

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Mercy Springs Water District and Fresno Slough Water District Multi-Year Transfers to Angiola Water District

FONSI-12-021

Recommended by:


Rain Healer
Natural Resources Specialist
South-Central California Area Office

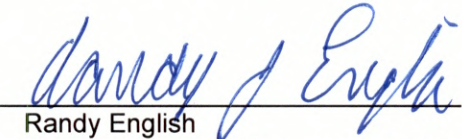
Date: 08/13/2012

Concurred by:


Chuck Siek
Supervisory Natural Resources Specialist
South-Central California Area Office

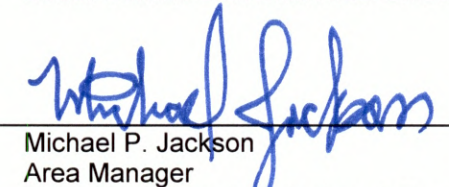
Date: 8/14/12

Concurred by:


Randy English
Chief, Resources Management Division
South-Central California Area Office

Date: 8/21/12

Approved by:


Michael P. Jackson
Area Manager
South-Central California Area Office

Date: 8/23/2012



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 (EIS) is not required to approve a series of annual transfers between Mercy Springs Water District (Mercy Springs), Fresno Slough Water District (Fresno Slough) and Angiola Water District (Angiola). This Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-12-021, *Mercy Springs Water District and Fresno Slough Water District Multi-Year Transfers to Angiola Water District*, and is hereby incorporated by reference.

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA between July 10, 2012 and August 8, 2012. No comments were received.

Background

The State of California has historically experienced periods of drought and flooding. Water agencies strive to prepare for varying water supply conditions to the extent possible so that agricultural or urban water supply needs can be met regardless of the water year type. This is done by having a variety of water supply options that can be implemented as needed. Having the ability to move water supplies from an area of greater supply to an area of lesser supply is one strategy that can be useful.

Mercy Springs is a Central Valley Project (CVP) contractor with a water service contract with Reclamation for up to 2,842 acre-feet per year (AFY) CVP water from the Sacramento-San Joaquin River Delta (Delta). Fresno Slough is a CVP contractor with a water service contract with Reclamation for up to 4,000 AFY from the Delta.

Angiola, a non-CVP contractor, is a member unit of the Tulare Lake Basin Water Storage District (TLBWSD), a State Water Project (SWP) contractor with a water service contract with the California Department of Water Resources (DWR).

Mercy Springs and Fresno Slough have requested, pursuant to their respective CVP contracts, approval from Reclamation to annually transfer up to 1,300 AFY of Mercy Springs' CVP water and up to 4,000 AFY of Fresno Slough's CVP water over a nine-year period to Angiola.

Proposed Action

Reclamation proposes to approve a series of annual transfers of up to 1,300 AFY of Mercy Springs' CVP water and up to 4,000 AFY of Fresno Slough's CVP water to Angiola over a nine-year period.

Angiola can only receive the proposed transfers off the California Aqueduct (through TLBWSD's existing turnouts); consequently, delivery of the proposed transfers will need to occur as operational exchanges between Reclamation and DWR. Under the operational exchange, Mercy Springs' and Fresno Sloughs' CVP water will be released from the federal share of San Luis Reservoir by Reclamation and made available to DWR at O'Neill Forebay.

DWR will then deliver the transferred water to Angiola under Article 55 of TLBWSD's SWP contract.

No additional diversions from the Delta are needed to deliver this water as they are part of the existing diversions of the CVP.

No new infrastructure, modifications of facilities, or ground disturbing activities will be needed for movement of this water. No native or untilled land (fallow for three years or more) will be cultivated with water involved with these actions.

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

Water Resources

The Proposed Action will not affect CVP operations and will not change existing diversion points from the Delta under Reclamation's water rights permits. The Proposed Action will not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes. There will be no change in the point of diversion for the transferred water as the point of diversion in the Delta (Jones Pumping Plant) will be the same. In addition, as the water is already part of the baseline conditions for diversion from the Delta, there will be no increase in total diversions from the Delta as a result of these two transfers.

No activities such as dredging or filling of wetlands or surface waters will be required for implementation of the Proposed Action, therefore permits obtained in compliance with Clean Water Act are not required.

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The Proposed Action will not affect either concern as there are none in the Proposed Action area.

Under the Proposed Action, the water supply allocated to Angiola by Mercy Springs and Fresno Slough will be put to beneficial use within Angiola's boundaries. Since 2006, Mercy Springs remaining CVP allocation has not been utilized in Mercy Springs, as this water supply is not associated with any lands as described in Section 3.1.1 in EA-12-021 and has historically been available for transfer to other CVP contractors or left unused. The principal water supply used in Mercy Springs is subsurface agricultural drainage water applied by Panoche Drainage District to irrigate salt tolerant crops as part of the San Joaquin River Improvement Project (SJRIIP). Transfer of 1,300 AF of Mercy Springs CVP allocation to Angiola will not increase the need for additional sources of supply, lead to a change in groundwater use in Mercy Springs, or increase groundwater pumping beyond levels currently used for SJRIIP supplemental irrigation and shallow groundwater management. Fresno Slough has historically transferred similar amounts of its available surface water supply out of the district. In addition, the groundwater supply

available for use within Fresno Slough will not change, and continues to be available for use to supplement Tranquillity Irrigation District's supplies that can be transferred in and could be used to farm a portion of the acreage. Therefore, there will be no significant impacts to water resources within Mercy Springs or Fresno Slough as a result of the Proposed Action.

Conveying water under Article 55 of TLBWSD's SWP contract will not result in increased diversions from the Delta by DWR, as the water is already part of the baseline conditions for diversion from the Delta. The conveyance of up to 5,300 AFY of CVP water in the SWP system under Article 55 will not occur unless capacity exists. No changes will occur to water quantities, diversions, conveyance practices or deliveries.

The Proposed Action will not affect CVP or SWP operations and will not change existing diversion points from the Delta under Reclamation's or DWR's water rights permits. Because the shortage provisions in the Mercy Springs CVP contract remain applicable to the transferred water, the Proposed Action will not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes.

As Angiola cannot beneficially use their allocation of Mercy Springs' and Fresno Sloughs' CVP supply within Mercy Springs and Fresno Slough, the transfers will help to make the most beneficial use of available CVP supplies. Transfer of up to 5,300 AFY of CVP water supply to Angiola will help increase water supply reliability in Angiola and will reduce reliance on groundwater pumping. Therefore, the Proposed Action will have beneficial impacts to water resources within Angiola.

Land Use

Under the Proposed Action, neither Fresno Slough and Mercy Springs, nor Angiola will change historic land and water management practices. Fresno Slough and Mercy Springs CVP water will move through existing facilities for delivery to lands within Angiola and will be used on existing crops. The water will not be used to place untilled or new lands into production, or to convert undeveloped land to other uses. Therefore, there will be no change to land use.

Biological Resources

Under the Proposed Action, the water will be conveyed in existing facilities to established agricultural lands. No native lands or lands fallowed and untilled for three or more years will be disturbed as this water will be used on existing farmed lands. The Proposed Action will not affect migratory birds, imperiled species, unique habitats, or species and habitats protected by federal or state law. No Essential Fish Habitat exists in the authorized Place of Use within the bounds of the agencies; therefore the Proposed Action could not affect Essential Fish Habitat. Reclamation has determined that the Proposed Action will have no effect on Federally listed threatened or endangered species, designated critical habitat, or proposed or candidate species and critical habitat and no take of birds protected under the Migratory Bird Treaty Act.

Cultural Resources

There will be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action will facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities will occur as part of the Proposed Action.

The pumping, conveyance, and storage of water will be confined to existing wells, pumps, and CVP facilities. Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Indian Sacred Sites

Reclamation has determined that there will be no impacts to Indian sacred sites as a result of the Proposed Action since the Proposed Action will not limit access to and 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

Reclamation has determined that the Proposed Action will not impact Indian Trust Assets as there are none in the Proposed Action area.

Environmental Justice

The Proposed Action will not cause dislocation, changes in employment, or increase flood, drought, or disease nor will it disproportionately impact economically disadvantaged or minority populations. The Proposed Action may support and maintain jobs that low-income and disadvantaged populations rely upon through increased irrigation water supply reliability. Therefore, there may be a slight beneficial impact to minority or disadvantaged populations as a result of the Proposed Action.

