

# RECLAMATION

*Managing Water in the West*

**Draft Environmental Assessment**

## **Madera Irrigation District Storage and Conveyance of Non-Project Water in Friant Division and Hidden Unit Facilities, 2013-2043**

**Draft EA-11-016**



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

**November 2013**

## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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# Section 1 Introduction

## 1.1 Background

Madera Irrigation District (District) has Central Valley Project (CVP) Friant Division and Hidden Unit repayment contracts with the United States Bureau of Reclamation (Reclamation).

The Warren Act (Act of February 21, 1911; Chapter 141, 36 Stat. 925) authorizes Reclamation to enter into contracts to impound, store, and/or convey non-project water when excess capacity is available in Federal facilities.

Previously, Reclamation entered into temporary (1-year or 5-year) Warren Act contracts with the District for conveyance of their non-Project Soquel water in Friant Division facilities. Reclamation and the District currently have a 5-year Warren Act Contract authorizing the conveyance of up to 10,000 acre-feet (af) per water year of non-CVP water during contract years 2009 through 2013 (March 1, 2009 – February 28, 2014). The execution of the contract was evaluated in Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) number 08-086 (Reclamation, 2009)

Reclamation also considered execution of a 5-year Warren Act contract with the District for storage of their non-Project Soquel, Big Creek, and Fresno River water in Hidden Unit facilities. Draft EA/FONSI 10-047 (Reclamation, 2010) reviewed the action and were released for public comment in September 2010, but were not adopted in final form. Those draft documents are incorporated by reference.

Due to regulatory, contractual, and policy changes, the District may now store, convey, and/or divert non-CVP water according to Article 18 of their repayment contracts, with Reclamation's approval but without the need for separate Warren Act contracts. Additionally, since issuance of the 5-year Warren Act contract referenced in EA 08-086, Reclamation's Mid-Pacific Region has been given authority to approve Warren Act requests exceeding 10,000 acre-feet in a single contract year.

Pursuant to the terms of their repayment contracts, the District requests approval of storage and conveyance of up to 25,000 af of non-CVP water in Friant Division facilities, and/or storage of up to 36,000 af of non-CVP water at any one time in Hidden Unit facilities. The District also requests an additional point of delivery of up to 500 af of non-CVP water to be delivered to Fresno County Water Works #18 facilities for ultimate delivery to Table Mountain Rancheria (TMR).

## 1.2 Need for the Proposed Action

The District has a need to better regulate its varied water resources and provide for overall water management flexibility. To accomplish this, the District needs Reclamation's approval to store,

convey, and/or divert non-CVP water in Friant Division and Hidden Unit facilities. Additionally, TMR needs a reliable source of water for municipal and industrial (M&I) uses.

### **1.3 Scope**

This EA will examine the potential direct, indirect, and cumulative impacts to the affected environment as a result of storing, conveying, and/or diverting non-CVP water in CVP Friant Division and Hidden Unit facilities.

The temporal scope of the EA would be for up to 30 years, from the 2013 through 2042 contract years (March 1, 2013 - February 28, 2043). The spatial scope of the EA includes: the District's service area; the San Joaquin and Fresno Rivers; the District's and Reclamation's diversion structures; and Friant Division and Hidden Unit facilities, as depicted in Figure 2-1.

### **1.4 Resources of Potential Concern**

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

- Water Resources
- Land Use
- Biological Resources
- Indian Trusts Assets
- Socioeconomic Resources

## **Section 2 Alternatives Including the Proposed Action**

This EA considers two possible actions: the No Action Alternative and the Proposed Action. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment.

### **2.1 No Action Alternative**

Under the No Action Alternative, Reclamation would not approve storage, conveyance, and/or diversion of non-CVP water in Federal facilities according to Article 18 of the District's repayment contracts. Reclamation would also not allow Fresno County Water Works #18 to convey some of the District's non-CVP water to TMR.

Reclamation would continue to deliver CVP water pursuant to the terms of the District's repayment contracts. The District could continue to store and convey up to 10,000 af per year of non-CVP water in Friant Division facilities through February 28, 2014, per the existing Warren Act contract described in EA/FONSI-08-086. The District would divert their non-CVP supplies using non-Federal facilities, but the timing and beneficial uses of the water may change.

### **2.2 Proposed Action**

Reclamation would approve storage, conveyance, and/or diversion of non-CVP water in Federal facilities when excess capacity exists, according to Article 18 of the District's repayment contracts. Reclamation would also convey some of the District's non-CVP water to TMR. Approvals would be for varying lengths of time between the 2013 through 2042 Contract Years (March 1, 2013 - February 28, 2043).

