIIBIANS			
California tiger salamander, Central California DPS *Ambystoma californiense*	T	NE	**Absent.** There are no CNDDB records of this species within the Proposed Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way, which does not provide aquatic habitat. The Proposed Action would not result in the conversion of any potentially suitable habitat for this species. There would be *No Effect* to this species.
California red-legged frog *Rana draytonii*	T	NE	**Possible.** The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the canal, which does not provide aquatic habitat. The nearest record is over one mile away. The Proposed Action would not result in the conversion of any potentially suitable habitat for this species. There would be *No Effect* to this species.
FISHES			
Delta smelt *Hypomesus transpacificus*	T	NE	**Absent.** There are no CNDDB records of this species within the Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the canal, which does not provide aquatic habitat for the species. The Proposed Action would not affect waters inhabited by this species. There would be *No Effect* to this species.
Steelhead (Northern California DPS) *Oncorhynchus mykiss*	T	NE	**Absent.** There are no CNDDB records of this species within the Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the canal, which does not provide aquatic habitat for the species. The Proposed Action would not affect waters inhabited by this species. There would be *No Effect* to this species.
REPTILES			

Species	Status[1]	Effects[2]	Occurrence in the Study Area
Blunt-nosed leopard lizard *Gambelia sila*	E	NE	**Absent.** There are no CNDDB records of this species within the Proposed Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the canal. The Proposed Action would not result in the conversion of any potentially suitable habitat for this species. There would be *No Effect* to this species.
Giant garter snake *Thamnophis gigas*	T	NE	**Absent.** There are no CNDDB records of this species within the Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the concrete-lined canal, which does not provide aquatic habitat for the species. The Proposed Action would not affect waters inhabited by this species. There would be *No Effect* to this species.
BIRDS			
Swainson's hawk *Buteo swainsoni*	MBTA	NT	**Absent.** There are no CNDDB records of this species within the Proposed Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the canal. The Proposed Action would not result in the conversion of any potentially suitable habitat for this species. There would be *No Take* to this species.
MAMMALS			
Fresno kangaroo rat *Dipodomys nitratoides exilis*	E	NE	**Absent.** There are no CNDDB records of this species within the Proposed Action Area. The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the canal. The Proposed Action would not result in the conversion of any potentially suitable habitat for this species. There would be *No Effect* to this species.
San Joaquin kit fox *Vulpes macrotis mutica*	E	NE	**Possible.** The Proposed Action Area consists largely of disturbed Delta Mendota Canal right-of-way and the canal. Five of the eight records are from 1975 and the most recent is from 1992, and located about three miles from Check 10. The Proposed Action would not result in the conversion of any potentially suitable habitat for this species. 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
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 study area and/or habitat requirements not met
Possible: Species has the potential to occur in the action area

The Proposed Action Area includes an area extending approximately 100 feet "upstream" and "downstream" of Check 10 on the Delta-Mendota Canal. This

area includes the canal levee and service road on top of it, the inner prism and the wetted area from the delivery point of San Luis Reservoir/O'Neill Forebay to the Delta-Mendota Canal at Check 13, upstream to and above Check 10.

The land immediately adjacent and west of Check 10 on the Delta-Mendota Canal where the temporary pumping plant would be located at Check 10 is untilled grassland. This habitat extends approximately 0.6 mile westward from the Delta-Mendota Canal right-of-way to the Interstate 5 Highway (Interstate 5), and approximately 0.4 and 0.8 miles north and south of Check 10, respectively. The Delta-Mendota Canal skirts the foothills and passes adjacent to a mixture of grasslands and agricultural lands along the west side of the canal. In contrast, the lands bordering the east side of the Delta-Mendota Canal are almost purely agricultural crops for many miles.

The Delta-Mendota Canal service roadway on the canal levee is kept barren and is subject to frequent vehicular traffic. Disturbance along the Delta-Mendota Canal is frequent because of O&M activities, including blading and disking, and herbicide applications (Service 2005).

The barren service roadway and concrete inner prism of the Delta-Mendota Canal provide negligible habitat for wildlife. The wetted canal provides limited habitat for fish, principally striped bass (*Marone saxatalis*) and catfish (*Ictalarus* spp.). Occasionally waterfowl (Anseriformes) and coots (*Fulica americana*) use the canal as a resting site.

Special-Status Species

As shown in Table 4, special-status species that potentially could occur in the Proposed Action area are the California red-legged frog, burrowing owl, Swainson's hawk, and San Joaquin kit fox. There is no proposed or designated critical habitat within the Proposed Action Area.

