RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Tule River Water 5-Year Warren Act Agreement

FONSI-15-014

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-15-014

Tule River Water 5-Year Warren Act Agreement

Prepared by: Rain L. Emerson
Supervisory Natural Resources Specialist

05/04/2015
Date

Concurred by: Jennifer L. Lewis
Wildlife Biologist or Biology Technician

5/6/2015
Date

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

5/28/2015
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 issuance of a Warren Act agreement to convey Tule River water in the Friant-Kern Canal. This Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA)-15-014, *Tule River Water 5-Year Warren Act Agreement*, which is hereby incorporated by reference.

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA from April 20 to May 5, 2015. No comments were received.

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. 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. 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.

Friant Division Central Valley Project (CVP) water service contractors received unprecedented 0 percent water supply allocations in 2014, and again in 2015. The zero allocations follow previous dry years in 2012 and 2013, in which Friant Division CVP contractors received 57 and 62 percent of their full Class 1 contract supply, respectively. The historically low allocations are due to a combination of hydrologic, environmental, and regulatory conditions.

In order to continue meeting their customers' needs, affected contractors are pursuing a range of additional water supplies, such as transfers, pumped groundwater and other surface water sources. In 2014, Terra Bella Irrigation District acquired 5,000 acre-feet (AF) of non-CVP Tule River water from Lower

Tule River Irrigation District and Porterville Irrigation District. Under an agreement with Reclamation, this non-CVP water was conveyed in the Friant-Kern Canal, from milepost 97.36 to a turnout at milepost 103.64, where it was used for agricultural purposes. Reclamation evaluated the 2014 action under EA/FONSI 14-039.

Terra Bella Irrigation District has now proposed a five-year agreement for the same conveyance arrangement. The annual volumes would be the same, and the points of introduction and withdrawal would be the same.

Proposed Action

Reclamation proposes to issue a Warren Act agreement to Terra Bella Irrigation District under Article 18 of its Repayment Contract. Under the proposed agreement, the district would introduce up to 5,000 AF per year of non-CVP Tule River water into the Friant-Kern Canal, for a period of five years. Water would be introduced into the Friant-Kern Canal from June to August of each year, subject to available capacity. Scheduling would be coordinated with Reclamation and the Friant Water Authority.

Under the Proposed Action, Tule River water would be released from storage in Success Reservoir into the Tule River channel, and diverted 5 miles downstream at the Poplar Ditch head gate in Porterville. The water would then be conveyed 5.5 miles in Poplar Ditch to the downstream side of the Friant-Kern Canal near Highway 190, where it would be contained and stored at a temporary pumping station installed by Terra Bella Irrigation District, until they are ready to pump the water for introduction into the Friant-Kern Canal. The temporary pumping station would be placed in the paved area between the ditch and Friant-Kern Canal at milepost 97.36 outside of Reclamation right-of-way. The pumping station would be installed each year, for use during the irrigation season, and then removed until it is needed the following year. No ground disturbance would be needed for the installation of the pumping station. Water pumped into the Friant-Kern Canal would flow to milepost 103.64, where Terra Bella Irrigation District would take it at their existing turnout.

Environmental Commitments

Terra Bella Irrigation District shall implement the environmental protection measures listed in Table 1 of EA-15-014 to avoid and/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-15-014, Reclamation analyzed the affected environment and determined that the Proposed Action does not have the potential to cause direct, indirect, or cumulative adverse effects to the following resources: cultural resources, environmental justice, Indian Sacred Sites, Indian Trust Assets, land use, socioeconomic resources, air quality or global climate.

Water Resources

The Proposed Action would allow non-CVP water to be conveyed in the Friant-Kern Canal when excess capacity is available. This would allow the water to be delivered to Terra Bella Irrigation District's service area for agricultural use. There would be no modification of the Friant-Kern-Canal, and the capacity of the facility would remain the same.

Introduction and conveyance of non-CVP water is dependent on available capacity and operational constraints; therefore, the Proposed Action would not interfere with the normal operations of federal facilities, nor would it impede any CVP obligations to deliver water to other contractors or to local fish and wildlife habitat.

The total quantity of water conveyed in the Friant-Kern Canal under the Proposed Action would be limited to 5,000 AF per year. The quantity of water pumped into the Friant-Kern Canal by Terra Bella Irrigation District would be delivered (less conveyance losses) and used for irrigation purposes. Some of the irrigation water would be lost to evapotranspiration, and some would also percolate back into the aquifer.

Non-CVP water introduced into the Friant-Kern Canal must meet Reclamation's then current water quality requirements prior to approval for conveyance (see Appendix C in EA-15-014 for Reclamation's existing water quality requirements and monitoring plan). If testing under the monitoring program shows that the water does not meet the standards, Terra Bella Irrigation District would not be allowed to introduce the non-CVP water into the Friant-Kern Canal until water quality concerns are addressed. The water quality monitoring program is anticipated to adequately protect the quality of water in the canal and limit degradation of other users' supplies.

Biological Resources

Under the Proposed Action, federally listed, proposed or candidate species, and critical habitat protected under the Endangered Species Act (16 USC § 1531 et seq.) would not be affected. Migratory birds protected under the Migratory Bird

Treaty Act (16 USC § 703-712) also would not be affected. Many of the species and their critical habitat do not occur in the Proposed Action Area because habitat types required by species protected by the Endangered Species Act do not occur in the Proposed Action Area. The Proposed Action would not involve the conversion of any native habitat or land fallowed and untilled for three or more years. There would be no change in land use patterns of cultivated or fallowed fields that do have some value to listed species or to birds protected under the Migratory Bird Treaty Act. Non-CVP water would not reach streams containing listed fish species; therefore, there would be no effects to fish. Based upon the reasons described above, Reclamation has determined there would be No Effect to listed species or designated critical habitat under the Endangered Species Act and No Take of birds protected by the Migratory Bird Treaty Act. As such, no consultation with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service is required.

Cumulative Impacts

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

Water Resources

Reclamation has reviewed existing or foreseeable projects in the same geographic area that could affect or could be affected by the Proposed Action. Many water transfers, Warren Act agreements and other supply management actions have been executed or are in process. These drought relief projects are expected to have a cumulative beneficial effect on water supply during the ongoing drought.

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies, which drive requests for water service actions. Water districts provide water to their customers based on available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and a myriad of water service actions are approved and executed each year to facilitate water needs. It is likely that in future years more districts will request exchanges, transfers, and Warren Act contracts (conveyance of non-CVP water in CVP facilities) due to hydrologic conditions. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

The Friant-Kern Canal is used to convey water for a variety of users from a variety of sources. The quality of water being introduced will be tested regularly

in order to limit the potential for degradation of mixed water supplies. Reclamation's water quality monitoring program is anticipated to adequately protect the quality of water in the Friant-Kern Canal from the cumulative effects of this and other water conveyance actions.

Although capacity in the Friant-Kern Canal is limited, the Friant Water Authority and Reclamation actively operate the canal in order to balance competing demands. Non-CVP water, such as the water which would be conveyed under the Proposed Action, has a lower priority than CVP water for conveyance in the Friant-Kern Canal and is required to be coordinated with Reclamation and the Friant Water Authority prior to introduction; therefore, the Proposed Action would not cause conflicts or other cumulative impacts to Friant-Kern Canal operations.

Biological Resources

As the Proposed Action would not result in any direct or indirect impacts to federally listed, proposed, or candidate species, or critical habitat, it would not contribute cumulatively to any impacts to these resources.

RECLAMATION

Managing Water in the West

Final Environmental Assessment

Tule River Water 5-Year Warren Act Agreement

EA-15-014

U.S. Department of the Interior
Bureau of Reclamation

May 2015

Mission Statements

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Contents

Page

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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) from April 20 to May 5, 2015. No comments were received. Changes from the Draft EA which are not editorial and minor in nature are indicated by a line in the left margin.

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).

Friant Division Central Valley Project (CVP) water service contractors received unprecedented 0 percent water supply allocations in 2014, and again in 2015. The zero allocations follow previous dry years in 2012 and 2013, in which Friant Division CVP contractors received 57 and 62 percent of their full Class 1 contract supply, respectively. The historically low allocations are due to a combination of hydrologic, environmental, and regulatory conditions.