Socioeconomic Resources

Under the Proposed Action, the status quo of agriculture will be maintained. CVP contractors will re-distribute CVP water to balance out local deficiencies in water supply and promote efficient irrigation of crops. The most productive farmland will remain in production. Seasonal labor requirements will have very little change, and businesses that support agriculture will not be financially harmed. The transfer will allow more productive and labor-intensive land to remain in production, thereby potentially improving socioeconomic conditions in the region.

Air Quality

Under the Proposed Action, CVP water will be delivered off the California Aqueduct to Angiola rather than off the Delta-Mendota Canal (DMC) to Mercy Springs and Fresno Slough. This will occur via an operational exchange between Reclamation and DWR. Under the operational exchange, Mercy Springs' and Fresno Sloughs' CVP water will be released from the federal share of San Luis Reservoir by Reclamation and made available to DWR at O'Neill Forebay. DWR will then deliver the transferred water to Angiola under Article 55 of TLBWSD's SWP contract. Pumping for deliveries by DWR and Reclamation will occur with or without the Proposed Action and is therefore part of the existing baseline conditions. Delivery of this water will require no modification of existing facilities or construction of new facilities. CVP and SWP water will be moved either via gravity or electric pumps which will 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, water under the Proposed Action is water that would be delivered from existing facilities under either alternative and is therefore part of the existing conditions. In addition, the generating power plant is required to operate under permits issued by the air quality control districts. 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 will involve physical changes to the environment or construction activities that could impact global climate change. Generating power plants that produce electricity to operate the electric pumps produce carbon dioxide that could potentially contribute to GHG emissions; however, water under the Proposed Action is water that will be delivered from existing facilities under either alternative and is therefore part of the existing conditions. There will be no additional impacts to global climate change as a result of the Proposed Action. 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 will be addressed within Reclamation's operation flexibility and therefore surface water resource changes due to climate change will be the same with or without either alternative.

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. To determine whether cumulatively significant impacts are anticipated from the Proposed Action, the incremental effect of the Proposed Action was examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area.

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drives requests for water service actions. Water districts aim to provide water to their customers based on available water supplies and timing, all 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. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

Existing or foreseeable projects, in addition to the proposed transfers from Fresno Slough and Mercy Springs to Angiola, which could affect or could be affected by the Proposed Action, include the following:

South-of-Delta Accelerated Water Transfer Program The Central Valley Project Improvement Act (CVPIA) was signed into law in 1992 to mandate changes in management of the CVP. In addition to protecting, restoring, and enhancing fish and wildlife, one of the other purposes of the CVPIA is to increase water-related benefits provided by the CVP to the State of California through expanded use of voluntary water transfers and improved water conservation. To assist California urban areas, agricultural water users, and others in meeting their future water

needs, Section 3405(a) of the CVPIA authorizes all individuals or districts who receive CVP water under water service or repayment contracts, water rights settlement contracts or exchange contracts to transfer, subject to certain terms and conditions, all or a portion of the water subject to such contract to any other California water users or water agency, State or Federal agency, Indian Tribe, or private non-profit organization for project purposes or any purpose recognized as beneficial under applicable State law.

After enactment of the CVPIA, Reclamation has historically acknowledged water transfers and/or exchanges between CVP contractors geographically situated within the same region and who are provided water service through the same CVP facilities under an Accelerated Water Transfer Program (AWTP). In 2010, Reclamation approved the continuation of the South-of-Delta AWTP through February 29, 2016. Reclamation prepared EA-10-051, *Accelerated Water Transfers and Exchanges, Central Valley Project, South of Delta Contractors 2011-2015* and a FONSI was signed on February 14, 2011.

Byron Bethany Irrigation District Long-term Exchange Agreement Reclamation has received a request from Byron Bethany Irrigation District to enter into a 40-year contract for the introduction of up to 4,725 AFY of their non-CVP surface water in to the DMC for exchange with Reclamation. Reclamation is currently preparing an EA for the proposed project.

Water service actions, like those described above, do not result in increases or decreases of water diverted from rivers or reservoirs. Each water service transaction involving CVP and non-CVP water undergoes environmental review prior to approval. The Proposed Action and No Action alternative and other similar projects will not interfere with the projects listed above, nor will they hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Neither alternative, when added to other water service actions, will result in cumulative effects to surface water resources beyond historical fluctuations and conditions.

Existing conditions, such as loss of habitat due to urbanization and expanding agricultural lands that cumulatively impact listed species and their habitats, are expected under either alternative. The annual transfer of up to 5,300 AFY of CVP water is not expected to contribute cumulatively to habitat loss as neither area is in an area of likely urbanization and has long been fully developed for agriculture. Further, this water will be used on existing crops in Angiola and will not cause additional fallowing in Mercy Springs or Fresno Slough as this water was not used on those lands. In addition, all conditions under the existing contract that protect biological resources will remain. Therefore, there will be no cumulative adverse impacts to biological resources as a result of the Proposed Action.

The Proposed Action, when added to other existing and proposed actions, will have a slight beneficial contribution to cumulative impacts for minority or disadvantaged populations as it will help support and maintain jobs that low-income and disadvantaged populations rely upon due to increased irrigation water supply reliability.

Over the long term, the Proposed Action will have slight beneficial impacts to socioeconomic resources within Angiola as the transferred water will increase the amount of Angiola's surface

water supply. This will subsequently help to maintain the economic viability of irrigated agriculture within the district, and reduce the reliance on groundwater pumping. When added to other similar existing and proposed actions, the Proposed Action will contribute to beneficial cumulative impacts to socioeconomic resources within Angiola.

As the Proposed Action will not result in any direct or indirect impacts on land use, cultural resources, Indian Sacred Sites, Indian Trust Assets, air quality, or global climate, it will not contribute cumulatively to impacts on these resources.

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Mercy Springs Water District and Fresno Slough Water District Multi-Year Transfers to Angiola Water District

EA-12-021



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

August 2012

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.

Table of Contents

Section 1	Introduction.....	1
1.1	Background.....	1
1.2	Purpose and Need	1
1.3	Reclamation’s Legal and Statutory Authorities and Jurisdiction Relevant to the Proposed Federal Action.....	2
1.4	Scope.....	2
1.5	Resources Eliminated from Further Analysis	5
1.6	Resources Requiring Further Analysis	6
Section 2	Alternatives Including the Proposed Action.....	7
2.1	No Action Alternative.....	7
2.2	Proposed Action.....	7
Section 3	Affected Environment and Environmental Consequences	9
3.1	Water Resources	9
3.2	Biological Resources	14
3.3	Environmental Justice	19
3.4	Socioeconomic Resources	20
Section 4	Consultation and Coordination	23
4.1	Public Review Period.....	23
4.2	Fish and Wildlife Coordination Act (16 U.S.C. § 661 et seq.).....	23
4.3	Endangered Species Act (16 U.S.C. § 1531 et seq.).....	23
4.4	National Historic Preservation Act (16 U.S.C. § 470 et seq.)	24
4.5	Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.)	24
Section 5	List of Preparers and Reviewers	25
Section 6	Acronyms and Abbreviations	26
Section 7	References	27

List of Tables and Figures

Figure 1-1	Proposed Action Area	3
Table 3-1	Mercy Springs Water District Historical Water Supply.....	9
Table 3-2	Fresno Slough Water District Historical Water Supply	10
Table 3-3	Angiola Water District Historical Water Supply.....	11
Table 3-4	Federal Status Species for Proposed Action Area.....	15
Table 3-5	2010 Estimated Demographics for Fresno, Kings and Tulare Counties	20
Table 3-6	2011 Preliminary Monthly Labor Force Data	21

THIS PAGE LEFT INTENTIONALLY BLANK

Section 1 Introduction

The Bureau of Reclamation (Reclamation) provided the public with an opportunity to comment on the Draft Finding of No Significant Impact (FONSI) and Draft Environmental Assessment (EA) between July 10, 2012 and August 8, 2012. No comments were received. Changes from the draft EA that are not minor editorial changes are indicated by vertical lines in the left margin of this document.

1.1 Background

The State of California has historically experienced periods of drought and flooding. Water agencies strive to prepare for varying water supply conditions to the extent possible so that agricultural or urban water supply needs can be met regardless of the water year type. This is done by having a variety of water supply options that can be implemented as needed. Having the ability to move water supplies from an area of greater supply to an area of lesser supply is one strategy that can be useful.

Mercy Springs Water District (Mercy Springs) is a Central Valley Project (CVP) contractor with a water service contract with Reclamation for up to 2,842 acre-feet per year (AFY) CVP water from the Sacramento-San Joaquin River Delta (Delta). Fresno Slough Water District (Fresno Slough) is a CVP contractor with a water service contract with Reclamation for up to 4,000 AFY from the Delta.