California red-legged frog Adults breed in wetlands and stock ponds or low flow streams with riparian cover. During non-breeding periods, this species can occur in uplands in grassland, oak savannah up to two miles from breeding areas. They also are found along forested riparian habitat. Rodent burrows may be used for harborage while in grassland and savannah habitat in uplands. Although this species at one time occupied wetlands in the San Joaquin Valley floor, it has since been extirpated from the valley floor. The species does, however, persist in foothill areas adjacent to the Valley floor and reaches edges of the Valley floor, particularly where stream courses flow into the Valley.

There is one record from 1993 for California red-legged frog approximately 1.3 miles south of Check 10. There are no records for this species in the Proposed Action Area. An underdrain crosses the San Luis Canal/California Aqueduct and then crosses under Interstate-5 before apparently directing flowage from the hills west of Interstate -5, downslope to terminate near or against the toe of the Delta-Mendota Canal. A slight depression may exist, and small trees surround a

potential depression where water may collect. This site may provide habitat for California red-legged frog. Burrows, if present in the Proposed Action Area, could be used by this species, although Check 10 is a considerable distance from likely wetted areas that may be used by this species.

Burrowing owl This small ground-dwelling owl is a yearlong-resident of the San Joaquin Valley and protected under the MBTA. Burrowing owls use burrows year-round. CNDDB records include this species within 5 miles of Check 10 on the Delta-Mendota Canal (CNDDB 2015) but nothing in the Proposed Action Area. Burrowing owl exhibits high site fidelity and utilize ground squirrel and other mammal burrows that are appropriated. These owls are typically found in shortgrass grasslands, open scrub habitats, and a variety of open human-altered environments, such as golf courses, airport runways, canal right-of ways, and agricultural fields (CDFG 1995).

There are two records of burrowing owl approximately seven miles south of Check 10 (CNDDB 2015).

Swainson's hawk Swainson's hawk is a federal species of concern and protected under MBTA. Swainson's hawks begin arriving on their breeding grounds in the Central Valley in February. The nesting season generally begins after February and is completed by August. Swainson's hawks often nest at the edge of the valley and use lone trees or groves of trees in agricultural fields (CDFG 1994). Conversion of habitat for agriculture is a major contributor to the decline of this species.

There are no large trees in the immediate vicinity of Check 10 that could be used by nesting birds, such as Swainson's hawk's. However, this species is known to nest about three miles northwest of the Check 10. Swainson's hawks commonly forage in open grasslands and sometimes in alfalfa fields. They would not be expected to forage in the disturbed habitat at Check 10.

San Joaquin kit fox The San Joaquin kit fox is federally listed as an endangered species. They currently inhabit western and southern San Joaquin valley in grassland and scrubland communities. San Joaquin kit fox excavate their own dens, or use those dug by other animals. Human-created features (culverts, abandoned pipelines, and banks in sumps or roadbeds) also are used. The diet for San Joaquin kit fox varies based on prey availability, and includes small to mid-sized mammals, ground-nesting birds, and insects. Primary reasons for the species decline include loss and degradation of habitat (Service 1998).

There are eight records of San Joaquin kit fox within ten miles of Check 10. Six of the eight records are for San Joaquin kit fox from uplands on the west side of Interstate 5 (CNDDB 2015), a 4-lane highway. The closest record to Check 10 is from east of Interstate 5 and approximately 3 miles south of Check 10, recorded

from 1993 (CNDDB 2015). One additional record for the species is recorded from 1989 at San Luis National Wildlife Refuge.

San Joaquin kit fox could potentially use the Proposed Action Area for movement or foraging. The agricultural lands and roads, including levee roads, present challenges for this species and they are generally not suitable for long-term occupation by kit foxes (Warrick et al. 2007). Ground disturbance is frequent (e.g., tilling, maintenance, harvesting) in agricultural lands, which can destroy dens. Also, most agricultural lands in the Valley are irrigated, which can flood and collapse dens. Agricultural lands also are subject to intensive chemical applications of fertilizers and pesticides. Use of rodenticides is common in some agricultural environments and is particularly problematic for kit foxes due to the potential for secondary poisoning. For the reasons described above, in addition to the relative sterility of most agricultural fields (e.g., weed suppression), there is a paucity of prey available to prey for San Joaquin kit fox.

3.3.2 Environmental Consequences

No Action

Under the No Action Alternative, there would be no impact to biological resources as conditions would remain the same as existing conditions.

Proposed Action

The Proposed Action Area provides minimal habitat to support fish and wildlife and this resource would be minimally affected, if at all, from the Proposed Action. Some individual non-sensitive fish might be attracted to the structure of intake pipes submerged in the canal at Check 10 and they could be sucked through the pumps, but delivery of water to the Delta-Mendota Canal and the pumping of water to above Check 10 would minimally affect fish populations. To reduce the potential of fish and debris being sucked into the pumps, screens are installed on the suctions lines.