In order to continue meeting their customers' needs, affected contractors are pursuing a range of additional water supplies, such as transfers, pumped groundwater and other surface water sources. In 2014, Terra Bella Irrigation District acquired 5,000 acre-feet (AF) of non-CVP Tule River water from Lower Tule River Irrigation District and Porterville Irrigation District. Under an agreement with Reclamation, this non-CVP water was conveyed in the Friant-Kern Canal, from milepost 97.36 to a turnout at milepost 103.64, where it was used for agricultural purposes. Reclamation evaluated the 2014 action under EA/FONSI-14-039 (Reclamation 2014).

Terra Bella Irrigation District has now proposed a five-year agreement for the same conveyance arrangement. The annual volumes would be the same, and the points of introduction and withdrawal would be the same. The location of the participating districts is shown in Figure 1.

1.2 Need for the Proposed Action

Terra Bella Irrigation District does not have adequate water supplies to meet the needs of their customers. The purpose of the Proposed Action is to provide a conveyance mechanism to deliver additional water supplies to support existing crops within the district.

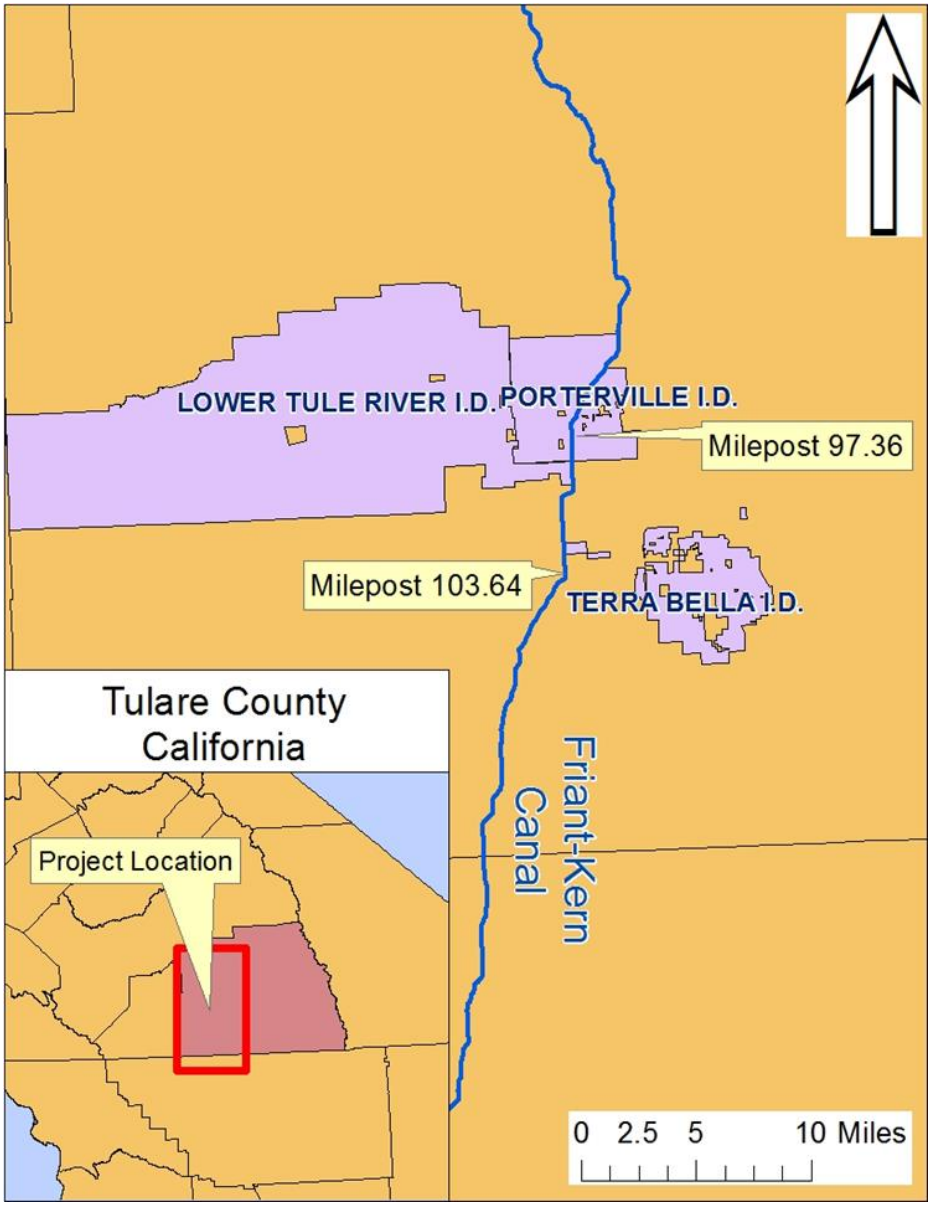

Figure 1 Project Location

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

If no action were taken, Terra Bella Irrigation District's non-CVP water would not be conveyed in the Friant-Kern Canal. The district would have to find an alternate water supply, or use another conveyance method to deliver this non-CVP water for use by their customers' on existing crops. If no other water supply or conveyance mechanism were found, fallowing of cropland would be necessary.

2.2 Proposed Action

Reclamation proposes to issue a Warren Act agreement to Terra Bella Irrigation District under Article 18 of its Repayment Contract. Under the proposed agreement, the district would introduce up to 5,000 AF per year of non-CVP Tule River water into the Friant-Kern Canal, for a period of five years. Water would be introduced into the Friant-Kern Canal from June to August of each year, subject to available capacity. Scheduling would be coordinated with Reclamation and the Friant Water Authority.

Under the Proposed Action, Tule River water would be released from storage in Success Reservoir into the Tule River channel, and diverted 5 miles downstream at the Poplar Ditch head gate in Porterville. The water would then be conveyed 5.5 miles in Poplar Ditch to the downstream side of the Friant-Kern Canal near Highway 190 (see Figure 2), where it would be contained and stored at a temporary pumping station installed by Terra Bella Irrigation District, until they are ready to pump the water for introduction into the Friant-Kern Canal. The temporary pumping station would be placed in the paved area between the ditch and Friant-Kern Canal at milepost 97.36 outside of Reclamation right-of-way. The pumping station would be installed each year, for use during the irrigation season, and then removed until it is needed the following year. No ground disturbance would be needed for the installation of the pumping station. Water pumped into the Friant-Kern Canal would flow to milepost 103.64, where Terra Bella Irrigation District would take it at their existing turnout.

2.2.1 Environmental Commitments

Terra Bella Irrigation District 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. Copies of all reports and monitoring shall be submitted to Reclamation.

Table 1 Environmental Protection Measures and Commitments

Resource	Protection Measure
Air Quality	All pumps to be used shall meet the applicable emission standards set by the San Joaquin Valley Air Pollution Control District.
Land Use/Biology	The non-CVP water involved in these actions must not be used to cultivate native or untilled land (fallow for three consecutive years or more).
Water Quality	Non-CVP water must meet water quality standards prior to approval for conveyance. If testing indicates that water does not meet then-current standards, it may not be introduced into the Friant-Kern Canal until water quality concerns are addressed.