Angiola Water District (Angiola), a non-CVP contractor, is a member unit of the Tulare Lake Basin Water Storage District (TLBWSD), a State Water Project (SWP) contractor with a water service contract with the California Department of Water Resources (DWR).

Mercy Springs and Fresno Slough have requested, pursuant to their respective CVP contracts, approval from Reclamation to annually transfer up to 1,300 AFY of Mercy Springs' CVP water and up to 4,000 AFY of Fresno Slough's CVP water over a nine-year period to Angiola.

1.2 Purpose and Need

California has experienced a severe drought in recent years that has reduced water supplies to both CVP and SWP contractors. South-of-Delta (SOD) CVP and SWP water contractors experienced reduced water supply allocations from 2007 to 2010 due to hydrologic conditions and regulatory requirements. Following an above average water year in 2011, the hydrologic conditions for 2012 are dry, and Angiola needs to supplement its supplies to reduce reliance on groundwater pumping.

The purpose of the proposed transfers is to provide an additional surface water supply to Angiola to meet in-district demands.

1.3 Reclamation's Legal and Statutory Authorities and Jurisdiction Relevant to the Proposed Federal Action

Several Federal laws, permits, licenses and policy requirements have directed, limited or guided the National Environmental Policy Act (NEPA) analysis and decision-making process of this EA and include the following as amended, updated, and/or superseded (all of which are incorporated by reference):

Central Valley Project Improvement Act

Central Valley Project Improvement Act of 1992, Title 34 (CVPIA), Section 3405(a), authorizes all individuals or districts who receive CVP water under water service or repayment contracts, water rights settlement contracts or exchange contracts to transfer, subject to certain terms and conditions, all or a portion of the water subject to such contract to any other California water users or water agency, State or Federal agency, Indian Tribe, or private non-profit organization for project purposes or any purpose recognized as beneficial under applicable State law.

CVPIA, Section 3408(c), authorizes the Secretary of the Interior to enter into contracts pursuant to Reclamation law and this title with any Federal agency, California water user or water agency, State agency, or private nonprofit organization for the exchange, impoundment, storage, carriage, and delivery of CVP and non-CVP water for domestic, municipal, industrial, fish and wildlife, and any other beneficial purpose, except that nothing in this subsection shall be deemed to supersede the provisions of section 103 of Public Law 99-546 (100 Stat. 3051).

Reclamation completed the Final Programmatic Environmental Impact Statement (EIS) for the CVPIA in October 1999 that analyzed alternatives and implementation of the CVPIA. The Record of Decision (ROD) was signed in January 9, 2001.

1.4 Scope

This EA is being prepared to examine the possible impacts of approving a series of annual transfers of up to 1,300 AFY of Mercy Springs' CVP water and up to 4,000 AFY of Fresno Slough's CVP water to Angiola over a nine year period. This EA has also been prepared to examine the possible impacts of the No Action alternative.

Both Mercy Springs and Fresno Slough are located in Fresno County. Angiola is located in southeastern Kings and western Tulare counties (Figure 1-1).

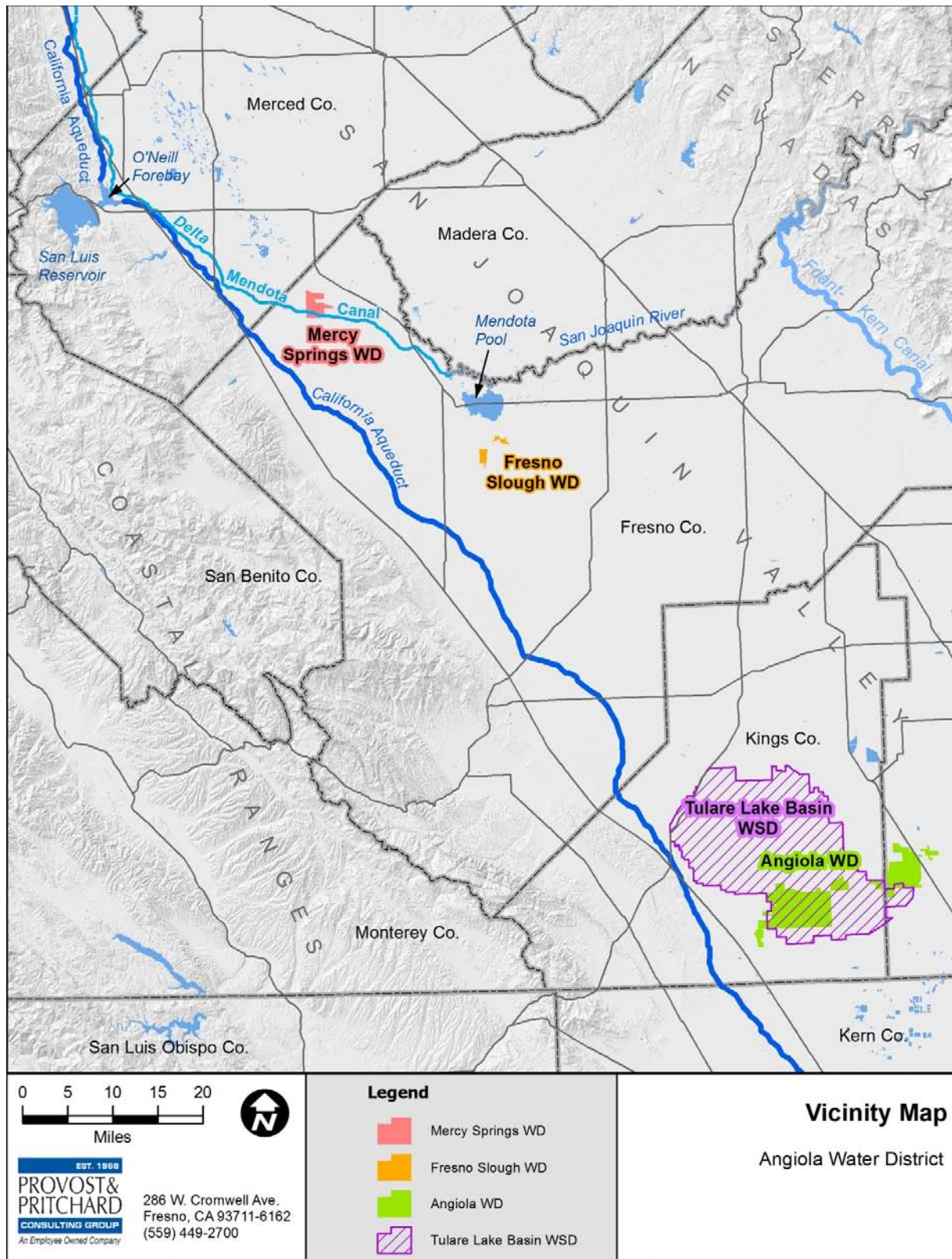


Figure 1-1 Proposed Action Area

THIS PAGE LEFT INTENTIONALLY BLANK

1.5 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment of the Proposed Action and No Action Alternative and has determined that there is no potential for direct, indirect, or cumulative effects to the following resources:

Land Use

There would be no impact to land use under the No Action alternative as conditions would remain the same as existing conditions. Under the Proposed Action, neither Fresno Slough and Mercy Springs, nor Angiola would change historic land and water management practices. Fresno Slough and Mercy Springs CVP water would move through existing facilities for delivery to lands within Angiola and would be used on existing crops. The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses. Therefore, there would be no change to land use.

Cultural Resources

There would be no impacts to cultural resources under the No Action alternative as conditions would remain the same as existing conditions. There would be no impacts to cultural resources as a result of implementing the Proposed Action as the Proposed Action would facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities would occur as part of the Proposed Action. The pumping, conveyance, and storage of water would be confined to existing wells, pumps, and CVP facilities. Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Indian Sacred Sites

No impact to Indian sacred sites would occur under the No Action alternative as conditions would remain the same as existing conditions. Reclamation has determined that there would be no impacts to Indian sacred sites as a result of the Proposed Action since the Proposed Action would not limit access to and 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

No impact to ITA would occur under the No Action alternative as conditions would remain the same as existing conditions. Reclamation has determined that the Proposed Action would not impact ITA as there are none in the Proposed Action area.

