

# RECLAMATION

*Managing Water in the West*

Draft FINDING OF NO SIGNIFICANT IMPACT

## **Contra Costa Water District Transfer to Byron Bethany Irrigation District**

FONSI-15-030



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-15-030**

**Contra Costa Water District Transfer to  
Byron Bethany Irrigation District**

---

Prepared by: Rain L. Emerson  
Supervisory Natural Resources Specialist

---

Date

---

Concurred by: Shauna McDonald  
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 a transfer of up to 500 acre-feet (AF) of Contra Costa Water District's (Contra Costa's) Central Valley Project (CVP) water to Byron Bethany Irrigation District (Byron Bethany). This draft Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-15-030, *Contra Costa Water District Transfer to Byron Bethany Irrigation District*, 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).

This year, due to extraordinarily dry hydrologic conditions, Byron Bethany's CVP allocation has been set to zero for agriculture and 25 percent for municipal and industrial (M&I). In addition, the State Water Resources Control Board has notified pre-1914 water rights holders that curtailments of pre-1914 and riparian diversions are likely to occur this year. Consequently, Byron Bethany and Contra Costa are working together to share resources and facilities as part of an integrated regional water management plan to the mutual benefit of their collective customers.

In 2014, Byron Bethany and Contra Costa entered into an agreement to undertake a one-time demonstration project to evaluate the feasibility of a longer-term partnership for the improvement of regional water supply reliability. Under the agreement, Byron Bethany purchased 4,000 AF of Contra Costa's water rights

water stored in Los Vaqueros Reservoir for use during 2014. The districts requested approval from Reclamation to facilitate a transfer (similar to a groundwater substitution transfer, albeit with Los Vaqueros water as opposed to groundwater) for delivery of this water to Byron-Bethany since there is no direct conveyance mechanism to deliver water from Los Vaqueros to Byron Bethany's distribution system. The transfer was analyzed in EA-14-041 and a FONSI was signed on August 29, 2014 (Reclamation 2014). FONSI/EA-14-041 is hereby incorporated by reference into EA-14-030.

Last year, 1,656 AF of this water was successfully transferred to Byron Bethany. Byron Bethany and Contra Costa have since amended their agreement to allow for the transfer of an additional 500 AF of the previously secured water in 2015 and have requested approval from Reclamation to transfer this water to Byron Bethany in the same manner as the transfer completed in 2014. Byron Bethany has also requested approval from Reclamation to apply this transfer water outside of its CVP service area.

## **Proposed Action**

Reclamation proposes to approve the transfer of up to 500 AF of Contra Costa's CVP water to Byron Bethany, which would be facilitated by a storage substitution exchange. The transfer facilitated by storage substitution exchange would be executed as described in Section 2.2 of EA-15-030.

## **Environmental Commitments**

Contra Costa and Byron Bethany shall implement the environmental protection measures listed in Table 1 of EA-15-030 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-15-009, 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, cultural resources, environmental justice, global climate change, Indian Sacred Sites, Indian Trust Assets, land use, or socioeconomic resources.

## **Water Resources**

Under the Proposed Action, Contra Costa would take delivery of up to 500 AF of its non-CVP water purchased by Byron Bethany that is currently stored in Los Vaqueros Reservoir. Contra Costa would then transfer up to 500 AF of its CVP supply (previously scheduled for delivery from the Delta) to Byron Bethany. The portion of CVP water that Contra Costa would have diverted at its Rock Slough Intake, Old River Intake or Middle River Intake at Victoria Canal would instead be diverted at Byron Bethany's point of diversion on the Banks Intake Channel. No additional overall Delta pumping would be needed for the transfer facilitated by a storage exchange.

The transfer facilitated by an exchange would result in a lower water level in the Los Vaqueros Reservoir than would have existed absent the Proposed Action. As such, a refill agreement is required in order to address operational concerns by Reclamation, the California Department of Water Resources (DWR), and other legal users of Delta water (see Appendix A of EA-14-030 for a draft refill agreement). The refill agreement would be executed in coordination with DWR and Reclamation and attached to Contra Costa's Los Vaqueros water right for the duration of the transfer and refill period. Pursuant to the refill agreement, Contra Costa would be required to keep track of the vacated storage amount in Los Vaqueros resulting from the transfer, and operate the reservoir to ensure that the refill of the reservoir does not injure other legal users of water or the environment.

When Byron Bethany takes the transferred CVP water from the Banks Intake Channel, the overall pumping from the south Delta would not be increased from what would have occurred absent the transfer. In addition, the Old and Middle River flows north of Contra Costa's Old River and Middle River intakes would not change as a result of the Proposed Action. As such, the Proposed Action would not affect CVP or State Water Project (SWP). The Proposed Action would not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes.

The transferred water would be brought into Byron Bethany's existing infrastructure for either direct delivery to its M&I customers or for introduction into the Delta-Mendota Canal pursuant to its existing Warren Act contract for conveyance to other M&I customers within the district. The amount of water introduced into the Delta-Mendota Canal under the Proposed Action would be within the amount previously approved for introduction into the Delta-Mendota Canal under the Warren Act contract. No additional water would be introduced into the Delta-Mendota Canal due to the Proposed Action.

The transfer of CVP water and the exchange of non-CVP water in Los Vaqueros would utilize existing facilities and not require new infrastructure, modifications of existing facilities, or ground disturbing activities. The water would be used for existing M&I purposes in both districts. No native or untilled land (fallow for three years or more) would be cultivated with water involved with these actions.

**Biological Resources**

Under the Proposed Action, there would be no additional impacts to migratory birds, federally listed species or their critical habitat, or to Essential Fish Habitat, beyond those previously addressed by the Biological Opinions issued to Reclamation for the Coordinated Long-Term Operations of the CVP and SWP (USFWS 2008, NMFS 2009). No lands fallowed and untilled for three years or more would be brought into production and no new facilities would be constructed. In addition, there would be no net change in deliveries of CVP and SWP water, and the water would move only through existing facilities and be put to existing uses. Therefore, Reclamation has determined that the Proposed Action would have no effect on any federally listed or proposed species or their critical habitat beyond those previously covered and no further consultation is required.

**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.



Withdrawals from Los Vaqueros Reservoir and the subsequent refill, in combination with other water actions, have the potential to affect other users of water. The refill agreement is anticipated to avoid cumulative impacts from the proposed withdrawal and transfer.

***Biological Resources***

As the Proposed Action would result in no impacts beyond those previously addressed, it would also not contribute cumulatively to any additional impacts to biological resources.

# RECLAMATION

*Managing Water in the West*

Draft Environmental Assessment

## **Contra Costa Water District Transfer to Byron Bethany Irrigation District**

EA-15-030



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

	Page
<b>Section 1 Introduction .....</b>	<b>1</b>
1.1 Background .....	1
1.2 Need for the Proposed Action .....	2
<b>Section 2 Alternatives Including the Proposed Action .....</b>	<b>5</b>
2.1 No Action Alternative .....	5
2.2 Proposed Action .....	5
2.2.1 Environmental Commitments .....	7
<b>Section 3 Affected Environment and Environmental Consequences .....</b>	<b>9</b>
3.1 Resources Eliminated from Further Analysis .....	9
3.2 Water Resources .....	10
3.2.1 Affected Environment .....	10
3.2.2 Environmental Consequences .....	10
3.3 Biological Resources .....	12
3.3.1 Affected Environment .....	12
3.3.2 Environmental Consequences .....	15
<b>Section 4 Consultation and Coordination .....</b>	<b>17</b>
4.1 Public Review Period .....	17
<b>Section 5 Preparers and Reviewers .....</b>	<b>19</b>
<b>Section 6 References .....</b>	<b>21</b>
Figure 1 Proposed Action Area .....	3
Figure 2 Byron Bethany and Consolidated Place of Use .....	7
Table 1 Environmental Protection Measures and Commitments .....	7
Table 2 Resources Eliminated from Further Analysis .....	9
Table 3 Federally Protected Species List for the Proposed Action Area .....	13
Appendix A   Refill Agreement	
Appendix B   Cultural Resources Determination	
Appendix C   Indian Trust Assets Determination	

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).