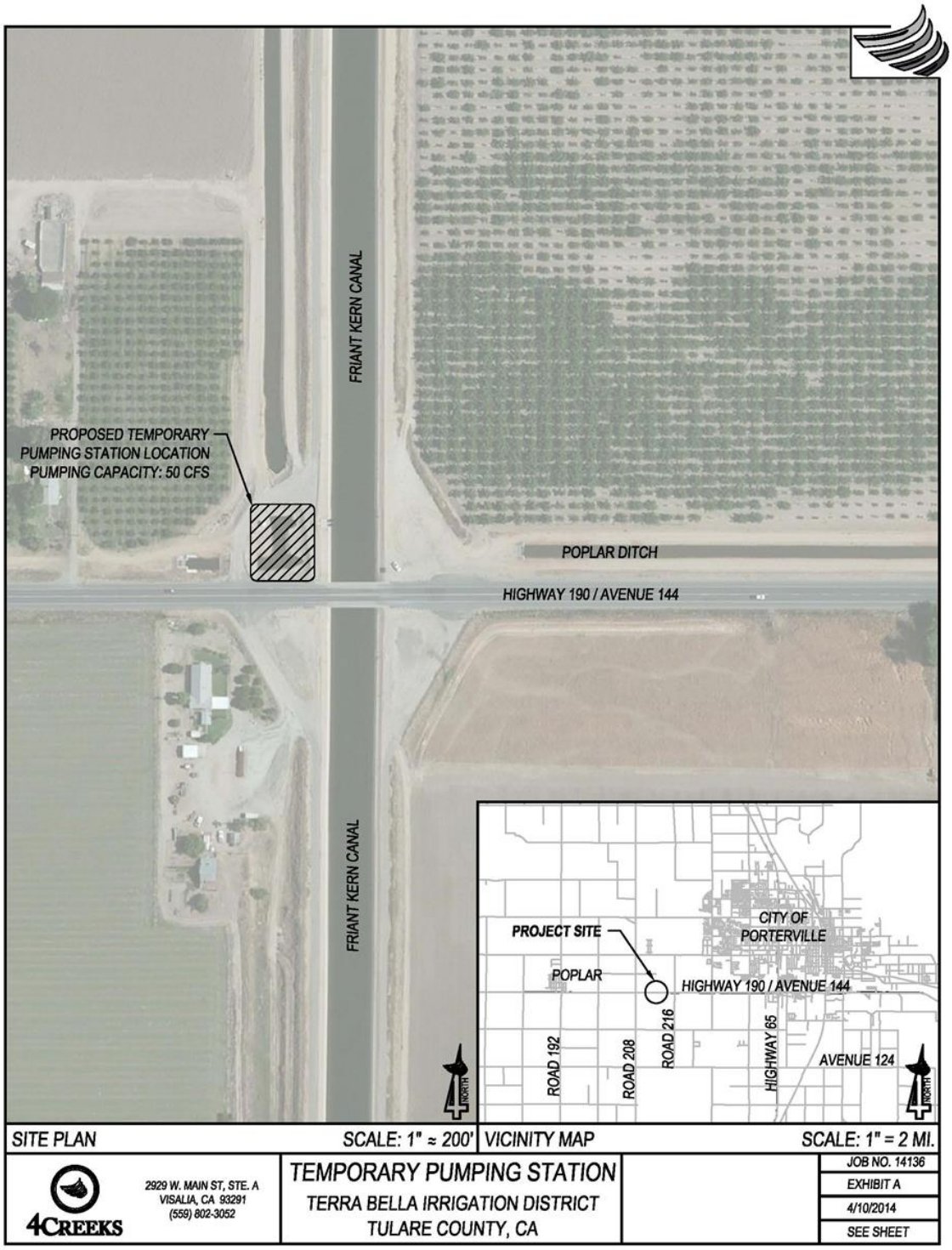

Figure 2 Proposed Temporary Pumping Station

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Section 3 Affected Environment and Environmental Consequences

This section analyzes 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-14-039 is the term of the Warren Act agreement (from one year to five). Therefore, the affected environment and environmental consequences section in this EA will focus on those changes and will not repeat information included in EA-14-039 (Reclamation 2014) as it is incorporated by reference into this EA.

3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that the Proposed Action 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	The San Joaquin Valley Air Pollution Control District requires pumps operated within the district to meet strict emission standards. With the requirement that equipment used for the Proposed Action must meet San Joaquin Valley Air Pollution Control District standards, impacts to air quality should be discountable.
Cultural Resources	The Proposed Action would facilitate the flow of water through existing facilities to existing users. As no construction or modification of 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 CFR Part 800.3(a)(1). See Appendix A 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. The Proposed Action would support agriculture by making additional supplies of water available to support existing crops. Since farm laborers often come from minority and low-income communities, supporting farm employment is a benefit to those disadvantaged groups.

Resource	Reason Eliminated
Global Climate	The combined greenhouse gas emissions of all pumps that could be used under the Proposed Action are not anticipated to approach the 25,000 tons of carbon dioxide equivalent per year threshold of significance set by the Environmental Protection Agency. The pumps would also have to meet San Joaquin Valley Air Pollution Control District emission standards, which are set such that impacts from regulated emission sources would not cumulatively cause an adverse effect.
Indian Sacred Sites	The Proposed Action would not limit access to ceremonial use of Indian Sacred Sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. Therefore, there would be no impacts to Indian Sacred Sites as a result of the Proposed Action.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action Area. See Appendix B for Reclamation's determination.
Land Use	Under the Proposed Action, non-CVP water would be conveyed to Terra Bella to maintain current land uses by supporting existing crops. A temporary pumping station would be required, but it would be located on an existing paved area and would not have any long-term impact on land use. In addition, the water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses.
Socioeconomic Resources	The conveyance of non-CVP water to Terra Bella would maintain current land uses by supporting existing crops. This would support agriculture, which is a benefit to the area's economy.

3.2 Water Resources

3.2.1 Affected Environment

See EA-14-039 for a discussion of the affected environment for the Proposed Action (Reclamation 2014).

3.2.2 Environmental Consequences

No Action

If no action were taken, the non-CVP Tule River water would not be conveyed in the Friant-Kern Canal. Terra Bella Irrigation District would have to find an alternate water supply, or use another conveyance method to deliver this non-CVP water to their customers for use on existing crops.

Proposed Action

The Proposed Action would allow non-CVP water to be conveyed in the Friant-Kern Canal when excess capacity is available. This would allow the water to be delivered to Terra Bella Irrigation District's service area for agricultural use. There would be no modification of the Friant-Kern Canal, and the capacity of the facility would remain the same.

Introduction and conveyance of non-CVP water is dependent on available capacity and operational constraints; therefore, the Proposed Action would not interfere with the normal operations of federal facilities nor would it impede any

CVP obligations to deliver water to other contractors or to local fish and wildlife habitat.

The total quantity of water conveyed in the Friant-Kern Canal under the Proposed Action would be limited to 5,000 AF per year, for five years. The water pumped into the Friant-Kern Canal would be delivered by way of the canal (less conveyance losses), and used for irrigation purposes on existing crops. Some of the irrigation water would be lost to evapotranspiration, and some would also percolate back into the aquifer.

Non-CVP water introduced into the Friant-Kern Canal must meet Reclamation's then current water quality requirements prior to approval for conveyance (see Appendix C for Reclamation's existing water quality requirements and monitoring plan). If testing under the monitoring program shows that the water does not meet the standards, Terra Bella Irrigation District would not be allowed to introduce the non-CVP water into the Friant-Kern Canal until water quality concerns are addressed. The water quality monitoring program is anticipated to adequately protect the quality of water in the canal and limit degradation of other users' supplies.

Cumulative Impacts

Reclamation has reviewed existing or foreseeable projects in the same geographic area that could affect or could be affected by the Proposed Action. Many water transfers, Warren Act agreements and other supply management actions have been executed or are in process. These drought relief projects are expected to have a cumulative beneficial effect on water supply during the ongoing drought.

As in the past, hydrological conditions and other factors are likely to result in fluctuating water supplies, which drive requests for water service actions. Water districts provide water to their customers based on available water supplies and timing, while attempting to minimize costs. Farmers irrigate and grow crops based on these conditions and factors, and a myriad of water service actions are approved and executed each year to facilitate water needs. It is likely that in future years more districts will request exchanges, transfers, and Warren Act contracts (conveyance of non-CVP water in CVP facilities) due to hydrologic conditions. Each water service transaction involving Reclamation undergoes environmental review prior to approval.

The Friant-Kern Canal is used to convey water for a variety of users from a variety of sources. The quality of water being introduced will be tested regularly in order to limit the potential for degradation of mixed water supplies. Reclamation's water quality monitoring program is anticipated to adequately protect the quality of water in the Friant-Kern Canal from the cumulative effects of this and other water conveyance actions.