No sensitive fish species occur in the Proposed Action Area, so none would be affected. There is no critical habitat in the Proposed Action Area and so there would be no affect to critical habitat.

California red-legged frog The nearest record for this species is at considerable distance from the Proposed Action Area. There are no wetlands or suitable aquatic habitat in the Proposed Action Area. Burrows, if present in the Delta-Mendota Canal levee could provide harborage for this species, but use of burrows in the Proposed Action Area would be improbable because of the distance for potential aquatic habitat. Additionally, the Proposed Action would not affect this species, should it use burrows near Check 10.

Burrowing owls Mammal burrows could exist at Check 10, however their potential use by burrowing owls is small because of the ongoing and frequent disturbances from maintenance of service roads and other O&M activities along

the Delta-Mendota Canal (Service 2005). Placement of a temporary pumping plant at Check 10 could disturb nests if they are located nearby. However, Reclamation has included environmental protection measures (see Table 1) in the Proposed Action to prevent take and minimize disturbance of burrowing owls.

Swainson's hawks The Proposed Action could have minor potential to affect nesting Swainson's hawks. Trees for nesting are absent from the Proposed Action Area; however, if a Swainson's hawk nest occurred near the temporary pumping plant, the pumping plant's installation/removal using trucks, cranes, or a forklift or operation of the temporary pumping plant pumps could create noise and disturbance sufficiently close to a nest and could cause disturbance that may lead to reduced nest attention and potential abandonment. Reclamation has included environmental protection measures (see Table 1) in the Proposed Action would avoid impacts to nesting Swainson's hawks.

San Joaquin kit fox If San Joaquin kit fox occurred in the Proposed Action Area, they most likely would be moving through the area. All project work would occur during daylight, when San Joaquin kit fox are generally inactive and inside burrows. Because of this, and because the Proposed Action Area is highly disturbed, i.e. the Delta-Mendota Canal service roads are relatively unattractive as habitat, San Joaquin kit fox are unlikely to occur there. If San Joaquin kit fox are present in the vicinity, they would not be affected. The temporary pumping plant would not preclude access or movement or foraging of San Joaquin kit fox. Reclamation has included environmental protection measures (see Table 1) in the Proposed Action would avoid impacts to San Joaquin kit fox. The preconstruction survey for this species would identify sign or other evidence of the presence of San Joaquin kit fox near Check 10, and if such sign is discovered, further consultation with the U.S. Fish and Wildlife Service would be conducted before the project could go forward.

Based on the discussion above and the incorporation of environmental protection measures included in Table 1, 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.) from the Proposed Action. Therefore, no consultation with the Service or National Marine Fisheries Service is necessary. Reclamation has also determined that the Proposed Action would have *No Take* of birds protected by the MBTA (16 U.S.C. §703 et seq.).

Cumulative Impacts

Biological resources would continue to be affected under either alternative by other types of ongoing activities that are unrelated to the Proposed Action. Potential impacts to biological resources from the implementation of the Proposed Action would occur primarily during installation/removal activities. As these would be short-term and minor, and Authority and Contractors would employ minimization measures to reduce the potential to impact special-status species as described in Table 1, the Proposed Action, when added to other existing and

proposed actions, would not contribute to adverse cumulative impacts to wildlife resources.

3.4 Cultural Resources

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the National Historic Preservation Act requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 CFR Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking will have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects, determine if historic properties are present within that area of potential effects, determine the effect that the undertaking will have on historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

3.4.1 Affected Environment

The only cultural resource present in the area of potential effects is the Delta-Mendota Canal. The Delta-Mendota Canal is part of the Delta Division of the CVP, a large-scale Federal water storage, transfer, and delivery system that conveys water from California's wetter northern regions to the more arid central and southern regions of the state. In 2006, Reclamation drafted a National Register Multiple Property Listing for the CVP that includes its history and eligibility for listing. This nomination is still in draft as the consultations have yet to be completed. The CVP was designed to have water from a northern reservoir (Shasta Lake) flow south in natural watercourses to the Sacramento-San Joaquin Delta, where a short channel cut (Delta Cross Channel) would redirect Sacramento River water to a pumping plant (Tracy Pumping Plant). This pumping plant would lift this water into the headworks of a highline canal (Delta-Mendota Canal) in the western Coastal Range foothills for gravity transport to a connection point with the San Joaquin River (Mendota Pool), approximately 30 miles east of Fresno. With construction completed in 1952, the Delta-Mendota

Canal is an approximately 116 mile long canal that runs from one mile south of the Tracy Pumping Plant (renamed in 2006 as the C.W. "Bill" Jones Pumping Plant) to its terminus at Mendota Pool.

Reclamation considers the Delta-Mendota Canal to be eligible for listing on the National Register as a contributing property (a historic property) to the CVP which is eligible for listing for its association with the development of irrigation and agriculture in California.