Contra Costa Water District (Contra Costa) is a federal Central Valley Project (CVP) contractor located in central and eastern Contra Costa County (see Figure 1). Los Vaqueros Reservoir is located within Contra Costa and stores water from the Sacramento-San Joaquin River Delta (Delta), under the Bureau of Reclamation's (Reclamation) CVP water rights (redirection of CVP storage releases) and Contra Costa's Los Vaqueros water rights. Los Vaqueros Reservoir currently holds approximately 33,000 acre-feet (AF) of water diverted under Contra Costa's water right, previously stored under Delta surplus conditions.

Byron Bethany Irrigation District (Byron Bethany) is a CVP contractor that receives its CVP supply from the Delta-Mendota Canal for agricultural and municipal and industrial (M&I) purposes. Byron Bethany also diverts water from the Delta at milepost (MP) 1.83 of the intake channel to the Harvey O. Banks Pumping Plant under its own pre-1914 water rights (see Figure 1). This year, due to extraordinarily dry hydrologic conditions, Byron Bethany's CVP allocation has been set to zero for agriculture and 25 percent for M&I. In addition, the State Water Resources Control Board has notified pre-1914 water rights holders that curtailments of pre-1914 and riparian diversions are likely to occur this year. Consequently, Byron Bethany and Contra Costa are working together to share resources and facilities as part of an integrated regional water management plan to the mutual benefit of their collective customers.

In 2014, Byron Bethany and Contra Costa entered into an agreement to undertake a one-time demonstration project to evaluate the feasibility of a longer-term partnership for the improvement of regional water supply reliability. Under the agreement, Byron Bethany purchased 4,000 AF of Contra Costa's water rights water stored in Los Vaqueros Reservoir for use during 2014. The districts requested approval from Reclamation to facilitate a transfer (similar to a groundwater substitution transfer albeit with Los Vaqueros water as opposed to groundwater) for delivery of this water to Byron-Bethany since there is no direct conveyance mechanism to deliver water from Los Vaqueros to Byron Bethany's distribution system. The transfer was analyzed in Environmental Assessment (EA)-14-041 and a Finding of No Significant Impact (FONSI) was signed on August 29, 2014 (Reclamation 2014). FONSI/EA-14-041 is hereby incorporated by reference into this EA.

Last year, 1,656 AF of this water was successfully transferred to Byron Bethany. Byron Bethany and Contra Costa have since amended their agreement to allow for the transfer of an additional 500 AF of the previously secured water in 2015 and have requested approval from Reclamation to transfer this water to Byron Bethany in the same manner as the transfer completed in 2014. Byron Bethany has also requested approval from Reclamation to apply this transfer water outside of its CVP service area.

## **1.2 Need for the Proposed Action**

Byron Bethany has a need to deliver water to support existing M&I uses within its service area. They have purchased 500 AF of Contra Costa's non-CVP water stored in Los Vaqueros Reservoir; however, there is no direct conveyance method to deliver it to its customers. The purpose of the proposed transfer facilitated by a storage substitution is to provide a means to deliver an equivalent volume of water to Byron Bethany.

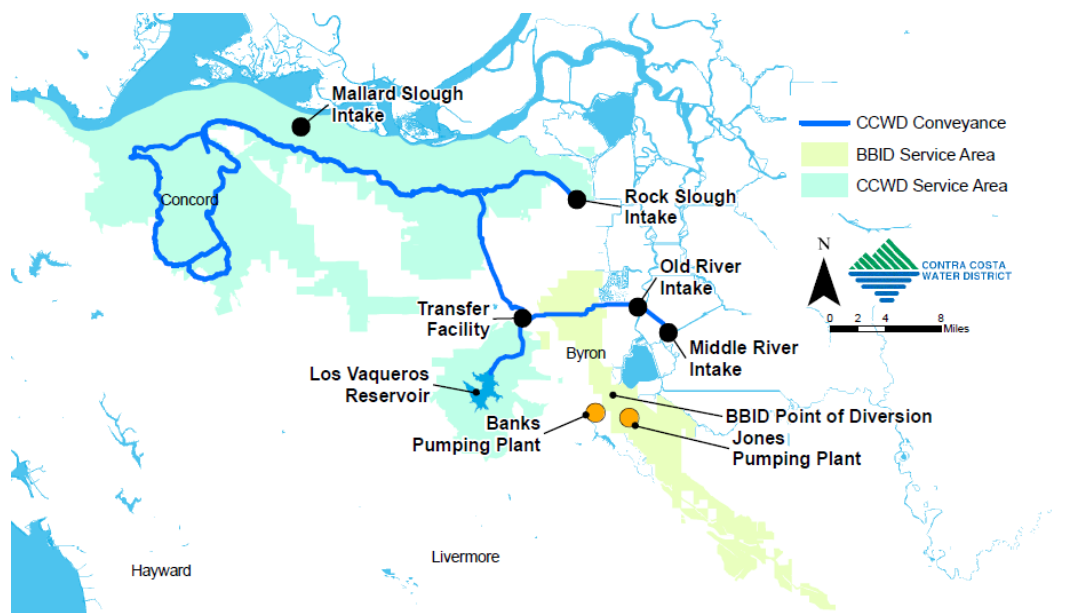


Figure 1 Proposed Action Area



THIS PAGE LEFT INTENTIONALLY BLANK

## **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 facilitate the transfer of water between Contra Costa and Byron Bethany. Contra Costa's non-CVP water purchased by Byron-Bethany would remain in Los Vaqueros reservoir, and Contra Costa would take delivery of its CVP water from the Delta as scheduled.

Due to extraordinarily dry hydrologic conditions, the State Water Resources Control Board has notified pre-1914 water rights holders that curtailments of pre-1914 and riparian diversions are likely to occur this year. Byron Bethany's CVP allocation has already been set to zero for agricultural uses and 25 percent for M&I. Byron Bethany has imposed mandatory conservation measures in response to the drought, eliminating surface furrow irrigation and operational spilling and converting to drip irrigation. Even so, the Byron area in Contra Costa County and the Mariposa Energy Center in Alameda County would lose its entire water supply if Byron Bethany's diversions under its pre-1914 water right are curtailed. The timing of the curtailment is uncertain, so approval of this transfer is needed as soon as possible to ensure an uninterrupted supply of water, in order to avoid severe economic impacts to the region.

### **2.2 Proposed Action**

Reclamation proposes to facilitate the transfer of up to 500 AF of CVP water between Contra Costa and Byron Bethany. The transfer would be executed as follows:

Contra Costa would take delivery of up to 500 AF of its non-CVP water purchased by Byron Bethany that is currently stored in Los Vaqueros Reservoir. The non-CVP water would be delivered in-district for use by Contra Costa's M&I customers. Byron Bethany would then take delivery of up to 500 AF of Contra Costa's CVP water from the Delta previously scheduled for delivery to Contra Costa.

Contra Costa's normal points of diversion for its CVP water are at its Rock Slough Intake, Old River Intake, and Middle River Intake at the Victoria Canal. Under the Proposed Action, the transferred water would instead be diverted from the Delta by Byron Bethany at Byron Bethany's point of diversion on the intake channel of the Harvey O. Banks Pumping Plant (Banks Intake Channel). This intake is downstream of and is protected by the John E. Skinner Fish Protective Facility. Once the transferred water enters Byron Bethany's facilities, it would be conveyed to its M&I customers directly or introduced into the Delta-Mendota Canal for conveyance to M&I customers that receive their supplies from the Delta-Mendota Canal. As the transfer was facilitated by an exchange of Contra Costa's non-CVP water, the transferred water would require a Warren Act contract for introduction into the Delta-Mendota Canal. Byron-Bethany currently has an existing five-year Warren Act contract that allows for the introduction of non-CVP water into the Delta-Mendota Canal. Under the Proposed Action, the Warren Act contract would be updated to allow the introduction and conveyance of the transferred water.

The transferred water would be delivered to customers within Byron Bethany as shown in Figure 2, except for the Tracy Hills area which is outside the CVP place of use. A temporary transfer petition is required to add Byron Bethany's point of diversion on the Banks Intake Channel as a point of diversion/rediversion for CVP water rights water. As such, Contra Costa and Reclamation will submit petitions to the State Water Resources Control Board for a temporary change in point of diversion/rediversion for the transfer.