Although capacity in the Friant-Kern Canal is limited, the Friant Water Authority and Reclamation actively operate the canal in order to balance competing

demands. Non-CVP water, such as the water which would be conveyed under the Proposed Action, has a lower priority than CVP water for conveyance in the Friant-Kern Canal and is required to be coordinated with Reclamation and the Friant Water Authority prior to introduction; therefore, the Proposed Action would not cause conflicts or other cumulative impacts to Friant-Kern Canal operations.

3.3 Biological Resources

3.3.1 Affected Environment

See EA-14-039 for a discussion of the affected environment for the Proposed Action (Reclamation 2014).

Reclamation requested an updated official species list from the U.S. Fish and Wildlife Service via the Sacramento Field Office's website, http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-form.cfm, on March 23, 2015. The list is for the following U.S. Geological Survey 7½-minute topographic quadrangles, which are overlapped by the Proposed Action Area: Fountain Springs, Ducor, Sausalito School, Success Dam, Woodville, and Porterville. Reclamation further queried the California Department of Fish and Wildlife California Natural Diversity Database for records of protected species within 10 miles of the construction area associated with the Proposed Action (CNDDB 2015).

3.3.2 Environmental Consequences

No Action

Under the Proposed Action, federally listed, proposed or candidate species, and critical habitat protected under the Endangered Species Act (16 USC § 1531 et seq.) would not be affected. Migratory birds protected under the Migratory Bird Treaty Act (16 USC § 703-712) also would not be affected. Many of the species and their critical habitat do not occur in the Proposed Action Area because habitat types required by species protected by the Endangered Species Act do not occur in the Proposed Action Area. The Proposed Action would not involve the conversion of any native habitat or land fallowed and untilled for three or more years. There would be no change in land use patterns of cultivated or fallowed fields that do have some value to listed species or to birds protected under the Migratory Bird Treaty Act. Non-CVP water would not reach streams containing listed fish species; therefore, there would be no effects to fish. Based upon the reasons described above, Reclamation has determined there would be No Effect to listed species or designated critical habitat under the Endangered Species Act and No Take of birds protected by the Migratory Bird Treaty Act. As such, no consultation with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service is required.

Proposed Action

Under the Proposed Action, there would be no construction, no changes in Delta pumping, and water would only be used to support existing land uses. There is no critical habitat in the Proposed Action Area. The San Joaquin kit fox and any migrating birds could continue to use the Proposed Action Area as under the No Action alternative.

With the environmental commitments listed in Table 1 and based upon the nature of this Action, Reclamation has determined there would be No Effect to proposed or listed species or critical habitat under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et seq.), and there would be no take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cumulative Impacts

As the Proposed Action would not result in any direct or indirect impacts to federally listed, proposed, or candidate species, or critical habitat, it would not contribute cumulatively to any impacts to these resources.

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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 April 20, 2015 and May 5, 2015. No comments were received.

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Section 5 Preparers and Reviewers

Ben Lawrence, Natural Resources Specialist, SCCAO
Jennifer L. Lewis, Wildlife Biologist, SCCAO
Scott Williams, Archaeologist, MP-153
Richard Stevenson, Indian Trust Assets, MP-400
Rain L. Emerson, Supervisory Natural Resources Specialist, SCCAO – reviewer
David E. Hyatt, Resources Management Division Chief, SCCAO – reviewer
Joy Kelley, Repayment Specialist, SCCAO – reviewer

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Section 6 References

Bureau of Reclamation (Reclamation). 1999. Central Valley Project Improvement Act, Final Programmatic Environmental Impact Statement and Record of Decision. Mid-Pacific Region South-Central California Area Office. Fresno, California.

Bureau of Reclamation (Reclamation). 2014. Finding of No Significant Impact/Final Environmental Assessment. *Tule River Water Warren Act Agreement* (EA-14-039). Mid-Pacific Region South-Central California Area Office. Fresno, California.Website: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=18261.

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

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.

Appendix A

Reclamation's Cultural Resources Determination

CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

MP-153 Tracking Number: 15-SCAO-107

Project Name: 5-Year Warren Act Contract for Terra Bella Irrigation District

NEPA Contact: Ben Lawrence

NEPA Document: EA-15-014

MP 153 Cultural Resources Reviewer: Scott Williams

Date: March 26, 2015

The proposed undertaking by Reclamation is to issue a Warren Act agreement to Terra Bella Irrigation District under Article 18 of its Repayment Contract. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such properties be present, pursuant to the NHPA Section 106 regulations codified at 36 CFR § 800.3(a)(1). Reclamation has no further obligations under NHPA Section 106, pursuant to 36 CFR § 800.3(a)(1).

Under the proposed agreement, the district would introduce up to 5,000 AF per year of non-CVP Tule River water into the Friant-Kern Canal, for a period of five years. The Tule River water would be released from storage in Success Reservoir into the Tule River channel, and diverted 5 miles downstream at the Poplar Ditch head gate in Porterville. The water would then be conveyed 5.5 miles in Poplar Ditch to the downstream side of the Friant-Kern Canal near Highway 190 (see Figure 2-1), where it would be contained and stored at a temporary pumping station installed by Terra Bella Irrigation District, until they are ready to pump the water for introduction into the Friant-Kern Canal. The temporary pumping station would be placed in the paved area between the ditch and Friant-Kern Canal at milepost 97.36 outside of Reclamation right-of-way. No ground disturbance would be needed for the installation of the temporary pumping facility. Water pumped into the Friant-Kern Canal would flow to milepost 103.64, where Terra Bella Irrigation District would take it at their existing turnout. No new construction or modification of existing facilities may occur in order to complete the Proposed Action.

After reviewing documentation provided within EA-15-014, Reclamation has concluded this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places.

This document is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

Appendix B

Reclamation's Indian Trust Assets Determination

Lawrence, Benjamin <blawrence@usbr.gov>

Indian Trust Asset Determination Request, 5-Year Warren Act Contract for Terra Bella Irrigation District

Johnson, Charles <cjohnson@usbr.gov> Wed, Apr 8, 2015 at 9:46 AM
To: Benjamin Lawrence <blawrence@usbr.gov>
Cc: RICHARD STEVENSON <rstevenson@usbr.gov>

Ben,

The closest ITA to the proposed Terra Bella Warren Act activities is the Tule River Indian reservation about 8 miles to the east of Terra Bella ID. (see attached image). Based on the nature of the planned work it does not appear to be in areas that will impact Indian hunting or fishing resources or water rights nor are they on actual Indian lands. It is reasonable to assume that the proposed action will not have any impacts on ITAs.

Chuck Johnson

Chuck Johnson, CPSS
Chief, Land Resources
Regional GIS Program Manager
Regional Realty Officer
Regional Soil Scientist
Regional Fire Management Officer
US Bureau of Reclamation voice 916-978-5266
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"Non sibi sed aliis"
****

On Wed, Apr 8, 2015 at 8:30 AM, STEVENSON, RICHARD <rstevenson@usbr.gov> wrote:

> Chuck,
>
> Do you have a record of having done this one? I thought we were caught up.
>
> ---------- Forwarded message ----------
> From: **Lawrence, Benjamin** <blawrence@usbr.gov>
> [Quoted text hidden]

Appendix C

Reclamation's Water Quality Standards

RECLAMATION

Managing Water in the West

Policy for Accepting Non-Project Water into the Friant-Kern and Madera Canals

Water Quality Monitoring Requirements

Friant-Kern Canal in Tulare County (Credit: Ted Holzem, Mintier & Associates)

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

March 7, 2008

United States Bureau of Reclamation
South-Central California Area Office
and
Friant Water Authority

Policy for Accepting Non-Project Water into the Friant-Kern and Madera Canals Water Quality Monitoring Requirements

This Policy describes the approval process, implementation procedures, and responsibilities of a Contractor requesting permission from the U.S. Bureau of Reclamation (Reclamation) to introduce non-project water into the Friant-Kern and Madera Canals, features of the Friant Division of the Central Valley Project (CVP). The monitoring requirements contained herein are intended to ensure that water quality is protected and that domestic and agricultural water users are not adversely impacted by the introduction of non-project water. The discharge of non-project water shall not in any way limit the ability of either Reclamation or the Friant Water Authority (Authority) to operate and maintain the Canals for their intended purposes nor shall it adversely impact existing contracts or any other agreements. The discharge of non-project water into the Canals will be permissible only when there is excess capacity in the system as determined by the Authority and or Reclamation.