Reclamation's approvals would not include modifications of Reclamation facilities; nor would they include construction of new turnouts, canals, pipelines, ditches, or conveyance systems. If such modifications or conveyance structures are required on Federal facilities or lands, additional environmental review would be required.

#### **2.2.1 Friant Division**

Reclamation would store and/or convey the District's non-CVP supplies in Friant Division facilities. The District could store and/or convey up to 25,000 af per year, when excess capacity exists.

The non-CVP supplies would be released into the San Joaquin River, where they would pass through Millerton Lake, Friant Dam, and into either the Madera Canal, the Friant-Kern Canal (FKC), or continue down the San Joaquin River. The water would be delivered from the canals to existing turnouts, within thirty days of release from storage, when Reclamation determines that excess capacity exists.

The District's sources of non-CVP water that could potentially be stored and conveyed in Friant Division facilities include up to 50 cubic-feet per second (cfs) of water imported from North Fork Willow Creek through the Soquel Diversion from October 1 through July 31 the following year.

### 2.2.2 Hidden Unit

Reclamation would allow the District to store its non-CVP supplies within the Hidden Unit of the CVP. The District could store up to 36,000 af at any one time, when excess capacity exists.

The non-CVP supplies would enter Hensley Lake and pass through Hidden Dam or be stored and later released (at the District's request) into the Fresno River for re-diversion by the District to be used for irrigation or other purposes. The re-diversion would either be through the District's own facilities along the Fresno River, or diverted through John A. Franchi Diversion Dam, which is a Reclamation facility that is managed by the District.

The District's water rights to sources of non-CVP water that could potentially be stored within the Hidden Unit are as follows:

- Up to 50 cfs of water imported from Big Creek from December 1 to July 15 the following year (except in April, when the water right is reduced to 20 cfs);
- Up to 50 cfs of water imported from North Fork Willow Creek through the Soquel Diversion from October 1 through July 31 the following year; and
- Up to 200 cfs of water from the Fresno River (which is inclusive of water imported from Big Creek and North Fork Willow Creek) year-round.

### 2.2.3 Table Mountain Rancheria

Reclamation would deliver up to 500 af of the District's non-CVP water to Fresno County Water Works #18 facilities for ultimate delivery to TMR. TMR would use the water for on-site M&I purposes.

### 2.2.4 Environmental Commitments

Reclamation and the District would implement environmental protection measures listed in Table 2-1 to reduce environmental consequences associated with the Proposed Action. Environmental consequences for resource areas assume the measures specified would be fully implemented. Reclamation's South-Central California Area Office has initiated an Environmental Commitment Program in order to implement, track and evaluate the environmental commitments developed for the Proposed Action. As part of this program, Reclamation would review the affected environment at five-year intervals or sooner if Reclamation determines that there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. If necessary, Reclamation would conduct additional environmental analyses to supplement this EA.

**Table 2-1 Environmental Protection Measures and Commitments for the Proposed Action**

Resource	Protection Measure
Biological / Water	The District's non-CVP water released from Friant or Hidden Dams must not alter the flow regime of natural water bodies such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as to have a detrimental effect on fish or wildlife, or their habitats.