The proposed transfer would occur in 2015, and could take anywhere from fifteen days to three months to complete consistent with the State Water Resources Control Board petitions. The timing and rate of the water transfer would be determined in close coordination among Byron Bethany, Contra Costa, Reclamation and the Department of Water Resources (DWR). No construction or modification of facilities would be required.

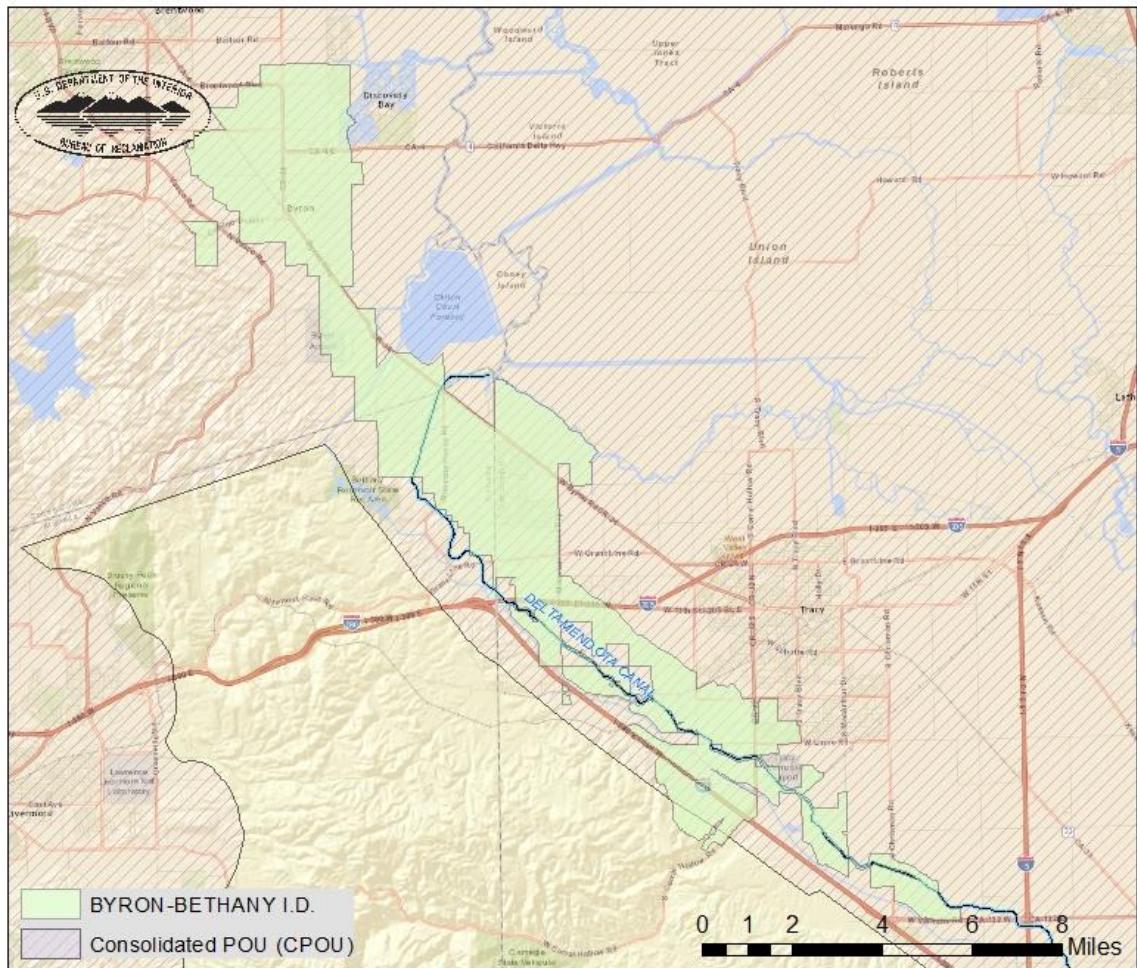


Figure 2 Byron Bethany and Consolidated Place of Use

### 2.2.1 Environmental Commitments

Contra Costa and Byron Bethany 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
Water Resources	Water under the Proposed Action may only be served within the Consolidated Place of Use.
	A refill agreement between Contra Costa, Reclamation and DWR is required before water may be taken from Los Vaqueros Reservoir for the purpose of this transfer. See Appendix A for a draft refill agreement.
Biological Resources	No native or untilled land (fallow for three consecutive years or more) may be cultivated with CVP water without additional environmental analysis and approval.
	No new construction or modification of existing facilities may occur in order to complete the Proposed Action.
	The Proposed Action cannot alter the flow regime of natural waterways

Resource	Protection Measure
	or natural watercourses such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as to have a detrimental effect on fish or wildlife or their habitats.
Various Resources	The Proposed Action must comply with all applicable Federal, State and local laws, regulations, permits, guidelines and policies.
	The Proposed Action would not increase or decrease water supplies that would result in development.

## Section 3 Affected Environment and Environmental Consequences

This section identifies the potentially affected environment and the environmental consequences involved with the Proposed Action and the No Action Alternative, in addition to environmental trends and conditions that currently exist.

The only difference between the Proposed Action analyzed in this EA and the action analyzed in EA-14-041 is the transfer of an additional 500 AF of Contra Costa's CVP water to Byron Bethany for M&I purposes facilitated by an exchange of an equal amount of Contra Costa's non-CVP water purchased by Byron Bethany currently stored in Los Vaqueros Reservoir. As EA-14-041 has been incorporated by reference into this EA, the affected environment and environmental consequences section in this EA will focus only on updates or changes and will not repeat information included in EA-14-041.

### 3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action did not have the potential to cause direct, indirect, or cumulative adverse effects to the resources listed in Table 2.

Table 2 Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Air Quality	No construction or modification of facilities is proposed. Some pumping would be required to move water under the Proposed Action, but power usage would be within the typical range for the facilities involved.
Cultural Resources	The Proposed Action would not involve physical changes to the environment or construction activities that could impact cultural resources. As the Proposed Action would facilitate the flow of water through existing facilities to existing users and no construction or modification of these facilities would be needed in order to complete the Proposed Action, Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 Code of Federal Regulations Part 800.3(a)(1). See Appendix B for Reclamation's determination.
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	No construction or modification of facilities is proposed. Some pumping would be required to move water under the Proposed Action, but power usage would be within the typical range for the facilities involved. No greenhouse gas emissions are anticipated outside normal operational fluctuations. 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 are flexible, any changes in hydrologic conditions due to global climate

Resource	Reason Eliminated
	change would be addressed within Reclamation's operation flexibility.
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.
Land Use	The Proposed Action would not change historic land and water management practices. Water would move through existing facilities for delivery to the districts for existing M&I purposes. The water would not be used to place untillied or new lands into production, or to convert undeveloped land to other uses.
Socioeconomics	Water would move through existing facilities for delivery to the districts for existing M&I purposes. As such, no change in socioeconomic conditions is expected from the Proposed Action.

## 3.2 Water Resources

### 3.2.1 Affected Environment

EA-14-041 included an analysis of the CVP service areas of Contra Costa, Byron Bethany, and Los Vaqueros Reservoir. As this is the same for this EA, it is not repeated here.

### 3.2.2 Environmental Consequences

#### **No Action**

Under the No Action Alternative, Reclamation would not approve the transfer of Contra Costa's CVP water to Byron Bethany. The non-CVP water in Los Vaqueros purchased by Byron Bethany would remain in storage and Contra Costa would divert its CVP water from the Delta as previously scheduled.

Due to extraordinarily dry hydrologic conditions, the State Water Resources Control Board has notified pre-1914 water rights holders that curtailments of pre-1914 and riparian diversions are likely to occur this year. Byron Bethany's CVP allocation has already been set to zero for agricultural uses and 25 percent for M&I. Byron Bethany has imposed mandatory conservation measures in response to the drought, eliminating surface furrow irrigation and operational spilling and converting to drip irrigation. Even so, the Byron area in Contra Costa County and the Mariposa Energy Center in Alameda County would lose its entire water supply if Byron Bethany's diversions under its pre-1914 water right are curtailed. The timing of the curtailment is uncertain, so approval of this transfer is needed as soon as possible to ensure an uninterrupted supply of water, in order to avoid severe economic impacts to the region.