The Contractor shall be responsible for securing other requisite Federal, State or local permits.

Reclamation, in cooperation with the Authority, will consider all proposals to convey non-project water based upon this Policy's water quality criteria and implementation procedures established in this document. Table 1 provides a summary of the Policy's water quality monitoring requirements.

This policy is subject to review and modification by Reclamation and the Authority. Reclamation and the Authority reserve the right to change the water quality monitoring requirements for any non-project water to be conveyed in the Friant-Kern and Madera Canals.

A. Types of Non-Project Water

This policy recognizes three types of non-project water with distinct requirements for water quality monitoring.

1. "***Type A***" Non-Project Water

Water for which analytical testing demonstrates complete compliance with California drinking water standards (Title 22)[1], plus other constituents of concern recommended by the California Department of Health Services. Type A water must be tested every year for the full list of

1. Title 22. The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 4010-4037), and Administrative Code (Sections 64401 et seq.), as amended.

constituents listed in Table 2. No in-prism (within the Canal) monitoring is required to convey Type A water.

2. "***Type B***" Non-Project Water

Water that generally complies with Title 22, but may exceed the Maximum Contaminant Level (MCL) for certain inorganic constituents of concern to be determined by Reclamation and the Authority on a case-by-case basis. This water may be discharged into the Canal over short-intervals. Type B water shall be tested every year for the full list of constituents in Table 2, and more frequently for the identified constituents of concern. Flood Water and Ground Water are Type B non-project water.

Type B water may not be pumped into the Friant-Kern Canal within a half-mile upstream of a delivery point to a CVP Municipal and Industrial contractor. At this time, there are no M & I Contractors served from the Madera Canal.

The introduction of Type B water into the Friant-Kern and Madera Canals will require regular in-prism monitoring to confirm that the CVP water delivered to downstream customers is suitable in quality for their needs. The location, frequency, and parameters of in-prism monitoring will be determined by Reclamation and the Authority on a case-by-case basis.

3. "***Type C***" Non-Project Water

Type C Water is non-project water that originates in the same source as CVP water but that has not been appropriated by the United States. For example, non-project water from a tributary within the upper San Joaquin River watershed, such as the Soquel Diversion from Willow Creek above Bass Lake, is Type C water. Another example is State Water Project water pumped from the California Aqueduct and Cross Valley Canal into the lower Friant-Kern Canal. No water quality analyses are required to convey Type C water through the Friant-Kern or Madera Canals because it is physically the same as Project water.

B. Authorization

The Warren Act (Act of February 21, 1911, ch. 141, 36 Stat. 925), as supplemented by Section 305 of Public Law 102-250, authorizes Reclamation to contract for the carriage and storage of non-project water when excess capacity is available in Federal water facilities. The terms of this Policy are also based on the requirements of the Clean Water Act (33 U.S.C. 1251 et seq.), the Endangered Species Act of 1973 (P.L. 93-205), the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. 4321 et seq.), the Reclamation Act of 1902 (June 17, 1902 as amended), and the Safe Drinking Water Act of 1974 (P.L. 93-523, amended 1986) and Title XXIV of the Reclamation Projects Authorization and Adjustments Act of 1992 (P.L. 102-575, 106 Stat 4600).

C. General Requirements for Discharge of Non-Project Water

1. Contract Requirements

A Contractor wishing to discharge non-project water into the Friant-Kern or Madera Canals must first execute a contract with Reclamation. The contract may be negotiated with Reclamation's South Central California Area Office (SCCAO) in Fresno.

2. Facility Licensing

Each non-project water discharge facility must be licensed by Reclamation and the Authority. The license for erection and maintenance of structures may be negotiated with the SCCAO.

3. Prohibition When the Canal is Empty

Non-project shall not be conveyed in the Friant-Kern or Madera Canals during periods when the canal is de-watered for maintenance.

D. Non-Project Discharge, Water Quality, and Monitoring Program Requirements

1. General Discharge Approval Requirements

Each source of non-project water must be correctly sampled, completely analyzed, and be approved by Reclamation prior to introduction into the Friant-Kern or Madera Canals. The Contractor shall pay the cost of collection and analyses of the non-project water required under this policy[2].

2. Water Quality Sampling and Analyses

Each source of Type A and B non-project water must be tested every year for the complete list of constituents of concern and bacterial organisms listed in Table 2. The analytical laboratory must be approved by Reclamation (Table 3).

3. Water Quality Reporting Requirements

Water quality analytical results must be reported to the Contracting Officer for review.

4. Type B Water Quality Monitoring

Reclamation will provide a Quality Assurance Project Plan (QAPP) that will describe the protocols and methods for sampling and analysis of Type B non-project water.

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2. Reclamation will pay for the collection and analyses of quarterly baseline samples collected at Friant Dam and Lake Woolomes.

The program may include sampling of canal water upstream and downstream of the Contractor's discharge point into the Friant-Kern or Madera Canal. The location of samples, and the duration and frequency of sampling, and the list of constituents to be analyzed, may be changed upon review of measured trends in concentration of those constituents of concern.

E. Control of Water Quality in the Friant Division

The quality of CVP water will be considered impaired if the conveyance of the Contractor's non-project water is causing the quality of CVP water to exceed a maximum contaminant level specified in Title 22 (Table 2).

Reclamation, in consultation with the Authority, will direct the Contractor to stop the discharge of non-project water from this source into the Friant-Kern or Madera Canal.

F. Baseline Water Quality Analysis

Every four months, Reclamation will collect samples of water from the Friant-Kern Canal near Friant Dam and near Lake Woolomes. These samples will be analyzed for Title 22 and many other constituents. The purpose of theses samples is to identify the baseline quality of water in the canal. No direct analysis within the Madera Canal will be conducted at this time.

The cost of this analysis will be borne by Reclamation under the CVP Baseline water quality monitoring program.

G. Water Quality Data Review and Management

All water quality data must be sent to Reclamation for review, verification, and approval. All water quality data will be entered into a database to be maintained by Reclamation. All field notes and laboratory water quality analytical reports will be kept by the Authority. All water quality data will be available upon request to the Contractor and other interested parties.

Definitions

CVP or Project water
Water that has been appropriated by the United States for the Friant Division of the CVP. The source of Project water in the Friant Division is the San Joaquin River watershed.

Non-project water
Water that has not been appropriated by the United States for the Friant Division of the CVP. This includes groundwater, and surface water from other streams and rivers that cross the Friant-Kern and Madera Canals, such as Wutchumna Ditch.

Maximum Contaminant Level
Usually reported in milligrams per liter (parts per million) or micrograms per liter (parts per billion).

Non-project discharge system
The pipe and pumps from which non-project water enters the Friant Division.

Title 22
The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 4010-4037), and Administrative Code (Sections 64401 et seq.), as amended.

Type A water
This is non-project water that meets California drinking water standards. This water must be tested every year for the full list of Title 22 constituents. No in-stream monitoring is required to convey Type A water in the Friant Division.

Type B water
This is non-project water that has constituents that may exceed the California drinking water standards. This water must be tested every year for the full list of Title 22 constituents, plus annually for constituents of concern. Field monitoring is required of each source and of water upstream and downstream of the discharge point.

Type C water
This is non-project water from the same watershed as Project water that has not been appropriated by the United States for the Central Valley Project. Water from Soquel Creek diversion or the State Water Project are Type C water. No water quality analyses are required to convey this water in the Friant-Kern Canal.