Air Quality

There would be no impacts to air quality under the No Action alternative as conditions would remain the same as existing conditions. Under the Proposed Action, CVP water would be delivered off the California Aqueduct to Angiola rather than off the Delta-Mendota Canal (DMC) to Mercy Springs and Fresno Slough. This would occur via an operational exchange between Reclamation and DWR. Under the operational exchange, Mercy Springs' and Fresno Sloughs' CVP water would be released from the federal share of San Luis Reservoir by Reclamation and made available to DWR at O'Neill Forebay. DWR would then deliver the transferred water to Angiola under Article 55 of TLBWSD's SWP contract. Pumping for

deliveries by DWR and Reclamation would occur with or without the Proposed Action and is therefore part of the existing baseline conditions. Delivery of this water would require no modification of existing facilities or construction of new facilities. CVP and SWP water would be moved either via gravity or electric 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, water under the Proposed Action is water that would be delivered from existing facilities under either alternative and is therefore part of the existing conditions. In addition, the generating power plant is required to operate under permits issued by the air quality control districts. 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

Neither the Proposed Action nor the No Action alternative would involve physical changes to the environment or construction activities that could impact global climate change. Generating power plants that produce electricity to operate the electric pumps produce carbon dioxide that could potentially contribute to GHG emissions; however, water under the Proposed Action is water that would be delivered from existing facilities under either alternative and is therefore part of the existing conditions. There would be no additional impacts to global climate change as a result of the Proposed Action. 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 and therefore surface water resource changes due to climate change would be the same with or without either alternative.

As there would be no impact to the resources listed above as a result of the Proposed Action or the No Action alternative, they will not be considered further.

1.6 Resources Requiring Further Analysis

This EA will analyze the affected environment of the Proposed Action and No Action Alternative in order to determine the potential direct, indirect, and cumulative effects to the following resources:

- Water Resources
- Biological Resources
- Environmental Justice
- Socioeconomic Resources

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 a series of annual transfers of up to 1,300 AFY of Mercy Springs' CVP water and up to 4,000 AFY of Fresno Slough's CVP water to Angiola over a nine-year period. The water in Mercy Springs would remain allocated to Angiola but would not be delivered in Mercy Springs, as most of the land in Mercy Springs has been included in the San Joaquin River Improvement Project (SJRIIP) and has relinquished the right to the Mercy Springs contract allocation. The water in Fresno Slough would remain allocated to Angiola, and a portion could be used to irrigate lands that are currently owned by Angiola but have historically been fallowed.

2.2 Proposed Action

Reclamation proposes to approve a series of annual transfers of up to 1,300 AFY of Mercy Springs' CVP water and up to 4,000 AFY of Fresno Slough's CVP water to Angiola over a nine-year period.

Angiola can only receive the proposed transfers off the California Aqueduct (through TLBWSD's existing turnouts); consequently, delivery of the proposed transfers would need to occur as operational exchanges between Reclamation and DWR. Under the operational exchange, Mercy Springs' and Fresno Sloughs' CVP water would be released from the federal share of San Luis Reservoir by Reclamation and made available to DWR at O'Neill Forebay. DWR would then deliver the transferred water to Angiola under Article 55 of TLBWSD's SWP contract.

No additional diversions from the Delta are needed to deliver this water as they are part of the existing diversions of the CVP.

No new infrastructure, modifications of facilities, or ground disturbing activities would be needed for movement of this water. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions.

THIS PAGE LEFT INTENTIONALLY BLANK

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 Water Resources

3.1.1 Affected Environment

Mercy Springs Water District

Mercy Springs is a CVP contractor located in Fresno County with a CVP allocation of up to 2,842 AFY (Contract No. 14-06-200-3365A) from the Delta taken directly off the DMC. Originally, Mercy Springs had a CVP contract for up to 13,300 AFY; however, beginning in 1999 and 2002 certain Mercy Springs' landowners took actions to transfer the CVP contract supply allocated to their lands to third parties, encumbering the associated Mercy Springs land with covenants foregoing the right to an allocated share of Mercy Springs CVP contract water. Reclamation subsequently approved two permanent partial assignments of the Mercy Springs contract totaling 10,458 AF to Pajaro Valley Water Management Agency, Santa Clara Valley Water District, Westlands Water District, and to Westlands Water Distribution District No. 2.

In 2006, the Mercy Springs landowner who was still entitled to receive 2,825 AF of the remaining 2,842 AF of Mercy Springs CVP allocation entered into transactions transferring the right to the 2,825 AF of Mercy Springs Contract allocation to third parties consequently burdening the associated Mercy Springs land with covenants foregoing the right to the Mercy Springs' CVP contractual allocation. At present, none of the 2,825 AF is applied within Mercy Springs. Instead, it is subject to annual transfers outside the District (see Transfers Out in Table 3-1). In years in which transfers out of Mercy Springs do not equal 2,825 AF, the CVP water has either not been pumped at the Delta or has remained in San Luis Reservoir for rescheduling. Angiola has acquired up to 1,300 AF of this allocation pursuant to an agreement with Mercy Springs. Mercy Springs retains 17 AF under its contract that may be allocated to lands within the District, but to date has not scheduled such deliveries.

Table 3-1 Mercy Springs Water District Historical Water Supply

	2005	2006	2007	2008	2009	2010	2011
CVP Allocation (%)	85	100	50	40	10	45	80
CVP Allocation (AF)	2,416	2,842	1,421	1,137	284	1,279	2,274
CVP Transfers In	735	1,164	711	1,028	691	562	600
CVP Transfers Out	0	0	1,400	1,045	153	1,571	75
Groundwater Pumped-in/CVP carry-over	0	0	129	0	0	926	0
Deliveries	735	1,164	861	1,120	691	1,196	1,151
Total Unused	2,416	2,842	0	0	131	0	1,648

Beginning in 2000 and continuing through 2008, Panoche Drainage District purchased the land within Mercy Springs from which the right to CVP water allocation had been removed and included them in the SJRIP, a regional drainage reuse area where subsurface agricultural drainage water collected from throughout approximately 94,000 acres in the Grassland Drainage Area (GDA) is utilized to irrigate salt-tolerant crops, such as Jose tall wheat grass, pistachios, and paspalam grass. The irrigation with subsurface drainage reduces the quantity of agricultural subsurface drainage and loads of salts and selenium which are discharged from the GDA while producing marketable crops.

At present only approximately 450 irrigable acres in Mercy Springs are owned by a landowner other than Panoche Drainage District. While improved with one well, the parcel is subject to a restrictive covenant and does not receive Mercy Springs' CVP water. The land is typically either fallowed, irrigated with the well, or the farmer transfers in CVP water from other CVP SOD contractors. Water Districts within Panoche Drainage District served by the SJRIP also sometimes transfer in CVP contract allocation to supplement the subsurface drainage irrigation supply for the SJRIP (see Table 3-1 Transfers In). As part of its SJRIP activities, Panoche Drainage District pumps groundwater for use in the SJRIP to supplement the subsurface irrigation drainage supply and/or to assist in managing shallow groundwater. Some of that water is pumped into the DMC under Reclamation's DMC pump-in program and stored for later deliveries to Mercy Springs or transferred to neighboring CVP contractors participating in the SJRIP to help offset SJRIP costs (see Table 3-1).

Fresno Slough Water District

Fresno Slough is a CVP contractor, located within Fresno County, with a CVP allocation of up to 4,000 AFY (Contract No. 14-06-200-4019I) from the Delta which is taken off the Fresno Slough after it is released from Mendota Pool. In addition to CVP supplies, Fresno Slough receives 866 AF of Schedule 2 water from a water rights settlement. The Schedule 2 supply is used on Tranquillity Irrigation District's (TID) owned lands within Fresno Slough in accordance with an agreement that segregates the contract water and the settlement water between the landowners in the district. Fresno Slough also owns a newly constructed deep groundwater well, which will be used for backup supplies during periods of high demand. A summary of the available water supplies used in Fresno Slough is included in Table 3-2.

Table 3-2 Fresno Slough Water District Historical Water Supply

	2005	2006	2007	2008	2009	2010	2011
CVP Allocation (%)	85	100	50	40	10	45	80
CVP Allocation (AF)	3,400	4,000	2,000	1,600	400	1,800	3,200
Settlement Water	866	866	866	866	866	866	866
Transfers Out	0	0	385	1,312	0	1,800	0
Irrigation Use	4,266	4,866	866	866	866	866	866
Total Unused	0	0	1,615	288	400	0	3,200

Fresno Slough is active in transfers of water out of the district. Because TID is a landowner in Fresno Slough, any transfers out of the district would first be offered to TID. Fresno Slough has also transferred a portion of its CVP contract water to other CVP contractors in the past.