#### **Proposed Action**

Under the Proposed Action, Contra Costa would take delivery of up to 500 AF of its non-CVP water purchased by Byron Bethany that is currently stored in Los Vaqueros Reservoir. Contra Costa would then transfer up to 500 AF of its CVP supply (previously scheduled for delivery from the Delta) to Byron Bethany. The

portion of CVP water that Contra Costa would have diverted at its Rock Slough Intake, Old River Intake or Middle River Intake at Victoria Canal would instead be diverted at Byron Bethany's point of diversion on the Banks Intake Channel. No additional overall Delta pumping would be needed for the transfer facilitated by a storage exchange.

The transfer facilitated by an exchange would result in a lower water level in the Los Vaqueros Reservoir than would have existed absent the Proposed Action. As such, a refill agreement is required in order to address operational concerns by Reclamation, DWR, and other legal users of Delta water (see Appendix A for a draft refill agreement). The refill agreement would be executed in coordination with DWR and Reclamation and attached to Contra Costa's Los Vaqueros water right for the duration of the transfer and refill period. Pursuant to the refill agreement, Contra Costa would be required to keep track of the vacated storage amount in Los Vaqueros resulting from the transfer, and operate the reservoir to ensure that the refill of the reservoir does not injure other legal users of water or the environment.

When Byron Bethany takes the transferred CVP water from the Banks Intake Channel, the overall pumping from the south Delta would not be increased from what would have occurred absent the transfer. In addition, the Old and Middle River flows north of Contra Costa's Old River and Middle River intakes would not change as a result of the Proposed Action. As such, the Proposed Action would not affect CVP or State Water Project (SWP). The Proposed Action would not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes.

The transferred water would be brought into Byron Bethany's existing infrastructure for either direct delivery to its M&I customers or for introduction into the Delta-Mendota Canal pursuant to its existing Warren Act contract for conveyance to other M&I customers within the district. The amount of water introduced into the Delta-Mendota Canal under the Proposed Action would be within the amount previously approved for introduction into the Delta-Mendota Canal under the Warren Act contract. No additional water would be introduced into the Delta-Mendota Canal due to the Proposed Action.

The transfer of CVP water and the exchange of non-CVP water in Los Vaqueros would utilize existing facilities and not require new infrastructure, modifications of existing facilities, or ground disturbing activities. The water would be used for existing M&I purposes in both districts. 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.

Withdrawals from Los Vaqueros Reservoir and the subsequent refill, in combination with other water actions, have the potential to affect other users of water. The refill agreement is anticipated to avoid cumulative impacts from the proposed withdrawal and transfer.

### **3.3 Biological Resources**

#### **3.3.1 Affected Environment**

Reclamation requested an official species list from the U.S. Fish and Wildlife Service (Service) at <http://ecos.fws.gov/ipac/>, on May 7, 2015. The list is for Contra Costa, Alameda, and San Joaquin Counties (Service 2015). Reclamation further queried the California Department of Fish and Wildlife California Natural Diversity Database (CNDDB) for records of protected species within 10 miles of the Proposed Action Area (CNDDB 2015). Table 3 also includes Lange's

metalmark butterfly, the Central California Coast coho salmon, Central Valley spring-run chinook salmon, North American green sturgeon, and Sacramento River winter-run chinook salmon, which occur in the Proposed Action Area but were not included on the list. Table 3 also includes the southern resident killer whale, due to its inclusion in the 2009 biological opinion from the National Marine Fisheries Service (NMFS) for the coordinated long-term operations of the CVP and SWP.

Table 3 Federally Protected Species List for the Proposed Action Area

COMMON NAME	CRITICAL HABITAT	LISTING STATUS	EFFECT DETERMINATIONS
<b>Invertebrates</b>			
bay checkerspot butterfly	designated	threatened	no effect; no effect on critical habitat
California freshwater shrimp	no	endangered	no effect
callippe silverspot butterfly	no	endangered	no effect
Conservancy fairy shrimp	designated	endangered	no effect
delta green ground beetle	no	threatened	no effect
Lange's metalmark butterfly	no	endangered	no effect
longhorn fairy shrimp	designated	endangered	no effect; no effect on critical habitat
mission blue butterfly	no	endangered	no effect
valley elderberry longhorn beetle	no	threatened	no effect
vernal pool fairy shrimp	designated	threatened	no effect; no effect on critical habitat
vernal pool tadpole shrimp	designated	endangered	no effect; no effect on critical habitat
<b>Fish</b>			
Central California Coast coho salmon	designated	endangered	no effect; no effect on critical habitat
Central California Coastal steelhead	designated	threatened	no effect; no effect on critical habitat
Central Valley spring-run chinook salmon	designated	threatened	any effects on this species and its critical habitat have already been addressed
Central Valley steelhead	designated	threatened	any effects on this species and its critical habitat have already been addressed
delta smelt	designated	threatened	any effects on this species and its critical habitat have already been addressed
North American green sturgeon	designated	threatened	any effects on this species and its critical habitat have already been addressed
Sacramento River winter-run chinook salmon	designated	endangered	any effects on this species and its critical habitat have already been addressed
tidewater goby	no	endangered	no effect
<b>Amphibians</b>			
California red-legged frog	designated	threatened	no effect; no effect on critical habitat

COMMON NAME	CRITICAL HABITAT	LISTING STATUS	EFFECT DETERMINATIONS
California tiger salamander, Central DPS	designated	threatened	no effect; no effect on critical habitat
<b>Reptiles</b>			
Alameda whipsnake	designated	threatened	no effect; no effect on critical habitat
giant garter snake	no	threatened	no effect
San Francisco garter snake	no	endangered	no effect
<b>Birds</b>			
California Clapper Rail	no	endangered	no effect
California Least Tern	no	endangered	no effect
Least Bell's Vireo	no	endangered	no effect
Northern Spotted Owl	no	threatened	no effect
Western Snowy Plover	no	threatened	no effect
Western Yellow-billed Cuckoo	no	proposed threatened	no effect
<b>Mammals</b>			
riparian brush rabbit	no	endangered	no effect
riparian woodrat	no	endangered	no effect
salt marsh harvest mouse	no	endangered	no effect
San Joaquin kit fox	no	endangered	no effect
southern resident killer whales	no	endangered	any effects on this species have already been addressed
<b>Plants</b>			
Antioch Dunes evening-primrose	designated	endangered	no effect; no effect on critical habitat
California sea blite	no	endangered	no effect
Contra Costa goldfields	designated	endangered	no effect; no effect on critical habitat
Contra Costa wallflower	designated	endangered	no effect; no effect on critical habitat
Greene's tuctoria	no	endangered	no effect
lone manzanita	no	threatened	no effect
large-flowered fiddleneck	no	endangered	no effect
Marin dwarf-flax	no	threatened	no effect
pallid manzanita	no	threatened	no effect
palmate-bracted bird's-beak	no	endangered	no effect
Presidio clarkia	no	endangered	no effect
Sacramento Orcutt grass	designated	endangered	no effect; no effect on critical habitat
Santa Cruz tarplant	designated	threatened	no effect; no effect on critical habitat
showy Indian clover	no	endangered	no effect
soft bird's-beak	designated	endangered	no effect; no effect on critical habitat
succulent owl's-clover	designated	threatened	no effect; no effect on critical habitat
Tiburon jewelflower	no	endangered	no effect
Tiburon mariposa lily	no	threatened	no effect
Tiburon paintbrush	no	endangered	no effect

### ***Migratory Birds***

There are CNDDDB records of migratory birds in the Proposed Action Area. In addition to the federally-listed species in Table 3, there are records of Swainson's Hawks and Western Burrowing Owls. These species would typically only fly

over the developed areas that would be receiving the transferred water involved in the Proposed Action, and would not otherwise use these lands.

### ***Federally-listed Species***

With the exception of the fish species that occur in the Delta (which includes all the listed fishes in Table 3 except the tidewater goby), the other species do not occur in developed areas. The southern resident killer whales are on the list due to possible effects on their chinook salmon prey base as a result of pumping in the South Delta.

Essential Fish Habitat for chinook salmon also occurs in the Delta.

### ***Critical Habitat***

As with the case for the federally listed species, the only critical habitat in the Proposed Action Area is that for several of the fish species, as indicated in Table 3.