Table 1. Water Quality Monitoring Requirements - Friant Division, Central Valley Project

Type of Water	Location	How often will a sample be collected?	What will be measured in the water?	Who will collect samples?
Project Water	Friant	January, April, June, October	Title 22 and bacterial constituents (1) (2)	Reclamation, MP-157
	Lake Woolomes	January, April, June, October	Title 22 and bacterial constituents (1) (2)	Reclamation, MP-157
Type A Non-Project Water		Every year	Title 22 and bacterial constituents (1) (2)	Contractor
Type B Non-Project Water		Every year	Title 22 and bacterial constituents (1) (2)	Contractor
		Every month (5)	Constituents of concern (5)	Contractor
		Every week (5)	EC, turbidity, etc.(3) (5)	Friant Water Authority
Type C Non-Project Water		None required		
Project water	Upstream of each Type B discharge (4)	Every week (5)	EC, turbidity, etc.(3) (5)	Friant Water Authority
	Downstream of each Type B discharge (4)	Every week (5)	EC, turbidity, etc.(3) (5)	Friant Water Authority

Notes:
(1) California Department of Health Services, California Code of Regulations, Title 22, Division 4, Chapter 15, Domestic Water Quality and Monitoring, *http://www.dhs.ca.gov/ps/ddwem/publications/Regulations/regulations_index.htm.*
(2) Cryptosporidium, Giardia, total coliform bacteria
(3) Field measurements.
(4) Location to be determined by the Contracting Officer
(5) To be determined by the Contracting Officer, if necessary.

This water quality monitoring program is subject to change at any time by the Contracting Officer.

Revised: 08/16/2007 SCC-107

U.S. Bureau of Reclamation
Friant Water Authority
Friant Division, California
Water Quality Monitoring Requirements

Table 2a. Water Quality Constituents

CONSTITUENT OR PARAMETER	Units	Recommended Method	California DHS Maximum Contaminant Level		CAS Registry Number
Primary Constituents (CCR § 64431)					
Aluminum	µg/L	EPA 200.7	1,000	1	7429-90-5
Antimony	µg/L	EPA 200.8	6	1	7440-36-0
Arsenic	µg/L	EPA 200.8	10	16	7440-38-2
Asbestos	MFL > 10µm	EPA 100.2	7	1	1332-21-4
Barium	µg/L	EPA 200.7	1,000	1	7440-39-3
Beryllium	µg/L	EPA 200.7	4	1	7440-41-7
Cadmium	µg/L	EPA 200.7	5	1	7440-43-9
Chromium	µg/L	EPA 200.7	50	1	7440-47-3
Cyanide	µg/L	EPA 335.4	150	1	57-12-5
Fluoride	mg/L	EPA 300.1	2	1	16984-48-8
Mercury (inorganic)	µg/L	EPA 245.1	2	1	7439-97-6
Nickel	µg/L	EPA 200.7	100	1	7440-02-0
Nitrate (as NO3)	mg/L	EPA 300.1	45	1	7727-37-9
Total Nitrate + Nitrite (as Nitrogen)	mg/L	EPA 353.2	10	1	
Nitrite (as Nitrogen)	mg/L	EPA 300.1	1	1	14797-65-0
Selenium	µg/L	EPA 200.8	50	1	7782-49-2
Thallium	µg/L	EPA 200.8	2	1	7440-28-0
Secondary Constituents (CCR § 64449)					
Aluminum	µg/L	EPA 200.7	200	6	7429-90-5
Chloride	mg/L	EPA 300.1	250/500/600	7	16887-00-6
Color	units	SM 2120 B	15	6	
Copper	µg/L	EPA 200.7	1,000	6	7440-50-8
Foaming agents (MBAS)	mg/L	SM 5540 C	0.5	6	
Iron	µg/L	EPA 200.7	300	6	7439-89-6
Manganese	µg/L	EPA 200.7	50	6	7439-96-5
Methyl-tert-butyl ether (MtBE)	µg/L	EPA 524.2	5	6	1634-04-4
Odor - Threshold	threshold units	SM 2150 B	3	6	
Silver	µg/L	EPA 200.7	100	6	7440-22-4
Specific conductance (EC)	µS/cm	SM 2510 B	900/1600/2200	7	
Sulfate	mg/L	EPA 300.1	250/500/600	7	14808-79-8
Thiobencarb	µg/L	EPA 525.2	1	6	28249-77-6
Total dissolved solids (TDS)	mg/L	SM 2540 C	500/1000/1500	7	
Turbidity	NTU	EPA 180.1	5	6	
Zinc	mg/L	EPA 200.7	5	6	7440-66-6

Table 2a. Water Quality Constituents

CONSTITUENT OR PARAMETER	Units	Recommended Method	California DHS Maximum Contaminant Level		CAS Registry Number
Other required analyses (CCR § 64449 (b)(2); CCR § 64670)					
Bicarbonate	mg/L	SM 2320B		8	
Calcium	mg/L	SM3111B		8,12	7440-70-2
Carbonate	mg/L	SM 2320B		8	
Copper	mg/L	EPA 200.7	1.3	14	7440-50-8
Hardness	mg/L	SM 2340 B		8	
Hydroxide alkalinity	mg/L	SM 2320B		8,12	
Lead	mg/L	EPA 200.8	0.015	14	7439-92-1
Magnesium	mg/L	EPA 200.7		8	7439-95-4
Orthophosphate	mg/L	EPA 365.1		12	
pH	units	EPA 150.1		8,12	
Silica	mg/L	EPA 200.7		12	
Sodium	mg/L	EPA 200.7		8	7440-23-5
Temperature	degrees C	SM 2550		12	
Radiochemistry (CCR § 64442)					
Radioactivity, Gross Alpha	pCi/L	SM 7110C	15	3	
Microbiology					
Cryptosporidium	org/liter		No MCL, measure for presence (surface water only)		
Fecal Coliform	MPN/100ml		No MCL, measure for presence (surface water only)		
Giardia	org/liter		No MCL, measure for presence (surface water only)		
Total Coliform bacteria	MPN/100ml		No MCL, measure for presence (surface water only)		
Organic Constituents (CCR § 64444)					
EPA 504.1 method					
Dibromochloropropane (DBCP)	µg/L	EPA 504.1	0.2	4	96-12-8
Ethylene dibromide (EDB)	µg/L	EPA 504.1	0.05	4	206-93-4
EPA 505					
Chlordane	µg/L	EPA 505	0.1	4	57-74-9
Endrin	µg/L	EPA 505	2	4	72-20-8
Heptachlor	µg/L	EPA 505	0.01	4	76-44-8
Heptachlor epoxide	µg/L	EPA 505	0.01	4	1024-57-3
Hexachlorobenzene	µg/L	EPA 505	1	4	118-74-1
Hexachlorocyclopentadiene	µg/L	EPA 505	50	4	77-47-4
Lindane (gamma-BHC)	µg/L	EPA 505	0.2	4	58-89-9
Methoxychlor	µg/L	EPA 505	30	4	72-43-5
Polychlorinated biphenyls	µg/L	EPA 505	0.5	4	1336-36-3
Toxaphene	µg/L	EPA 505	3	4	8001-35-2
EPA 508 Method					
Alachlor	µg/L	EPA 508.1	2	4	15972-60-8
Atrazine	µg/L	EPA 508.1	1	4	1912-24-9
Simazine	µg/L	EPA 508.1	4	4	122-34-9