Angiola Water District

Angiola is a non-CVP contractor, located in southeastern Kings and southwestern Tulare Counties, which supplies only agricultural irrigation water. Water supplies available to Angiola include water rights to the Kings River and other local streams (Tule River and Deer Creek), surplus Kings River floodwater releases which are periodically available in Tulare Lake, SWP water available to TLBWSD through its contracts with DWR, other supplemental local and SWP water that can be purchased when available, and groundwater wells in the eastern portion of the district. A summary of the water supplies available to Angiola is included in Table 3-3.

Table 3-3 Angiola Water District Historical Water Supply

	2005	2006	2007	2008	2009	2010	2011
Groundwater	662	141	32,894	32,502	37,798	22,568	3,615
SWP water	0	6,782	243	761	34	12	1,835
SWP Article 21 water	12,435	10,641	4,881	0	0	0	0
Kings River water	25,632	14,253	18,083	2,806	0	10,587	14,383
Tule River water	2,634	795	0	828	0	1,676	1,170
Floodwater	5,890	7,973	0	0	0	0	10,011
Deer Creek water	0	0	0	0	0	282	1,516
Other water sources	1,851	0	63	0	0	0	434
Total	49,104	40,585	56,164	36,897	37,832	35,125	32,964

Angiola has a number of water sources that can fluctuate considerably depending on the type of water year. In general, groundwater is used to supplement the available surface water supplies. In wet years, surface water supplies are often sufficient to meet all water user needs and very little groundwater may be required. In drought years when groundwater becomes the major source of water, the cropping patterns may be restricted because of the pumping capacity of the well field as well as the total amount of available water.

Points of Diversion Because Angiola cannot physically take deliveries from the DMC, the CVP water would need to be delivered to Angiola through SWP facilities. As a State Water Contractor, TLBWSD takes its SWP deliveries from turnouts off of the California Aqueduct for delivery to its member units, including Angiola. Article 55 of TLBWSD's SWP contract specifies that SWP facilities can be used by the SWP contractors to transport non-SWP water to the extent that such deliveries do not conflict with other, higher priority SWP uses. To facilitate this transfer, TLBWSD has requested that DWR approve the delivery of this water under Article 55 of their contract.

3.1.2 Environmental Consequences

No Action

Under the No Action alternative, the water supply allocated to Angiola in Mercy Springs and Fresno Slough would be left unused or underutilized. Without a demand for the water in Mercy Springs and Fresno Slough, the unused CVP supply would remain in CVP storage (as it did in 2011), and annually incorporated into the following year's CVP supply. Transfers to other CVP contractors, which occurred prior to Angiola's acquisition of a portion of Mercy Springs remaining CVP supply, are possible, but Angiola has not contemplated this for their portion, so

further discussion would be speculative. Angiola would continue to seek additional surface supplies to augment its water supply portfolio and to reduce groundwater pumping.

Proposed Action

The Proposed Action would not affect CVP operations and would not change existing diversion points from the Delta under Reclamation's water rights permits. The Proposed Action would not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes. There would be no change in the point of diversion for the transferred water as the point of diversion in the Delta (Jones Pumping Plant) would be the same. In addition, as the water is already part of the baseline conditions for diversion from the Delta, there would be no increase in total CVP diversions from the Delta as a result of these two transfers.

No activities such as dredging or filling of wetlands or surface waters would be required for implementation of the Proposed Action, therefore permits obtained in compliance with Clean Water Act are not required.

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The Proposed Action would not affect either concern as there are none in the Proposed Action area.

Under the Proposed Action, the water supply allocated to Angiola by Mercy Springs and Fresno Slough would be put to beneficial use within Angiola's boundaries. Since 2006, Mercy Springs remaining CVP allocation has not been utilized in Mercy Springs, as this water supply is not associated with any lands as described in Section 3.1.1 and has historically been available for transfer to other CVP contractors or left unused. The principal water supply used in Mercy Springs is subsurface agricultural drainage water applied by Panoche Drainage District to irrigate salt tolerant crops as part of the SJRIP. Transfer of 1,300 AF of Mercy Springs CVP allocation to Angiola would not increase the need for additional sources of supply, lead to a change in groundwater use in Mercy Springs, or increase groundwater pumping beyond levels currently used for SJRIP supplemental irrigation and shallow groundwater management. Fresno Slough has historically transferred similar amounts of its available surface water supply out of the district. In addition, the groundwater supply available for use within Fresno Slough would not change, and continues to be available for use to supplement TID's supplies that can be transferred in and could be used to farm a portion of the acreage. Therefore, there would be no adverse impacts to water resources within Mercy Springs or Fresno Slough as a result of the Proposed Action.

Conveying water under Article 55 of TLBWSD's SWP contract would not result in increased diversions from the Delta by DWR, as the water is already part of the baseline conditions for diversion from the Delta. The conveyance of up to 5,300 AFY of CVP water in the SWP system under Article 55 would not occur unless capacity exists. No changes would occur to water quantities, diversions, conveyance practices or deliveries.

The Proposed Action would not affect CVP or SWP operations and would not change existing diversion points from the Delta under Reclamation's or DWR's water rights permits. Because

the shortage provisions in the Mercy Springs CVP contract remain applicable to the transferred water, the Proposed Action would not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes.

As Angiola cannot beneficially use their allocation of Mercy Springs' and Fresno Sloughs' CVP supply within Mercy Springs and Fresno Slough, the transfers would help to make the most beneficial use of available CVP supplies. Transfer of up to 5,300 AFY of CVP water supply to Angiola would help increase water supply reliability in Angiola and would reduce reliance on groundwater pumping. Therefore, the Proposed Action would have beneficial impacts to water resources within Angiola.

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.

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies which drives requests for water service actions. Water districts aim to provide water to their customers based on available water supplies and timing, all 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. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

Existing or foreseeable projects, in addition to the proposed transfers from Fresno Slough and Mercy Springs to Angiola, which could affect or could be affected by the Proposed Action or No Action alternative, include the following:

South-of-Delta Accelerated Water Transfer Program The CVPIA was signed into law in 1992 to mandate changes in management of the CVP. In addition to protecting, restoring, and enhancing fish and wildlife, one of the other purposes of the CVPIA is to increase water-related benefits provided by the CVP to the State of California through expanded use of voluntary water transfers and improved water conservation. To assist California urban areas, agricultural water users, and others in meeting their future water needs, Section 3405(a) of the CVPIA authorizes all individuals or districts who receive CVP water under water service or repayment contracts, water rights settlement contracts or exchange contracts to transfer, subject to certain terms and conditions, all or a portion of the water subject to such contract to any other California water users or water agency, State or Federal agency, Indian Tribe, or private non-profit organization for project purposes or any purpose recognized as beneficial under applicable State law.

After enactment of the CVPIA, Reclamation has historically acknowledged water transfers and/or exchanges between CVP contractors geographically situated within the same region and who are provided water service through the same CVP facilities under an Accelerated Water

Transfer Program (AWTP). In 2010, Reclamation approved the continuation of the SOD AWTP through February 29, 2016. Reclamation prepared EA-10-051, *Accelerated Water Transfers and Exchanges, Central Valley Project, South of Delta Contractors 2011-2015* and a FONSI was signed on February 14, 2011 (Reclamation 2011).

Byron Bethany Irrigation District Long-term Exchange Agreement Reclamation has received a request from Byron Bethany Irrigation District to enter into a 40-year contract for the introduction of up to 4,725 AFY of their non-CVP surface water in to the DMC for exchange with Reclamation. Reclamation is currently preparing an EA for the proposed project.

Water service actions, like those described above, do not result in increases or decreases of water diverted from rivers or reservoirs. Each water service transaction involving CVP and non-CVP water undergoes environmental review prior to approval. The Proposed Action and No Action alternative and other similar projects would not interfere with the projects listed above, nor would they hinder the normal operations of the CVP and Reclamation's obligation to deliver water to its contractors or to local fish and wildlife habitat. Neither alternative, when added to other water service actions, would result in cumulative effects to surface water resources beyond historical fluctuations and conditions.

3.2 Biological Resources

3.2.1 Affected Environment

The Action Area includes the Mercy Springs, Fresno Slough and Angiola water districts (Figure 1-1). Historically, native habitat types in Mercy Springs, Fresno Slough, and Angiola consisted of valley sink scrub and saltbush, grasslands, wetlands and riparian habitat. Over the last few decades, much of the historic native grassland and wetland habitats have been converted to farmland, which requires importation of water for production.