## **3.3.2 Environmental Consequences**

### ***No Action***

Under the No Action Alternative, Reclamation would not approve the transfer of Contra Costa's CVP water to Byron Bethany and there would be no change in the affected environment for biological resources. The effects of CVP and SWP pumping on federally listed fishes and their critical habitat have been addressed by Biological Opinions issued to Reclamation for the Coordinated Long-Term Operations of the CVP and SWP (NMFS 2009, Service 2008). The Biological Opinion issued by the Service to Reclamation for the Coordinated Long-Term Operations of the CVP and SWP found that operations as proposed were likely to jeopardize the continued existence of delta smelt and adversely modify its critical habitat. The Service provided a Reasonable and Prudent Alternative (RPA) with five components. On December 15, 2008, Reclamation submitted a memo provisionally accepting the RPA. The memo also indicated that Reclamation would immediately begin implementing the RPA. The provisional acceptance of the RPA was conditioned upon the further development and evaluation of the two RPA components directed at aquatic habitats. Reclamation stated that the two RPA components, RPA Component 3 – the fall action, and RPA Component 4 – the tidal habitat restoration action, both need additional review and refinement before Reclamation would be able to determine whether implementation of these actions by the CVP and SWP is reasonable and prudent.

The Biological Opinion issued by NMFS determined that long term SWP and CVP operations were likely to jeopardize several species and result in adverse modification of their critical habitat. NMFS also developed an RPA and included it in the Biological Opinion. On June 4, 2009, Reclamation sent a provisional acceptance letter to NMFS, citing the need to further evaluate and develop many of the longer-term actions, but also stating that Reclamation would immediately begin implementing the near-term elements of the RPA.

Reclamation also consulted under the Magnusson-Stevens Fishery Conservation and Management Act with NMFS on the impacts to Essential Fish Habitat for Chinook salmon as a result of the pumping (NMFS 2009).

However, following their provisional acceptance, both Biological Opinions were subsequently challenged in Court, and following lengthy proceedings, the United States District Court for the Eastern District of California remanded the Biological Opinions, and Reclamation was ordered by the Court to comply with the National Environmental Policy Act (NEPA) before accepting the RPAs. In March and December 2014, the Biological Opinions issued by the Service and NMFS, respectively, were upheld by the Ninth Circuit Court of Appeals, although certain requirements (such as an obligation for Reclamation to follow a NEPA process) were left in place. Reclamation is currently preparing environmental documentation to comply with the Court's decisions. In the meantime, Reclamation continues to comply with the existing Biological Opinions and current Court orders.

#### ***Proposed Action***

Under the Proposed Action, there would be no additional impacts to migratory birds, federally listed species or their critical habitat, or to Essential Fish Habitat, beyond those previously addressed by the Biological Opinions issued to Reclamation for the Coordinated Long-Term Operations of the CVP and SWP (USFWS 2008, NMFS 2009). No lands fallowed and untilled for three years or more would be brought into production and no new facilities would be constructed. In addition, there would be no net change in deliveries of CVP and SWP water, and the water would move only through existing facilities and be put to existing uses. Therefore, Reclamation has determined that the Proposed Action would have no effect on any federally listed or proposed species or their critical habitat beyond those previously covered and no further consultation is required.

#### ***Cumulative Impacts***

As the Proposed Action would result in no impacts beyond those previously addressed, it would also not contribute cumulatively to any additional impacts to biological resources.

## **Section 4 Consultation and Coordination**

### **4.1 Public Review Period**

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

THIS PAGE LEFT INTENTIONALLY BLANK

## **Section 5 Preparers and Reviewers**

### **Bureau of Reclamation**

Rain L. Emerson, M.S., Supervisory Natural Resources Specialist, SCCAO

Shauna McDonald, Wildlife Biologist, SCCAO

BranDee Bruce, Architectural Historian, MP-153

Scott Taylor, Acting Supervisory Repayment Specialist, SCCAO – reviewer

David E. Hyatt, Resources Management Division Chief, SCCAO – reviewer

### **Contra Costa Water District**

Lucinda Shih, Senior Water Resources Specialist – reviewer

### **Byron Bethany Irrigation District**

Rick Gilmore, General Manger – reviewer



THIS PAGE LEFT INTENTIONALLY BLANK

## Section 6 References

Bureau of Reclamation (Reclamation). 2014. Contra Costa Water District Transfer to Byron Bethany Irrigation District. FONSI/EA-14-041. Mid-Pacific Region, South-Central California Area Office. Website: [http://www.usbr.gov/mp/nepa/nepa\\_projdetails.cfm?Project\\_ID=18781](http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=18781).

California Natural Diversity Database (CNDDDB). 2015. California Department of Fish and Wildlife's Natural Diversity Database, March, 2015.

National Marine Fisheries Service (NMFS). 2009. Final biological opinion and conference opinion on the long-term operations of the Central Valley Project and State Water Project. June 4, 2009.

State of California. 2015. California Drought. Website: <http://ca.gov/drought/>.

State of California. 2014. Governor Brown Declares Drought State of Emergency. Website: <http://gov.ca.gov/news.php?id=18368>.

U.S. Fish and Wildlife Service (Service). 2008. Formal Endangered Species Act consultation on the coordinated operations of the Central Valley Project and State Water Project. December 15, 2008.

U.S. Fish and Wildlife Service (Service). 2015. IPAC Trust Resource Report for Alameda, Contra Costa, and San Joaquin Counties. May 7, 2015. Website: <http://ecos.fws.gov/ipac/>.

# **Appendix A**

---

## **Draft Refill Agreement**

**REFILL AGREEMENT FOR  
2015 WATER TRANSFER  
FROM CONTRA COSTA WATER DISTRICT  
TO BYRON BETHANY IRRIGATION DISTRICT**

This Agreement is made as of the \_\_\_\_\_ day of \_\_\_\_\_, 2015, by and between the United States Bureau of Reclamation ("Reclamation"), the California Department of Water Resources ("DWR"), and the Contra Costa Water District ("CCWD"), a public agency in the state of California.

The following refill criteria pertain to the temporary transfer of up to 500 acre-feet (AF) of Central Valley Project (CVP) water to Byron Bethany Irrigation District (BBID) from Contra Costa Water District (CCWD).

**RECITALS**

A. Los Vaqueros Reservoir is an off-stream reservoir owned and operated by CCWD that is filled from Delta diversions under CCWD's CVP Contract water or CCWD's Los Vaqueros water rights issued in State Water Resources Control Board Decision 1629 and Water Right orders issued on July 8, 2010.

B. CCWD is a CVP water supply contractor. CVP water can be diverted through Rock Slough, Old River, and Middle River intakes and stored in Los Vaqueros Reservoir to supply its annual CVP allocation. CVP water consists of water rediverted from upstream storage releases and direct diversions from the Delta under United States Bureau of Reclamation CVP and Orland Project water rights.

C. Los Vaqueros Project is used to manage salinity in CCWD's delivered water and to provide for an emergency supply.

D. CCWD currently maintains a monthly accounting of CVP and CCWD diversions and storage and provides them to Reclamation within 15 days of end of each month. This accounting is titled "Contra Costa Water District WATER CONTRACT MEASUREMENTS [I75r-3401, Articles 5(d) and 17(e)]."

E. In the Cooperative Agreement for the Use of Los Vaqueros Reservoir for a One-Time Storage and Exchange Demonstration Project between Byron Bethany Irrigation District and Contra Costa Water District (Cooperative Agreement) dated June 13, 2014, BBID secured the use of up to 4,000 AF of water already held in storage in CCWD's Los Vaqueros Reservoir, previously stored under CCWD's Los Vaqueros water right. 1,656 AF of this water was transferred to BBID in 2014. Amendment No. 2 of the Cooperative Agreement allows for the transfer of an additional 500 AF of the previously secured water.

F. There is currently no direct conveyance between Los Vaqueros Reservoir and BBID's service area.

G. The water is therefore being made available to BBID through a substitution-type transfer. In 2015, CCWD submitted a CVP delivery schedule in accordance with its annual allocation that is a combination of diversions from the Delta and releases of CVP water from Los Vaqueros Reservoir. CCWD will substitute up to 500 AF of this diversion from the Delta with up to 500 AF of releases of CCWD water from Los Vaqueros Reservoir. The 500 AF of CCWD's scheduled CVP diversion from the Delta water will instead be diverted by BBID at the BBID point of diversion on the intake channel to the Harvey O. Banks (Banks) pumping plant for delivery to the BBID service area. This reduction at CCWD intakes will occur on the same schedule and of the same quantity as the diversion by BBID.