Table 2a. Water Quality Constituents

CONSTITUENT OR PARAMETER	Units	Recommended Method	California DHS Maximum Contaminant Level		CAS Registry Number
EPA 515.3 Method					
Bentazon	µg/L	EPA 515	18	4	25057-89-0
2,4-D	µg/L	EPA 515.1-4	70	4	94-75-7
Dalapon	µg/L	EPA 515.1-4	200	4	75-99-0
Dinoseb	µg/L	EPA 515.1-4	7	4	88-85-7
Pentachlorophenol	µg/L	EPA 515.1-4	1	4	87-86-5
Picloram	µg/L	EPA 515.1-4	500	4	1918-02-1
2,4,5-TP (Silvex)	µg/L	EPA 515.1-4	50	4	93-72-1
EPA 524.2 Method (Volatile Organic Chemicals)					
Benzene	µg/L	EPA 524.2	1	4	71-43-2
Carbon tetrachloride	µg/L	EPA 524.2	0.5	4	56-23-5
1,2-Dibromomethane	µg/L	EPA 524.2	0.05		106-93-4
1,2-Dichlorobenzene	µg/L	EPA 524.2	600	4	95-50-1
1,4-Dichlorobenzene	µg/L	EPA 524.2	5	4	106-46-7
1,1-Dichloroethane	µg/L	EPA 524.2	5	4	75-34-3
1,2-Dichloroethane	µg/L	EPA 524.2	0.5	4	107-06-2
1,1-Dichloroethylene	µg/L	EPA 524.2	6	4	75-35-4
cis-1,2-Dichloroethylene	µg/L	EPA 524.2	6	4	156-59-2
trans-1,2-Dichloroethylene	µg/L	EPA 524.2	10	4	156-60-5
Dichloromethane	µg/L	EPA 524.2	5	4	75-09-2
1,2-Dichloropropane	µg/L	EPA 524.2	5	4	78-87-5
1,3-Dichloropropene	µg/L	EPA 524.2	0.5	4	542-75-6
Ethylbenzene	µg/L	EPA 524.2	300	4	100-41-4
Methyl-tert-butyl ether (MtBE)	µg/L	EPA 524.2	13	4	1634-04-4
Monochlorobenzene	µg/L	EPA 524.2	70	4	108-90-7
Styrene	µg/L	EPA 524.2	100	4	100-42-5
1,1,2,2-Tetrachloroethane	µg/L	EPA 524.2	1	4	79-34-5
Tetrachloroethylene (PCE)	µg/L	EPA 524.2	5	4	127-18-4
Toluene	µg/L	EPA 524.2	150	4	108-88-3
1,2,4-Trichlorobenzene	µg/L	EPA 524.2	5	4	120-82-1
1,1,1-Trichloroethane	µg/L	EPA 524.2	200	4	71-55-6
1,1,2-Trichloroethane	µg/L	EPA 524.2	5	4	79-00-5
Trichloroethylene (TCE)	µg/L	EPA 524.2	5	4	79-01-6
Trichlorofluoromethane	µg/L	EPA 524.2	150	4	75-69-4
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	EPA 524.2	1,200	4	76-13-1
Total Trihalomethanes	ug/L	EPA 524.2	80	10	
Vinyl chloride	µg/L	EPA 524.2	0.5	4	75-01-4
Xylene(s)	µg/L	EPA 524.2	1,750	4	1330-20-7
EPA 525.2 Method					
Benzo(a)pyrene	µg/L	EPA 525.2	0.2	4	50-32-8
Di(2-ethylhexyl)adipate	µg/L	EPA 525.2	400	4	103-23-1
Di(2-ethylhexyl)phthalate	µg/L	EPA 525.2	4	4	117-81-7
Molinate	µg/L	EPA 525.2	20	4	2212-67-1
Thiobencarb	µg/L	EPA 525.2	70	4	28249-77-6
EPA 531.1 Method					
Carbofuran	µg/L	EPA 531.1-2	18	4	1563-66-2
Oxamyl	µg/L	EPA 531.1-2	50	4	23135-22-0

Table 2a. Water Quality Constituents

CONSTITUENT OR PARAMETER	Units	Recommended Method	California DHS Maximum Contaminant Level		CAS Registry Number
EPA 547 Method					
Glyphosate	µg/L	EPA 547	700	4	1071-83-6
EPA 548.1 Method					
Endothal	µg/L	EPA 548.1	100	4	145-73-3
EPA 549.2 Method					
Diquat	µg/L	EPA 549.2	20	4	85-00-7
EPA 613 Method					
2,3,7,8-TCDD (Dioxin)	µg/L	EPA 1613	0.00003	4	1746-01-6

Source Data:
Adapted from Marshack, Jon B. August 2003. A Compilation of Water Quality Goals. Prepared for the California Environmental Protection Agency, Regional Water Quality Control Board.

U.S. Bureau of Reclamation
Friant Water Authority
Friant Division, California
Water Quality Monitoring Requirements

Table 2b. Unregulated Chemicals (CCR § 64450)

CONSTITUENT OR PARAMETER	Units	Recommended Method	California Department of Health Services Notification Level		Response Level	CAS Registry Number
Boron	mg/L	EPA 200.7	1	9, 17	10	7440-42-8
n-Butylbenzene	µg/L	EPA 524.2	260	17	2,600	104-51-8
sec-Butylbenzene	µg/L	EPA 524.2	260	17	2,600	135-98-8
tert-Butylbenzene	µg/L	EPA 524.2	260	17	2,600	98-06-6
Carbon disulfide	µg/L		160	17	1,600	
Chlorate	µg/L	EPA 300.1	0.8	17	8	
2-Chlorotoluene	µg/L	EPA 524.2	140	17	1,400	95-49-8
4-Chlorotoluene	µg/L	EPA 524.2	140	17	1,400	106-43-4
Dichlorofluoromethane (Freon 12)	µg/L	EPA 524.2	1,000	9,17	10,000	75-43-4
1,4-Dioxane	µg/L	SM 8270	3	17	300	123-91-1
Ethylene glycol	µg/L	SM 8015	1,400	17	14,000	107-21-1
Formaldehyde	µg/L	SM 6252	100	17	1,000	50-00-0
n-Propylbenzene	µg/L		260	17	2,600	
HMX	µg/L	SM 8330	350	17	3,500	2691-41-0
Isopropylbenzene	µg/L		770	17	7,700	
Manganese	mg/L		1	17	5	
Methyl isobutyl ketone	µg/L		120	17	1,200	
Napthalene	µg/L	EPA 524.2	17	17	170	91-20-3
n-nitrosodiethylamine (NDEA)	µg/L	1625	0.01	17	0.1	
n-nitrosodimethylamine (NDMA)	µg/L	1625	0.01	17	0.2	
n-nitroso-n-propylamine (NDPA)	µg/L	1625	0.01	17	0.5	
Perchlorate	µg/L	EPA 314	6	9, 17	60	13477-36-6
Propachlor	µg/L	EPA 507 or 525	90	17	900	1918-16-7
p-Isopropyltoluene	µg/L	EPA 524.2	770	17	7,700	99-87-6
RDX	µg/L	SM 8330	0.30	17	30	121-82-4
tert-Butyl alcohol (ethanol)	µg/L	EPA 524.2	12	9,17	1,200	75-65-0
1,2,3-Trichloropropane (TCP)	ug/L	EPA 524.2	0.005	9,17	0.5	96-18-4
1,2,4-Trimethylbenzene	µg/L	EPA 524.2	330	17	3,300	95-63-6
1,3,5-Trimethylbenzene	µg/L	EPA 524.2	330	17	3,300	95-63-6
2,4,6-Trinitrotoluene (TNT)	µg/L	SM 8330	1	17	100	
Vanadium	mg/L	EPA 286.1	0.05	9,17	0.5	7440-62-2

Revised: 05/17/2007

U.S. Bureau of Reclamation
Friant Water Authority
Friant Division, California
Water Quality Monitoring Requirements

Notes for Tables 2a and 2b

Title 22. California Code of Regulations, California Safe Drinking Water Act and Related Laws and Regulations. February 2007.
http://www.dhs.ca.gov/ps/ddwem/publications/lawbook/PDFs/dwregulations-02-06-07.pdf

[1] Table 64431-A. Maximum Contaminant Levels, Inorganic Chemicals
[2] Table 64432-A. Detection Limits for Purpose of Reporting (DLRs) for Regulated Inorganic Chemicals
[3] Table 644442. Radionuclide Maximum contaminant Levels (MCLs) and Detection Levels for Reporting (DLRs)
[4] Table 64444-A. Maximum Contaminant Levels Organic Chemicals
[5] Table 64445.1-A. Detection Limits for Reporting (DLRs) for Regulated Organic Chemicals
[6] Table 64449-A. Secondary Maximum Contaminant Levels "Consumer Acceptance Levels"
[7] Table 64449-B. Secondary Maximum Contaminant Levels "Consumer Acceptance Levels"
[8] § 64449(b)(2)
[9] Table 64450. Unregulated Chemicals
[10] Appendix 64481-A. Typical Origins of Contaminants with Primary MCLs
[11] Table 64533-A. Maximum Contaminant Levels and Detection Limits for Reporting Disinfection Byproducts
[12] § 64670.(c)
[13] Table 64678-A. DLRs for Lead and Copper
[14] § 64678 (d)
[15] § 64678 (e)
[16] New Federal standard as of 1/23/2006
[17] Dept Health Services Drinkig Water Notification Levels (June 2006)