Mercy Springs is located in northwestern Fresno County and consists of agricultural lands that are bordered by patches of sparsely vegetated scrub habitat. Fresno Slough is located in northern Fresno County and consists of agricultural lands that are bordered by the Fresno Slough in the north and scrub habitat in the northeast. Angiola is located in southeastern Kings County and southwestern Tulare County and consists almost entirely of agricultural lands with some patches of valley saltbush scrub habitat. Angiola also contains a small pond in its southwestern corner, and is bordered on its southern edge by a long, narrow body of water.

Reclamation requested an official species list from the U.S. Fish and Wildlife Service (USFWS) on June 4, 2012 via the Sacramento Field Office's website, http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm, (Document Number: 120604022058). The list is for the following 7 ½ minute U.S. Geological Survey quadrangles: Alpaugh, Hacienda ranch NE, Hacienda ranch NW, Dudley ridge, west camp, Corcoran, Tranquility, Oxalis and Dos Palos. Reclamation further queried the California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the service areas (CNDDB 2012). 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 (see Table 3-4).

Table 3-4 Federal Status Species for Fresno Slough, Mercy Springs and Angiola Water Districts

Species	Status ¹	Effects ²	Summary basis for ESA determination ³
INVERTEBRATES			
Conservancy fairy shrimp (<i>Branchinecta conservatio</i>)	E	NE	Absent. No individuals or habitat in area of effect.
vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	T, X	NE	Possible. There is a vernal pool located in Angiola with nearby CNDDDB ⁴ -records of this species. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	T	NE	Absent. No individuals or habitat in area of effect.
FISH			
delta smelt (<i>Hypomesus transpacificus</i>)	T	NE	Absent. No natural waterways within the species' range would be affected by the proposed action.
Central Valley steelhead (<i>Oncorhynchus mykiss</i>)	T NMFS	NE	Absent. No natural waterways within the species' range would be affected by the proposed action.
AMPHIBIANS			
California tiger salamander, central population (MSWD only) (<i>Ambystoma californiense</i>)	T	NE	Absent. No individuals or habitat in area of impact. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
California red-legged frog (<i>Rana aurora draytonii</i>)	T	NE	Possible. There are CNDDDB-records and suitable habitat in or near the action area. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
REPTILES			
blunt-nosed leopard lizard (<i>Gambelia sila</i>)	E	NE	Possible. There are CNDDDB-records and suitable habitat in or near the action area. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
giant garter snake (<i>Thamnophis gigas</i>)	T	NE	Possible. There are CNDDDB-records and suitable habitat in or near the action area. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
BIRDS			
Burrowing owl (<i>Athene cunicularia hypugaea</i>)	P	NE	Possible. There are CNDDDB-records and suitable habitat in or near the action area. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.

Species	Status ¹	Effects ²	Summary basis for ESA determination ³
Swainson's hawk (<i>Buteo swainsoni</i>)	P	NE	Possible. There are CNDDDB-records and suitable habitat in or near the action area. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	T	NE	Possible. There are CNDDDB-records and suitable habitat in or near the action area. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
MAMMALS			
giant kangaroo rat (<i>Dipodomys ingens</i>)	E	NE	Absent. No individuals or habitat in area of effect.
Fresno kangaroo rat (<i>Dipodomys nitratoideus exilis</i>)	E, X	NE	Absent. No individuals or habitat in area of effect.
Tipton kangaroo rat (<i>Dipodomys nitratoideus nitratoideus</i>)	E	NE	Possible. There is suitable habitat and CNDDDB-records of this species in the Angiola. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities would be constructed.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	E	NE	Possible. There are CNDDDB-records and suitable habitat in or near the action area. No land use changes would occur to habitat for this species as a result of this action, no conversion of habitat, and no new facilities.
PLANTS			
palmate-bracted bird's-beak (<i>Cordylanthus palmatus</i>)	E	NE	Absent. No individuals or habitat in area of effect.
San Joaquin woolly-threads (<i>Monolopia congdonii</i>)	E	NE	Absent. No individuals or habitat in area of effect.
1 Status= Listing of Federally protected species under the Endangered Species Act E: Listed as Endangered T: Listed as Threatened X: Critical Habitat designated for this species P: Protected under the Migratory Bird Treaty Act NMFS: Species under jurisdiction of National Oceanic & Atmospheric Administration Fisheries Service 2 Effects = Endangered Species Act Effect determination NE: No Effect 3 Definition Of Occurrence Indicators Possible: Species and habitat recorded in area Absent: Species not recorded in study area and habitat requirements not met 4 CNDDDB = California Natural Diversity Database 2012			

Many of the special-status species named on the official species list have no potential to be present in the Action Area due to a lack of suitable habitat. Federally protected species with the potential to be in the Action Area include vernal pool fairy shrimp (*Branchinecta lynchi*), the California red-legged frog (*Rana draytonii*), the blunt-nosed leopard lizard (*Gambelia sila*), the giant garter snake (*Thamnophis gigas*), the western snowy plover (*Charadrius alexandrinus nivosus*), the burrowing owl (*Athene cunicularia hypugaea*), the Swainson's hawk (*Buteo*

swainsoni), the Tipton kangaroo rat (*Dipodomys nitratoide nitratoide*), and the San Joaquin kit fox (*Vulpes macrotis mutica*).

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp are federally listed as a threatened species. This species is a crustacean with 11 pairs of legs that it uses to eat, swim and breathe. Vernal pool fairy shrimp live in vernal pools, or seasonal ponds, in the unplowed grasslands of California (Eng et al.). This species can only survive in temporary ponds where vertebrate predators, like fish, cannot survive. Vernal pool fairy shrimp hatch when the first rains of the season fill vernal pools, and they mature in about 41 days. Near the end of the rainy season, female vernal pool fairy shrimp produce thick-shelled eggs called cysts that become embedded in the dried mud of the vernal pool during the dry season. Vernal pool fairy shrimp have a diet that consists of algae and plankton. This species scrapes and strains its food from the bottom of vernal pools and produces a gluey substance that it mixes with the food before eating it. The primary reason for the species decline is habitat loss from urbanization and agriculture (USFWS 1994).

California Red-Legged Frog

The California red-legged frog is federally listed as a threatened species. Their diet consists mainly of invertebrates, but larger red-legged frogs also eat small amphibians and mammals. Red-legged frogs live near the standing or slow moving waters of ponds, streams, marshes, stock ponds or reservoirs. They require the shelter of tall grasses, cattails, downed trees, leaf litter or small animal burrows to protect them from predators and desiccation (USFWS 2011). Although shrubs, cattails and grasses provide optimal habitat, red-legged frogs have also been found in areas with no vegetation at all. They have been known to travel up to two miles in response to changing water levels and precipitation (USFWS 2005). Primary reasons for the species decline include predation, pesticide use, and habitat loss (USFWS 2011).

Blunt-Nosed Leopard Lizard

The blunt-nosed leopard lizard is federally listed as an endangered species. Their diet consists of insects, other arthropods and small lizards. Blunt-nosed leopard lizards live in alkali flats, grasslands and other sparsely vegetated areas in California. For shelter, they use small mammal burrows or, in areas where burrowing mammals are scarce, they construct tunnels under exposed rocks or berms. Blunt-nosed leopard lizards hibernate in the winter, beginning around October, and emerge from their burrows in late March. Blunt-nosed leopard lizards are active in early morning and late afternoon from April to September. Primary reasons for the species decline include habitat loss and degradation (CDFG 1997).

Giant Garter Snake

The giant garter snake is federally listed as a threatened species. Giant garter snakes require habitats with vegetative cover and water sources that do not go dry in the summer. They live in sloughs, rivers, freshwater marshes, drainage canals, ponds and other aquatic habitats. The giant garter snake can also be found on roads, in drains, or near grasses and cattails. Giant garter snakes den in small mammal burrows above flood lines during their dormant period from October 31st to March 1st. They are active from March 1st to October 31st when they emerge from their dens to mate (in the beginning of March) and move throughout their aquatic habitat (starting in May or June). The diet of the giant garter snake consists of tadpoles, frogs, small fish and other small vertebrates (USFWS 1998a).

Western Snowy Plover

The western snowy plover is federally listed as a threatened species. Snowy plovers are visual foragers that eat insects, mollusks and other invertebrates. They forage and nest primarily on coastal beaches and sand dunes, but they have also been known to use river bars, salt marshes and river mouths. This species breeds from March 1st to September 30th and lays its eggs in small indentations in the sand. Reasons for the species decline include nest destruction by vehicles and beach-goers, and loss of habitat (USFWS 2012b).