H. In July 2014, Reclamation approved a transfer of up to 5,000 AF of water previously stored in Los Vaqueros Reservoir from CCWD to Alameda County Water District (ACWD). The ACWD transfer is subject to a Refill Agreement, signed July 10, 2014 by Reclamation, CCWD, and DWR.

I. In September 2014, Reclamation approved a transfer of up to 4,000 AF of water previously stored in Los Vaqueros Reservoir from CCWD to BBID. This transfer is subject to a Refill Agreement, signed August 28, 2014 by Reclamation, CCWD, and DWR. 1,656 AF of water was transferred in September and October 2014.

J. The proposed transfer will result in a reduction in storage in Los Vaqueros Reservoir beyond what would have existed absent the transfer. Maximum storage in Los Vaqueros Reservoir absent transfers is 160,000 AF under normal CCWD operations. The maximum storage in Los Vaqueros Reservoir will be decreased by the amount of water transferred from storage until the conditions for refill of the vacated storage have been met. Maximum storage in Los Vaqueros Reservoir after the release of 5,000 AF for the ACWD transfer and the release of 1,656 AF for the 2014 BBID transfer, maximum Los Vaqueros Reservoir storage is 153,344 AF until the conditions for refill of the storage vacated for the previous transfers have been met. As a result of the release of up to 500 AF for the 2015 transfer to BBID, maximum Los Vaqueros Reservoir storage will be further reduced by the amount of the transfer until the conditions for refill of the storage vacated for the transfer provided in this agreement have been met. To avoid impacting other water users, including the SWP and CVP, refill of the storage vacated for the transfer must occur at times when the Delta is in excess conditions, as specified in the refill criteria described below. The storage vacated by this transfer will be refilled after the storage vacated by the ACWD transfer and the 2014 BBID transfer.

K. Delta excess conditions occur when DWR and Reclamation releases from upstream reservoirs plus unregulated flow exceed the water supply needed to meet Sacramento Valley in-basin uses, Delta water quality and outflow requirements, and Delta exports, as defined in Article 3b of the Agreement Between the United States of America

and the State of California for Coordinated Operations of the Central Valley Project and the State Water Project dated November 24, 1986.

L. The biological opinions on the coordinated operations of the CVP and SWP, issued to DWR and Reclamation by the United States Fish and Wildlife Service for delta smelt on December 15, 2008, and the National Marine Fisheries Service for anadromous fishes and marine mammal species on June 4, 2009 (BiOps) include restrictions on Old and Middle River flows (OMR) at certain times of the year. OMR restrictions may control CVP and SWP exports from the Delta from late December through June of each year. Additional diversions from the Delta may affect OMR flows and could impact SWP and CVP operations.

**NOW, THEREFORE, the parties have agreed as follows:**

1. CCWD agrees to maintain an accounting of the vacated storage amount in Los Vaqueros Reservoir resulting from this transfer and the ACWD transfer and the 2014 BBID transfer.

2. For the duration of the transfer and refill period, CCWD will modify “Contra Costa Water District WATER CONTRACT MEASUREMENTS [I75r-3401, Articles 5(d) and 17(e)]” to include accounting of the transfer and refill operations in accordance with this agreement (see Exhibits 1 and 2) and the ACWD transfer refill agreement. The accounting will include separate tracking of daily storage releases substituted for reduced CVP diversions from the Delta and Los Vaqueros storage volumes absent and with this transfer and the ACWD transfer through the end of cumulative refill. Monthly accounting will be transmitted to both Reclamation and DWR.

3. CCWD agrees to refill storage vacated for this transfer and the ACWD transfer only under its Los Vaqueros water rights in compliance with term 5 on page 94 of D1629, during periods when the Delta is in excess conditions, subject to the approval of DWR and USBR. CCWD will cease refill of the vacated storage if its diversions will result in a shift from excess into balanced conditions.

4. CCWD will not refill the storage vacated for this transfer and the ACWD transfer at times when OMR flow restrictions are controlling CVP and SWP exports, or at any time when CCWD diversions to storage in Los Vaqueros Reservoir would impair the export capability at either Jones Pumping Plant or Banks Pumping Plant.

5. CCWD, Reclamation, and DWR will continue to coordinate their operations to resolve any outstanding issues of concern and to meet the operational goals of all three agencies to the maximum extent possible, pursuant to the April 28, 2011 Coordinated Operations Agreement (10-XC-20-0400) by and between U.S. Department of the Interior, Bureau of Reclamation, Mid-Pacific Region and the Contra Costa Water District for the Los Vaqueros Reservoir.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement on the date first written.

United States Bureau of Reclamation

---

Ron Milligan  
Operations Manager

Contra Costa Water District

---

Marguerite Patil  
Special Assistant to the General Manager

California Department of Water Resources

---

David Roose  
Chief, SWP Operations Control Office

**EXHIBIT 1**  
**RESERVOIR RELEASE AND REFILL CRITERIA**

Seller is located in Contra Costa County and will make Transfer Water available to Buyer in 2015 by release of previously stored water in Los Vaqueros. Los Vaqueros Reservoir is an off-stream reservoir owned and operated by CCWD that is filled from Delta diversions under CCWD's CVP Contract water or CCWD's Los Vaqueros water rights issued in State Water Resources Control Board Decision 1629 and Water Right orders issued on July 8, 2010.

The following definitions and criteria apply to Seller's water transfer to Buyer:

**1. DEFINITIONS**

As used in Exhibit 1 and Exhibit 2, the following terms have the meanings set forth below.

- a. "ACWD transfer" is the transfer of 5,000 AF of water previously stored in Los Vaqueros Reservoir from CCWD to Alameda County Water District (ACWD). The State Water Resources Control Board issued an order approving the ACWD transfer on July 11, 2014. The ACWD transfer was approved by Reclamation in a July 31, 2014 letter to CCWD and is subject to a Refill Agreement, signed July 10, 2014 by Reclamation, CCWD, and DWR. The ACWD transfer was completed September 1, 2014.
- b. "2014 BBID transfer" is the transfer of 1,656 AF of water previously stored in Los Vaqueros Reservoir from CCWD to BBID in 2014. The State Water Resources Control Board issued an order approving the 2014 BBID transfer on August 27, 2014. The 2014 BBID transfer was approved by Reclamation in a September 5, 2014 letter to CCWD and is subject to a Refill Agreement, signed August 28, 2014 by Reclamation, CCWD, and DWR.
- c. "Actual Storage" is the observed end of day storage Los Vaqueros as reported in the Contra Costa Water District, Water Contract Measurements.
- d. "Allowable Storage" is the top of conservation storage in Los Vaqueros Reservoir, which is 160,000 acre-feet.
- e. "Balanced Conditions" means those periods when the Department of Water Resources (DWR) and US Department of the Interior's Bureau of Reclamation (Reclamation) agree that releases from upstream reservoirs plus unregulated flow approximately equals the water supply needed to meet Sacramento Valley in-basin uses plus exports, as defined in Article 3b of the "Agreement Between The United States of America And The State of California For Coordinated Operations Of The Central Valley Project And The State Water Project" (COA) dated November 24, 1986.