RECLAMATION
Managing Water in the West

Table 3. Approved Laboratory List for the Mid-Pacific Region Environmental Monitoring Branch (MP-157)

Basic Laboratory	**Address**	2218 Railroad Avenue Redding, CA 96001 USA
	Contact	Nathan Hawley, Melissa Hawley, Ricky Jensen
	P/F	(530) 243-7234 / (530) 243-7494
	Email	nhawley@basiclab.com (QAO), mhawley@basiclab.com (PM), jcady@basiclab.com (quotes),
		poilar@basiclab.com (sample custody), khawley@basiclab.com (sample custody)
	CC Info	nhawley@basiclab.com, jcady@basiclab.com (sample custody)
	Methods	*Approved only for inorganic parameters (metals, general chemistry)*
BioVir Analytical Laboratories	**Address**	685 Stone Road Unit 6 Benicia, CA 94510 USA
	Contact	Rick Danielson, Lab Director
	P/F	(707) 747-5906 / (707) 747-1751
	Email	red@biovir.com, csj@biovir.com, lb@biovir.com, QAO Jim Truscott jrt@biovir.com
	Methods	*Approved for all biological and pathogenic parameters*
Block Environmental Services	**Address**	2451 Estand Way Pleasant Hill, CA 94523 USA
	Contact	David Block
	P/F	(925) 682-7200 / (925) 686-0399
	Email	dblock@blockenviron.com
	Methods	*Approved for Toxicity Testing.*
California Laboratory Services	**Address**	3249 Fitzgerald Road Rancho Cordova, CA 95742
	Contact	Raymond Oslowski
	P/F	(916) 638-7301 / (916) 638-4510
	Email	rayo@californialab.com
	Methods	*Approved for Chromium VI*
Caltest Analytical Laboratory	**Address**	1885 North Kelly Road Napa, CA 94558
	Contact	Bill Svoboda, Project Manager x29
	P/F	(707) 258-4000 / (707) 226-1001
	Email	bsvoboda@caltestlab.com
	Methods	*Approved for all inorganic parameters and bioligical parameters*
Columbia Environmental Resource Center	**Address**	4200 New Haven Road Columbia, MO 65201 USA
	Contact	Tom May, Research Chemist
	P/F	(573) 876-1858 / (573) 876-1896
	Email	tmay@usgs.gov
	Methods	*Approved for mercury in biological tissue*
Data Chem Laboratories	**Address**	960 West LeVoy Drive Salt Lake City, UT 84123-2547 USA
	Contact	Bob DiRienzo, Kevin Griffiths-Project Manager, Rand Potter - Project Manager, asbestos
	P/F	(801) 266-7700 / (801) 268-9992
	Email	griffiths@datachem.com, Potter@datachem.com Invoicing: (Justin) pate@datachem.com
	Methods	*Approved for asbestos, metals, organochlorine pesticides and PCBs in solids*
Dept. of Fish & Game - WPCL	**Address**	2005 Nimbus Road Rancho Cordova, CA 95670 USA
	Contact	David B. Crane
	P/F	(916) 358-2858 / (916) 985-4301
	Email	dcrane@ospr.dfg.ca.gov
	Methods	*Approved only for metals analysis in tissue.*
Frontier Geosciences	**Address**	414 Pontius North Seattle, WA 98109 USA
	Contact	Shelly Fank - QA Officer, Matt Gomes-Project Manager
	P/F	(206) 622-6960 / (206) 622-6870
	Email	shellyf@frontiergeosciences.com, mattg@frontiergeosciences.com
	Methods	*in low level metals analysis.*

Fruit Growers Laboratory	**Address**	853 Corporation Street Santa Paula, CA 93060 USA
	Contact	David Terz, QA Director
	P/F	(805) 392-2024 / (805) 525-4172
	Email	davidt@fglinc.com
	Methods	*Approved for all inorganic and organic parameters in drinking water.*
Montgomery Watson/Harza Laboratories	**Address**	750 Royal Oaks Drive Ste. 100 Monrovia, CA 91016 USA
	Contact	Allen Glover (project manager), Bradley Cahoon (quotes)
	P/F	(916) 374-8030, 916-996-5929 (AG-cell) / (916) 374-8061
	Email	Allen.Glover@us.mwhglobal.com, Bradley.Cahoon@us.mwhglobal.com
	CC Info	cc. Sam on all communications to Allen. Samer.Momani@us.mwhglobal.com
	Methods	*Approved for all inorganic and organic parameters in drinking water*
Olson Biochemistry Laboratories	**Address**	SDSU: Box 2170, ACS Rm. 133 Brookings, SD 57007 USA
	Contact	Nancy Thiex, Laboratory Director
	P/F	(605) 688-5466 / (605) 688-6295
	Email	Nancy.Thiex@sdstate.edu
	CC Info	For re-analysis: contact Zelda McGinnis-Schlobohm and Nancy Anderson
		Zelda.Schobohm@SDSTATE.EDU, Nancy.Anderson@SDSTATE.EDU
		For analysis questions only: just CC. Nancy Anderson
	Methods	*Approved only for low level selenium analysis.*
Severn Trent Laboratories	**Address**	880 Riverside Parkway West Sacramento, CA 95605 USA
	Contact	Jeremy Sadler
	P/F	(916) 374-4381 / (916) 372-1059
	Email	jsadler@stl-inc.com
	Methods	*Approved for all inorganic parameters and hazardous waste organics* ***except for Ammonia as Nitrogen*** *.* *Ag analysis in sediment, when known quantity is present, request 6010B*
Sierra Foothill Laboratory, Inc.	**Address**	255 Scottsville Blvd, Jackson, CA 95642
	Contact	Sandy Nurse (Owner) or Dale Gimble (QA Officer)
	P/F	(209) 223-2800 / (209) 223-2747
	Email	sandy@sierralab.com, CC: dale@sierralab.com
	Methods	*Approved for all inorganic parameters, microbiological parameters, acute and chronic toxicity*.
Twining Laboratories, Inc.	**Address**	2527 Fresno Street Fresno, CA 93721 USA
	Contact	Jim Brownfield (QA Officer), Sample Control (for Bottle Orders)
	P/F	(559) 268-7021 / (559) 268-0740
	Email	JimB@twining.com cc. to JosephU@twining.com
	Methods	*Approved only for general chemistry and boron analysis.*
U.S. Geological Survey - Denver	**Address**	Denver Federal Center Building 20, MS 973 Denver, CO 80225 USA
	Contact	Stephen A. Wilson
	P/F	(303) 236-2454 / (303) 236-3200
	Email	swilson@usgs.gov
	Methods	*Approved only for inorganic parameters in soil .*
USBR Technical Service Center Denver Soils	**Address**	Denver Federal Center Building 67, D-8750 Denver, CO 80225-0007 USA
	Contact	Juli Fahy or Stan Conway
	P/F	(303) 445-2188 / (303) 445-6351
	Email	jfahy@do.usbr.gov
	Methods	*Approved only for general physical analysis in soils.*
Western Environmental Testing Laboratories	**Address**	475 East Greg Street # 119 Sparks, NV 89431 USA
	Contact	Ginger Peppard (Customer Service Manager), Andy Smith (Lab Director), Michelle Kramer
	P/F	(775) 355-0202 / (775) 355-0817
	Email	ginger@WETLaboratory.com, andy@WETLaboratory.com, michelle@WETLaboratory.com
	Methods	*Approved only for inorganic parameters (metals, general chemistry).*

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