Burrowing Owl

The burrowing owl is a federal species of concern and is protected under the federal Migratory Bird Treaty Act (MBTA). Their diet consists of small mammals, birds, amphibians, invertebrates and insects. Burrowing owls forage in pastures, croplands, and areas with sparse vegetation. They nest in mammal burrows or natural cavities. The primary reason for the species decline is habitat loss and degradation. The use of pesticides in agricultural areas also contributes to the decline of burrowing owls by reducing burrowing mammal populations and potentially poisoning the owls (Klute et al).

Swainson's Hawk

The Swainson's hawk is a federal species of concern and is protected under the MBTA. They are found in the grasslands and agricultural lands of California's Central Valley in spring and summer. Swainson's hawks exhibit a high degree of nest site fidelity and usually construct nests in large trees including Fremont cottonwood, willow, and mature oak trees (Bloom 1980). This species spends large amounts of time soaring over grasslands and agricultural fields in the Central Valley and can travel up to 18 miles to forage for prey. Swainson's hawks prey on small mammals, insects, and birds. They have adapted to use certain croplands, including alfalfa, grain, tomatoes, beets and other row crops, for foraging (Estep 1989).

Tipton Kangaroo Rat

The Tipton kangaroo rat is federally listed as an endangered species. The Tipton kangaroo rat is one of three subspecies of the San Joaquin kangaroo rat and can be distinguished from the other two subspecies by its size; the Tipton kangaroo rat is larger than the Fresno kangaroo rat and smaller than the short-nosed kangaroo rat. Tipton kangaroo rats excavate burrows in saltbush scrub and valley sink scrub habitats. Their diet consists primarily of seeds, but also includes herbaceous vegetation and insects. Tipton kangaroo rats store seeds in their burrows and caches for later consumption. The primary reason for the species decline is habitat loss from agricultural development (USFWS 1988).

San Joaquin Kit Fox

The San Joaquin kit fox is federally listed as an endangered species. Their diet varies based on prey availability, and includes small to mid-sized mammals, ground-nesting birds, and insects. Kit foxes generally live in arid, relatively flat annual grassland and saltbush scrub habitats, but they are also found in urban areas like parks and golf courses. Kit foxes excavate their own dens or will use other animal and human-made structures (culverts, abandoned pipelines, and banks in sumps or roadbeds). Primary reasons for the species decline include loss and degradation of habitat (USFWS 1998b).

3.2.2 Environmental Consequences

No Action

Under the No Action alternative, Reclamation would not approve the transfer of up to 5,300 AFY of CVP water to Angiola. Contractor operations would continue unchanged; Angiola would continue to seek additional surface supplies to add to its water supply portfolio and to reduce groundwater pumping. Portions of Mercy Springs within the reuse project would continue to be cultivated with salt tolerant crops for drainage management. The remainder of Mercy Springs (outside of the SJRIP) would remain fallowed in some years and farmed in others, which has been the case the last several years. Fresno Slough's lands would continue to be cultivated with salt tolerant low value crops or fallowed, which has been the case the last several years. The No Action alternative would neither hinder nor enhance populations of special status species or their habitats.

Proposed Action

Under the Proposed Action, the water would be conveyed in existing facilities to established agricultural lands. No native lands or lands fallowed and untilled for three or more years would be disturbed as this water would be used on existing farmed lands. The Proposed Action would not affect migratory birds, imperiled species, unique habitats, or species and habitats protected by federal or state law. No Essential Fish Habitat exists in the authorized Place of Use within the bounds of the agencies; therefore the Proposed Action could not affect Essential Fish Habitat. Reclamation has determined that the Proposed Action would have no effect on Federally listed threatened or endangered species, designated critical habitat, or proposed or candidate species and critical habitat and no take of birds protected under the MBTA.

Cumulative Impacts

Existing conditions, such as loss of habitat due to urbanization and expanding agricultural lands that cumulatively impact listed species and their habitats, are expected under either alternative. The annual transfer of up to 5,300 AFY of CVP water is not expected to contribute cumulatively to habitat loss as neither area is in an area of likely urbanization and has long been fully developed for agriculture. Further, this water would be used on existing crops in Angiola and would not cause additional fallowing in Mercy Springs or Fresno Slough as this water was not used on those lands. In addition, all conditions under the existing contract that protect biological resources would remain. Therefore, there would be no cumulative adverse impacts to biological resources as a result of the Proposed Action.

3.3 Environmental Justice

Executive Order 12898 (February 11, 1994) mandates Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

3.3.1 Affected Environment

Fresno, Kings and Tulare Counties rely to a large extent, either directly or indirectly, on agriculture for employment. Between 50.3 percent and 60.6 percent of the population within these counties is of Hispanic or Latino origin, which compares to 37.6 percent for the state as a

whole (Table 3-5). The market for seasonal workers on local farms also draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America, increasing populations within these small communities during peak harvest periods.

Table 3-5 2010 Estimated Demographics for Fresno, Kings and Tulare Counties

	Total Population	White (not Hispanic)	Black or African American	American Indian	Asian	Native Hawaiian/ Pacific Islander	Hispanic
Fresno County	930,450	32.7%	5.3%	1.7%	9.6%	0.2%	50.3%
Kings County	152,982	35.2%	7.2%	1.7%	3.7%	0.2%	50.9%
Tulare County	442,179	32.6%	1.6%	1.6%	3.4%	0.1%	60.6%
California	37,253,956	40.1%	6.2%	1.0%	13.0%	0.4%	37.6%

Source: U.S. Census Bureau 2012

3.3.2 Environmental Consequences

No Action

The No Action alternative would not cause dislocation, changes in employment, or increase flood, drought, or disease nor would it disproportionately impact economically disadvantaged or minority populations. Mercy Springs and Fresno Slough would continue to annually transfer the majority of their remaining CVP water supply to other CVP contractors, or the supply would be left unused. Angiola would continue to seek water transfers from other sources to add to its water supply portfolio and reduce groundwater pumping in order to keep highly productive land under cultivation. Thus, the No Action alternative could potentially impact disadvantaged or minority populations due to the economic impacts to the agricultural industry of the uncertain supply and the threat of increased costs from ongoing competition to meet current water demands.

Proposed Action

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. The Proposed Action may support and maintain jobs that low-income and disadvantaged populations rely upon through increased irrigation water supply reliability. Therefore, there may be a slight beneficial impact to minority or disadvantaged populations as a result of the Proposed Action.

Cumulative Impacts

The Proposed Action, when added to other existing and proposed actions, would have a slight beneficial contribution to cumulative impacts for minority or disadvantaged populations as it would help support and maintain jobs that low-income and disadvantaged populations rely upon due to increased irrigation water supply reliability.

3.4 Socioeconomic Resources

3.4.1 Affected Environment

Unemployment for Kings and Fresno counties was 10.0 and 12.9 percent in 2009 which has since risen to 16.1 and 16.7 in 2011 (U.S. Census Bureau 2012). For 2009 and 2011 both counties were approximately two to five percentage points higher than the State average (Table

3-6). In addition, both counties had per capita incomes approximately \$9,000-11,000 lower than the State per capita income.

Table 3-6 2011 Preliminary Monthly Labor Force Data

	Labor Force	Employed	Per Capita Income ¹	Unemployment Rate
Fresno County	431,400	361,400	\$20,329	16.2%
Kings County	61,200	51,800	\$17,875	15.3%
Tulare County	211,400	177,300	\$17,966	16.2%
California	18,172,200	16,185,100	\$29,188	10.9%

Source: California Employment Development Department 2012 and U.S. Census Bureau 2012
¹Amounts are based on 2010 numbers as the most recent data available from the U.S. Census Bureau.

Mercy Springs, Fresno Slough, and Angiola are primarily rural agricultural lands. There are several communities and a few cities in the surrounding area that are homes for farm workers. In addition, there are small businesses that support agriculture such as feed and fertilizer sales, machinery sales and service, pesticide applicators, transport, packaging, marketing, etc.

3.4.2 Environmental Consequences

No Action

Under the No Action alternative, Mercy Springs and Fresno Slough could continue to annually transfer their remaining CVP water supply to other CVP contractors, or their supply would remain unused. Angiola would continue to seek annual water transfers from other sources to add to its water supply portfolio and to reduce groundwater pumping in order to keep highly productive land under cultivation. There may be adverse impacts to Angiola's socioeconomic resources under this alternative as they would need to purchase more costly water supplies and/or increase groundwater pumping in order to meet irrigation demands.