3.4.2 Environmental Consequences

No Action

The No Action Alternative would have no effect on cultural resources. Reclamation would have no requirement to comply with Title 54 USC § 306108, commonly known as Section 106 of the National Historic Preservation Act, as no undertaking would be established.

Proposed Action

Reclamation's proposed approval of the installation of a temporary pumping plant within the Delta-Mendota Canal's right-of-way and into the canal would be a Federal undertaking requiring compliance with Title 54 USC § 306108, commonly known as Section 106 of the National Historic Preservation Act. Under this Act, Reclamation must consider the effects of this undertaking on historic properties, defined as cultural resources that are listed on or eligible for listing on the National Register of Historic Places (National Register). Reclamation followed the process in the Section 106 implementing regulations (36 CFR Part 800) to fulfill this compliance requirement.

The Proposed Action would only temporarily reverse the direction of the historic gravity flows, restoring the direction once the pumping plant is no longer used. Visual impacts to the historic setting of the canal would also be temporary. Pursuant to 36 CFR § 800.4(d)(1), Reclamation finds no historic properties affected for the Proposed Action as there would be no effect to the only historic property present, the Delta-Mendota Canal. As required, Reclamation notified SHPO of this finding of effect.

Cumulative Impacts

The Proposed Action would not contribute to any cumulative impacts on the Delta-Mendota Canal as all actions are temporary.

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.

4.2 National Historic Preservation Act (16 U.S.C. § 470 et seq.)

The National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.), requires that Federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the National Historic Preservation Act.

Section 106 of the National Historic Preservation Act requires Federal agencies to consider the effects of Federal undertakings on historic properties, properties determined eligible for inclusion in the National Register. Compliance with Section 106 follows a series of steps that are designed to identify interested parties, determine the area of potential effects, conduct cultural resource inventories, determine if historic properties are present within the area of potential effects, and assess effects on any identified historic properties.

Reclamation is consulting with SHPO on its determination of no adverse effects to historic properties under 36 CFR § 800.5(b).

THIS PAGE LEFT INTENTIONALLY BLANK

Section 5 Preparers and Reviewers

Rain L. Emerson, M.S., Supervisory Natural Resources Specialist, SCCAO
Ned M. Gruenhagen, Ph.D., Wildlife Biologist, SCCAO
Laureen Perry, Regional Archaeologist, MP-153
Scott Taylor, Acting Supervisory Repayment Specialist, SCCAO – reviewer
David E. Hyatt, Resources Management Division Chief – reviewer

THIS PAGE LEFT INTENTIONALLY BLANK

Section 6 References

Bureau of Reclamation (Reclamation). 2015. Central Valley Project – General Description. Website: http://www.usbr.gov/projects/Project.jsp?proj_Name=Central+Valley+Project. Accessed: March 12, 2015.

California Department of Fish & Game (CDFG). 1995. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game, Sacramento, CA.

California Department of Fish & Game (CDFG). 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California. California Department of Fish and Game, Sacramento, CA).

California Natural Diversity Database (CNDDB). 2015. CNDDB personal computer program updated February, 2015. Sacramento, CA. From web at http://www.dfg.ca.gov/biogeodata/cnddb/rf_ftpinfo.asp.

U.S. Fish and Wildlife Service (Service). 1998. Recovery plan for the upland species of the San Joaquin Valley, California. Region 1, Portland, OR. 319 pp.

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

Appendix A
Reclamation's Indian Trust Assets Determination

Emerson, Rain <remerson@usbr.gov>

Re: ITA Determination Request - Drought Project (15-020)

STEVENSON, RICHARD <rstevenson@usbr.gov> Tue, May 5, 2015 at 4:10 PM
To: "Emerson, Rain" <remerson@usbr.gov>

Rain,

I have reviewed the project description set forth in EA-15-020.. This project does not have the potential to adversely impact Indian Trust Assets. Those assets range from approximately 32-48 miles from the Delta-Mendota canal.

Richard Stevenson
Deputy Regional Resource Manager

On Fri, May 1, 2015 at 3:45 PM, Emerson, Rain <remerson@usbr.gov> wrote:

> Good afternoon Dick,
>
> Attached is a project description for your review.
>
> Rain L. Emerson, M.S.
> *Supervisory Natural Resources Specialist*
> Bureau of Reclamation, South-Central California Area Office
> 1243 N Street, Fresno, CA 93721
> Work Ph: 559-487-5196
> Cell Ph: 559-353-4032

--

Richard M. Stevenson
Deputy Regional Resources Manager
2800 Cottage Way, MP-400
Sacramento, CA 95825-1898
(916) 978-5264
(916) 396-3380 iPhone
rstevenson@usbr.gov