**EXHIBIT 1**  
**RESERVOIR RELEASE AND REFILL CRITERIA**

- f. "Baseline Release" means the mean daily release from Los Vaqueros Reservoir that would have been made by Contra Costa Water District absent this transfer and the ACWD transfer.
- g. "Delta E/I Ratio" is identified in the State Water Resources Control Board's (SWRCB) Decision 1641 (D1641) and may be controlling Project exports from the Delta.
- h. "Excess Conditions" means periods when releases from upstream reservoirs plus unregulated flow exceed the water supply needed to meet Sacramento Valley in-basin uses, Delta water quality and outflow requirements and Delta exports, as defined in the COA.
- i. "OMR Flow Criteria" is identified in the Biological Opinions for Salmon and Delta Smelt and may be controlling Project exports from the Delta during the months of December through June of each year.
- j. "Point of Transfer" refers to the location where CVP makes available the Transfer Water to BBID.
- k. "Projects" means the federal Central Valley Project (CVP) and the California State Water Project (SWP).
- l. "Refill Impacts" mean the quantity of water accumulated in the storage vacated by the transfer during periods when the Delta is in Balanced Conditions or the Delta is in Restricted Conditions that would not have been diverted to storage by Seller had the transfer not occurred.
- m. "Refill Period" means the period extending from the cessation of Seller releases of Transfer Water until the Transfer and Cumulative Refill Impact Account Balances (End of Day) equal zero.
- n. "Restricted Conditions" means periods when the Delta is in Excess Conditions but Projects' operations are constrained by the following circumstances included in the Biological Opinions and the SWRCB's D1641 governing the Projects' operations in the Delta:

(1) during December through June, when OMR Flow Criteria is limiting Project exports from the Delta (for the purpose of this Exhibit 1 and Exhibit 2, it is assumed that 50% of the flow in the San Joaquin River tracks into the Old River and the Middle River),

**EXHIBIT 1**  
**RESERVOIR RELEASE AND REFILL CRITERIA**

- (2) during April and May, when the daily flow measured in the San Joaquin River at Vernalis is between 6,000 cfs and 21,750 cfs, and Project exports from the Delta are limited by the San Joaquin River I/E Ratio ranging between 1:1 and 4:1 or
  - (3) during February through June, when the Delta E/I Ratio is 35%, and during July through January, when the Delta E/I Ratio is 65% or such variations in percentages as provided for in the SWRCB's D1641.
- o. "San Joaquin River I/E Ratio" is identified in the Biological Opinion for Salmon and may be controlling Project exports from the Delta during the months of April and May of each year.
  - p. "Theoretical Storage" is the sum of Actual Storage plus the Transfer Account Balance.
  - q. "Transfer Period" means when Seller will make Transfer Water available to Buyer at the Point of Transfer. Export of the Transfer Water will begin approximately 1 day from the date the Seller makes water available at the Point of Transfer.
  - r. "Transfer Account Balance" reflects the quantity of Transfer Water released and the vacated storage refill as provided in Exhibit 2. Transfer Account Balance shall distinguish Transfer Water and Refill Impacts by individual transfer implemented by Seller
  - s. "Vacated Storage" refers to the amount of storage in Los Vaqueros Reservoir that is vacated as a result of this transfer and the ACWD transfer.
- 2. The Point of Transfer will be CCWD's Rock Slough Intake, Old River Intake, or Middle River Intake on Victoria Canal, and will be measured as releases from Los Vaqueros Reservoir made in lieu of direct diversions to CCWD's service area.
  - 3. Seller shall make up to 500 acre-feet of Transfer Water available for release from Los Vaqueros Reservoir during the Transfer Period. The Maximum Transfer Amount is 500 acre-feet. The schedule of releases by Seller will be provided to DWR and Reclamation prior to the Transfer Period. Any change to the schedule will be provided to DWR and Reclamation, together with the reason for the change. The effect of the change upon the transfer releases, if any, shall be agreed upon by DWR, Reclamation, and Seller. By the 10th day of every month, Seller will submit to DWR and Reclamation the actual release data for the previous month. No losses will be applied to this transfer water conveyed under this agreement. The amount of Transfer Water made available to Buyer shall be the gross amount measured at the Point of Transfer on the

**EXHIBIT 1**  
**RESERVOIR RELEASE AND REFILL CRITERIA**

Rock Slough, Old River, or Middle River, up to 500 acre-feet. For example, if the maximum quantity of 500 acre-feet is made available at the Point of Transfer, and with no loss, this results in a net amount of Transfer Water of 500 acre-feet at the points of rediversion.

4. The release of Transfer Water shall be in addition to amounts otherwise scheduled to be released by Seller from Los Vaqueros Reservoir including, but not limited to required in-stream flows in the Kellogg Creek, water provided under the terms of any settlement agreements, regulatory requirements and any other water transfers made by Seller.
5. The amounts of Transfer Water made available shall be the difference between the measured releases from Los Vaqueros Reservoir and the Baseline Release, computed as a volume of water during the Transfer Period, up to 500 acre-feet as measured at the Point of Transfer.
6. For purposes of verification of Transfer Water made available and to receive full credit, Seller will draw down Los Vaqueros to a storage of 500 acre-feet or less below the storage absent this transfer and the ACWD transfer, subject to the terms of this Exhibit 1 and Exhibit 2.

**EXHIBIT 2**  
**RESERVOIR REFILL IMPACTS ACCOUNTING PROCEDURES**

Contra Costa Water District agrees that the refilling of Los Vaqueros storage vacated for water transfers may adversely impact the operations of the CVP and SWP. Refill occurs when the daily Theoretical Storage goes above the Allowable Storage. The refilling of Los Vaqueros Reservoir for this transfer and the ACWD transfer and the 2014 BBID transfer will impact the Projects if it occurs when either 1) the Delta is in Balanced Conditions; or, 2) the Delta is in Restricted Conditions.

1. In the event DWR and/or Reclamation determine that there is a refill impact to the CVP and/or the SWP, CCWD agrees to not divert water to refill the Vacated Storage in Los Vaqueros Reservoir. Such a cessation of diversion to storage shall occur as soon as practicable, and on a schedule coordinated with Reclamation and DWR to avoid impacts. When there is a change in the Projects' operating conditions and CCWD is not filling Los Vaqueros Reservoir to avoid refill impacts associated with the quantity of Transfer Water released, then DWR and/or Reclamation shall notify CCWD of the changed conditions by telephone followed by written notice, electronic mail, or facsimile; and CCWD shall be allowed to divert water to storage within 48 hours of telephone notification.
2. DWR and Reclamation coordinate operations under the terms of the COA.
3. The accounting procedure provided below, incorporating the concepts in this Exhibit, is to be used in tracking the refill of Vacated Storage in Los Vaqueros Reservoir in order to avoid impacts on the Projects. General principles in this Exhibit are to be applied in accounting for any unusual operational conditions not set forth in the application example.
4. CCWD will not conduct another water transfer that could impair CCWD's ability to fully comply with this Agreement.

The following columnar description sets forth the format, criteria, and procedures to be used for the determination of combined impacts to the Projects due to changes in refilling Los Vaqueros caused by the water transfer under this Agreement and the ACWD transfer. An example of the application is attached.

**COLUMNAR DESCRIPTION<sup>1</sup>**

Column 1 – Date

Column 2 – Actual Storage: observed end-of-day storage as reported

---

<sup>1</sup> Where the Current Day's computation is dependent upon the Previous Day's data: <sub>i</sub> signifies the Current Day and <sub>i-1</sub> signifies the Previous Day.

**EXHIBIT 2**  
**RESERVOIR REFILL IMPACTS ACCOUNTING PROCEDURES**

- Column 3 – ACWD Transfer Account Balance, End of Day: Transfer Account Balance at end of current day.  
**Column 3<sub>i</sub> = Column 3<sub>i-1</sub> - Column 8<sub>i</sub> if Column 3<sub>i-1</sub> is greater than zero, and Column 3<sub>i</sub> = zero otherwise**
- Column 4 – 2014 BBID Transfer Account Balance, End of Day: Transfer Account Balance at end of current day.  
**Column 4<sub>i</sub> = Column 4<sub>i-1</sub> - Column 8<sub>i</sub> if Column 3<sub>i-1</sub> is zero, and Column 4<sub>i</sub> = Column 4<sub>i-1</sub> otherwise**
- Column 5 – 2015 BBID Transfer Account Balance, End of Day: Transfer Account Balance at end of current day.  
**Column 5<sub>i</sub> = Column 5<sub>i-1</sub> - Column 8<sub>i</sub> if Column 4<sub>i-1</sub> is zero, and Column 5<sub>i</sub> = Column 5<sub>i-1</sub> otherwise**
- Column 6 – Theoretical Storage, With Daily Refill Volume: end of day storage as would have occurred absent the water transfers.  
**Column 6<sub>i</sub> = Column 2<sub>i</sub> + Column 3<sub>i</sub> + Column 4<sub>i</sub> + Column 5<sub>i</sub>**
- Column 7 – Baseline Daily Filling: filling in the current day that would have occurred absent the transfers.  
**Column 7<sub>i</sub> = Column 2<sub>i</sub> - Column 2<sub>i-1</sub> but not less than zero when Column 2<sub>i</sub> is less than or equal to 160,000 acre-feet - (Column 3<sub>i-1</sub> + Column 4<sub>i-1</sub> + Column 5<sub>i-1</sub>), and Column 7<sub>i</sub> = 160,000 acre-feet - Column 6<sub>i-1</sub> otherwise**
- Column 8 – Daily Refill Volume: amount of Transfer Water refilled on the current day.  
**Column 8<sub>i</sub> = Column 2<sub>i</sub> - Column 2<sub>i-1</sub> - Column 7<sub>i</sub> but not less than zero**
- Column 9 – Cumulative Refill Volume: total volume of Transfer Water that has been refilled through end of current day.  
**Column 9<sub>i</sub> = Column 9<sub>i-1</sub> + Column 8<sub>i</sub>**
- Column 10 – Delta Condition: “B” indicates that the Delta is in Balanced Conditions, “R” indicates that the Delta is in Restricted Conditions, “E” indicates that the Delta is in Excess Conditions. (Source: Reclamation, DWR, <http://www.usbr.gov/mp/cvo/vungvari/coanew.pdf>, and <http://www.water.ca.gov/swp/operationscontrol/docs/delta/DeltaWQ.pdf>)  
Note: this information need only be included in table when refill is occurring.