Proposed Action

Under the Proposed Action, the status quo of agriculture would be maintained. CVP contractors would re-distribute CVP water to balance out local deficiencies in water supply and promote efficient irrigation of crops. The most productive farmland would remain in production. Seasonal labor requirements would have very little change, and businesses that support agriculture would not be financially harmed. The transfer would allow more productive and labor-intensive land to remain in production, thereby potentially improving socioeconomic conditions in the region.

Cumulative Impacts

There may be adverse cumulative impacts to socioeconomic resources under the No Action alternative as Angiola may need to purchase more costly water supplies and/or increase groundwater pumping in order to meet irrigation demands. There would be no impact to Mercy Springs or Fresno Slough as conditions would remain the same within these districts.

Over the long term, the Proposed Action would have slight beneficial impacts to socioeconomic resources within Angiola as the transferred water would increase the amount of Angiola's surface water supply. This would subsequently help to maintain the economic viability of irrigated agriculture within the district, and reduce the reliance on groundwater pumping. When

added to other similar existing and proposed actions, the Proposed Action would contribute to beneficial cumulative impacts to socioeconomic resources within Angiola.

Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA between July 10, 2012 and August 8, 2012. No comments were received.

4.2 Fish and Wildlife Coordination Act (16 U.S.C. § 661 et seq.)

The Fish and Wildlife Coordination Act (FWCA) requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. The amendments enacted in 1946 require consultation with the Service and State fish and wildlife agencies “whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United States, or by any public or private agency under Federal permit or license”. Consultation is to be undertaken for the purpose of “preventing the loss of and damage to wildlife resources”.

The Proposed Action does not involve any new impoundment or diversion of waters, channel deepening, or other control or modification of a stream or body of water as described in the statute, but the transfer of existing CVP supplies to a SWP contractor. In addition, no construction or modification of water conveyance facilities are required for movement of this water. Consequently, Reclamation has determined that FWCA does not apply.

4.3 Endangered Species Act (16 U.S.C. § 1531 et seq.)

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action would support existing uses and conditions. No native lands would be converted or cultivated with CVP water. The water would be delivered to existing agricultural lands, through existing facilities, as has been done in the past, and would not be used for land conversion. No species listed or proposed to be listed as endangered or threatened would be affected. No critical habitat for any listed species is located within the proposed action area and therefore would not be affected. Based on the above factors, Reclamation has made a determination of no-effect for the Proposed Action under the Endangered Species Act for all species expected to be within the action area.

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

The National Historic Preservation Act (NHPA) 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 of Historic Places. The 36 CFR Part 800 regulations implement Section 106 of the NHPA.

Section 106 of the NHPA 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 Effect (APE), conduct cultural resource inventories, determine if historic properties are present within the APE, and assess effects on any identified historic properties.

Reclamation has determined that the Proposed Action has no potential to cause effects to historic properties pursuant to the Section 106 implementing regulations at 36 CFR Part 800.3(a)(1).

4.5 Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.)

The MBTA implements various treaties and conventions between the United States and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

The Proposed Action would not change land use patterns in Fresno Slough, Mercy Springs, or Angiola. In addition, no ground disturbing activities would take place, and water for the annual transfers would come from existing allocations which would not require additional diversions. Cultivated or fallowed fields that could have value for birds protected by the MBTA would continue to be available; therefore, the Proposed Action would not take birds protected by the MBTA.

Section 5 List of Preparers and Reviewers

Bureau of Reclamation

Rain Healer, M.S., Natural Resources Specialist, SCCAO
Lisa Carlson, Biology Technician, SCCAO
BranDee Bruce, Architectural Historian, MP-153
Patricia Rivera, ITA, MP-400
Cathy James, Repayment Specialist, SCCAO – reviewer
George Bushard, Repayment Specialist, SCCAO – reviewer
Valerie Curley, Supervisory Repayment Specialist, SCCAO – reviewer
Chuck Siek, Supervisory Natural Resources Specialist, SCCAO – reviewer
Randy English, Resources Management Division Chief, SCCAO – reviewer
Dave Hyatt, Supervisory Wildlife Biologist, SCCAO – reviewer

Mercy Springs Water District

Marcos Hedrick, Mercy Springs Water District

Fresno Slough Water District

Liz Reeves, Fresno Slough Water District

Angiola Water District

Matthew Hurley, General Manager

Provost & Pritchard Consulting Group

Rick Besecker, Water Resources Specialist

Section 6 Acronyms and Abbreviations

AF	Acre-feet
AFY	Acre-feet per year
Angiola	Angiola Water District
APE	Area of Potential Effect
AWTP	Accelerated Water Transfer Program
CNDDDB	California Natural Diversity Database
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
Delta	Sacramento-San Joaquin River Delta
DMC	Delta-Mendota Canal
DWR	California Department of Water Resources
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
Fresno Slough	Fresno Slough Water District
GDA	Grasslands Drainage Area
Mercy Springs	Mercy Springs Water District
NHPA	National Historic Preservation Act
Reclamation	Bureau of Reclamation
SJRIP	San Joaquin River Improvement Project
SOD	South-of-Delta
SWP	State Water Project
TLBWSD	Tulare Lake Basin Water Storage District
TID	Tranquillity Irrigation District
USFWS	U.S. Fish and Wildlife Service

Section 7 References

Bloom, P.H. 1980. *The Status of the Swainson's Hawk in California, 1979*. Wildlife Management branch, Nongame Wildlife Investigations, Job II-8.0. California Department of Fish and Game, Sacramento, CA.

Bureau of Reclamation (Reclamation). 2011. Final Environmental Assessment. *Accelerated Water Transfer Program for Friant Division and Cross Valley Central Valley Project Contractors, 2011-2015* (EA-10-052). Mid-Pacific Region South-Central California Area Office. Fresno, California.

California Department of Fish and Game (CDFG). 1997. CDPR Endangered Species Project: Blunt- Nosed Leopard Lizard. Sacramento, CA.

California Employment Development Department. 2012. Report 400c – Monthly labor force data for Counties, July 2011 preliminary. Website: <http://www.calmis.ca.gov/file/lfmonth/countyur-400c.pdf>. Accessed: June 2012.

California Natural Diversity Database (CNDDB). 2012. California Department of Fish and Game's Natural Diversity Database. Accessed: March 2012.

Eng, Larry L., Denton Belk & Clyde H. Erikson. 1990. Californian Anostraca: Distribution, Habitat, and Status. *Journal of Crustacean Biology* 10(2): 247-277.

Estep, J.A. 1989. *Biology, Movements, and Habitat Relationships of the Swainson's Hawk in the Central Valley of California, 1986-87*. California Department of Fish and Game, Nongame Bird and Mammal Sec. Rep., 52 pp.

Klute, D.S., L.W. Ayers, M.T. Green, W.H. Howe, S.L. Jones, J.A. Shaffer, S.R. Sheffield, and T.S. Zimmerman. 2003. *Status Assessment and Conservation Plan for the Western Burrowing owl in the United States*. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R60001-2003, Washington, D.C.

U.S. Census Bureau. 2012. County Quick Facts. Website: <http://quickfacts.census.gov/qfd/states/06000.html>. Accessed: June 2012.

U.S. Fish and Wildlife Service (USFWS). 1988. Endangered and Threatened Wildlife and Plants: Determination of Endangered Status for the Tipton Kangaroo Rat. Washington, D.C.

U.S. Fish and Wildlife Service (USFWS). 1994. Determination of Endangered Status for the Conservancy Fairy Shrimp, Longhorn Fairy Shrimp and Vernal Pool Tadpole Shrimp; and Threatened Status for the Vernal Pool Fairy Shrimp.

U.S. Fish and Wildlife Service (USFWS). 1998a. California Department of Pesticide Regulation Endangered Species Project: Giant Garter Snake. Portland, OR.

U.S. Fish and Wildlife Service (USFWS). 1998b. Recovery Plan for the Upland Species of the San Joaquin Valley, California. Portland, OR.

U.S. Fish and Wildlife Service (USFWS). 2005. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. Portland, OR

U.S. Fish and Wildlife Service (USFWS). 2011. California Red-legged Frog. Arcata Fish and Wildlife Office. Arcata, CA.

U.S. Fish and Wildlife Service (USFWS). 2012a. Federal Species List (Document No. 120604022058). Website: http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm. Accessed: June 2012.

U.S. Fish and Wildlife Service (USFWS). 2012b. Western Snowy Plover. Arcata Fish and Wildlife Office. Arcata, CA.