## EXHIBIT 2

### RESERVOIR REFILL IMPACTS ACCOUNTING PROCEDURES

Hypothetical example of accounting of CCWD Refill of Vacated Storage									
1	2	3	4	5	6	7	8	9	10
Date	Actual Storage, End of Day (AF)	ACWD Transfer Account Balance, End of Day (AF)	BBID Transfer Account Balance, End of Day (AF)	BBID Transfer Account Balance, End of Day (AF)	Theoretical Storage, With Daily Refill Volume, End of Day (AF)	Daily Filling that would have occurred absent the transfer (AF)	Daily Refill Volume (AF)	Cumulative Refill Volume (AF)	Delta Condition
12/23/2017	152,544	5,000	1,656	500	159,700	300	0	0	
12/24/2017	152,844	5,000	1,656	500	160,000	300	0	0	
12/25/2017	152,844	5,000	1,656	500	160,000	0	0	0	Balanced
12/26/2017	152,844	5,000	1,656	500	160,000	0	0	0	Restricted (OMR)
12/27/2017	152,844	5,000	1,656	500	160,000	0	0	0	Restricted (OMR)
12/28/2017	153,144	4,700	1,656	500	160,000	0	300	300	Excess
12/29/2017	153,444	4,400	1,656	500	160,000	0	300	600	Excess
12/30/2017	153,744	4,100	1,656	500	160,000	0	300	900	Excess
12/31/2017	154,044	3,800	1,656	500	160,000	0	300	1,200	Excess
1/1/2018	154,344	3,500	1,656	500	160,000	0	300	1,500	Excess
1/2/2018	154,644	3,200	1,656	500	160,000	0	300	1,800	Excess
1/3/2018	154,944	2,900	1,656	500	160,000	0	300	2,100	Excess
1/4/2018	155,244	2,600	1,656	500	160,000	0	300	2,400	Excess
1/5/2018	155,544	2,300	1,656	500	160,000	0	300	2,700	Excess
1/6/2018	155,844	2,000	1,656	500	160,000	0	300	3,000	Excess
1/7/2018	155,844	2,000	1,656	500	160,000	0	0	3,000	
1/8/2018	155,844	2,000	1,656	500	160,000	0	0	3,000	
1/9/2018	155,644	2,000	1,656	500	159,800	0	0	3,000	
1/10/2018	155,444	2,000	1,656	500	159,600	0	0	3,000	
1/11/2018	155,244	2,000	1,656	500	159,400	0	0	3,000	
1/12/2018	155,044	2,000	1,656	500	159,200	0	0	3,000	
1/13/2018	154,844	2,000	1,656	500	159,000	0	0	3,000	
1/14/2018	155,144	2,000	1,656	500	159,300	300	0	3,000	Excess
1/15/2018	155,444	2,000	1,656	500	159,600	300	0	3,000	Excess
1/16/2018	155,744	2,000	1,656	500	159,900	300	0	3,000	Excess
1/17/2018	156,044	1,800	1,656	500	160,000	100	200	3,200	Excess
1/18/2018	156,344	1,500	1,656	500	160,000	0	300	3,500	Excess
1/19/2018	156,644	1,200	1,656	500	160,000	0	300	3,800	Excess
1/20/2018	156,944	900	1,656	500	160,000	0	300	4,100	Excess
1/21/2018	157,244	600	1,656	500	160,000	0	300	4,400	Excess
1/22/2018	157,544	300	1,656	500	160,000	0	300	4,700	Excess
1/23/2018	157,844	0	1,656	500	160,000	0	300	5,000	Excess
1/24/2018	158,144	0	1,356	500	160,000	0	300	5,300	Excess
1/25/2018	158,444	0	1,056	500	160,000	0	300	5,600	Excess
1/26/2018	158,744	0	756	500	160,000	0	300	5,900	Excess
1/27/2018	159,044	0	456	500	160,000	0	300	6,200	Excess
1/28/2018	159,344	0	156	500	160,000	0	300	6,500	Excess
1/29/2018	159,644	0	0	356	160,000	0	300	6,800	Excess
1/30/2018	159,944	0	0	56	160,000	0	300	7,100	Excess
1/31/2018	160,000	0	0	0	160,000	0	56	7,156	Excess

## **Appendix B**

---

### **Reclamation's Cultural Resources Determination**

**CULTURAL RESOURCES COMPLIANCE**  
**Mid-Pacific Region**  
**Division of Environmental Affairs**  
**Cultural Resources Branch (MP-153)**

**MP-153 Tracking Number:** 15-SCAO-140

**Project Name:** Contra Costa Water District (CCWD) Transfer of up to 500 acre-feet (af) of Central Valley Project (CVP) water to Byron Bethany Irrigation District (BBID)

**NEPA Document:** EA-15-030

**NEPA Contact:** Rain Emerson, Supervisory Natural Resources Specialist

**MP-153 Cultural Resources Reviewer:** BranDee Bruce, Architectural Historian

**Date:** May 8, 2015

---

Reclamation proposes to facilitate an exchange of up to 500 af of CVP water between CCWD and BBID. Under this exchange, CCWD will take delivery of up to 500 af of its water rights (non-CVP) water secured by BBID that is currently stored in Los Vaqueros Reservoir and deliver it to CCWD customers. BBID will then take 500 af of CCWD's CVP water from the Delta that has previously been scheduled for delivery to CCWD and deliver it to BBID customers. All points of diversion are existing and water will be moved through existing facilities. No new construction or modification of existing facilities will occur as a result of the proposed action. Additionally, the exchanged water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses.

Reclamation has determined that the approval of water transfers using existing facilities with no changes in land use is the type of activity that does not have the potential to cause effects on historic properties pursuant to 36 CFR § 800.3(a)(1). Therefore, Reclamation has no further obligations under Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108). The proposed action would result in no impacts to cultural resources.

This document conveys the completion of the cultural resources review and NHPA Section 106 process for this undertaking. Please retain a copy with the administrative record for this action. Should the proposed action change, additional review under Section 106, possibly including consultation with the State Historic Preservation Officer, may be required.



## **Appendix C**

### **Reclamation's Indian Trust Assets Determination**

---



Emerson, Rain &lt;remerson@usbr.gov&gt;

---

**Re: ITA Determination Needed - Drought Project (15-030)**

---

**STEVENSON, RICHARD** <rstevenson@usbr.gov>

Thu, May 7, 2015 at 11:33 AM

To: "Emerson, Rain" &lt;remerson@usbr.gov&gt;

Rain,

A minor point, but I would characterize this transaction as an exchange rather than a transfer.

I have reviewed the project description and the location of the facilities involved. Since these facilities are all well-established and have been used for the conveyance of CVP water for many years, I have determined that there is no likelihood that this activity will have an adverse impact on Indian Trust Assets.

Richard Stevenson

On Thu, May 7, 2015 at 10:57 AM, Emerson, Rain &lt;remerson@usbr.gov&gt; wrote:

Good morning Dick.

Attached is a project description for your review. Also attached is the determination we received for the same action (just different amounts of water) that was done last year.

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](mailto:rstevenson@usbr.gov)