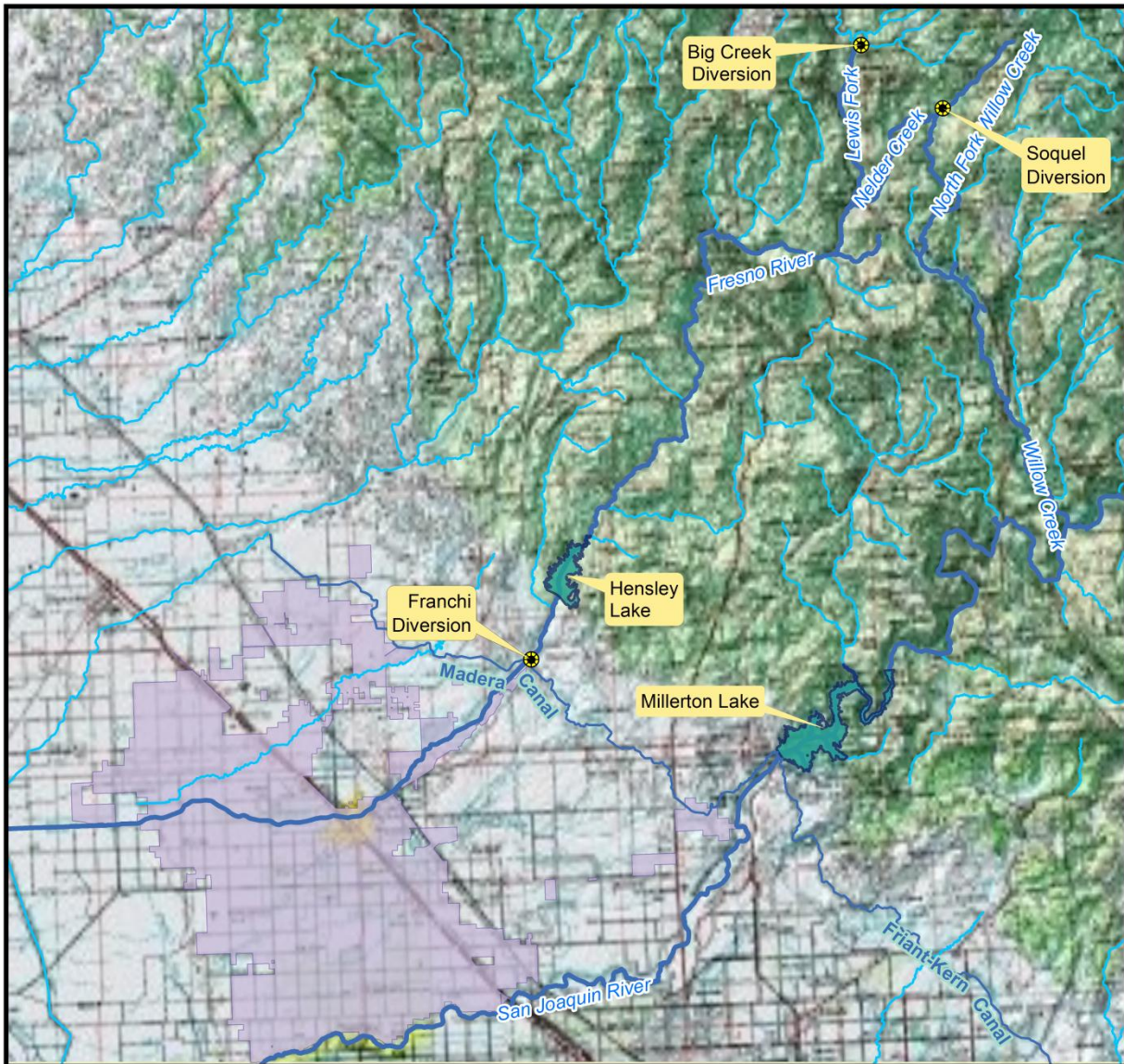


Resource	Protection Measure
Land	Native or untilled land (fallow for 3 consecutive years or more) must not be cultivated with the water involved in these actions.
Land / Water	Additional environmental review must be conducted if new construction or modification of existing facilities becomes necessary in order to complete the Proposed Action.
Land / Water	Additional environmental review must be conducted before the District's non-CVP water is used in a manner beyond those described in the Proposed Action.
Water	The total of non-CVP water diverted, stored, and conveyed in Federal facilities must not exceed the District's water rights.
Water	Storage and/or conveyance of the District's non-CVP supplies within Friant Division and Hidden Unit facilities must not impact water users with senior water rights, downstream landowners with riparian water rights, or minimum pool requirements in Millerton and Hensley Lakes.
Water	The District's non-CVP supplies would only be stored and/or conveyed within Friant Division facilities when there is excess capacity as determined by Reclamation.
Water	The District's non-CVP supplies would only be stored within Hidden Unit facilities when there is excess capacity as determined by Reclamation and the Army Corps of Engineers (Corps).
Water	The District's stored non-CVP supplies would be first to spill from Friant and Hidden Dams for flood control purposes.
Water	The Proposed Action must not interfere with the normal CVP operations.
Water	The District must comply with all provisions of Reclamation's water quality and monitoring requirements for the Madera and Friant-Kern Canals that are in effect at the time. The current (2008) Water Quality Monitoring Plan for the Proposed Action is attached as Appendix C

## 2.3 Alternatives Considered, but Eliminated from Further Analysis

The following are several possible scenarios regarding the District's use of their non-CVP supplies. Since these other options would not require Federal discretionary action or are speculative and may require additional environmental review if pursued, they were not considered in detail:

- The District could use the water for groundwater recharge in existing non-Federal facilities.
- The District could sell their non-CVP water supplies to willing buyers; however, any such action would need to be consistent with its water rights and the water would have to be available during times when a potential buyer could beneficially use the water.
- The District could construct new facilities to store and convey their non-CVP supplies, which would duplicate a portion of CVP facilities and have potential environmental impacts.
- In order to find supplemental water to their CVP supply, the District could pursue other sources, enter into exchanges with others, and/or their member landowners could rely on groundwater if available.



EA-11-016

Figure 1 Map of Surface Water Sources

Background Map Sources:  
ESRI, i-cubed, and USGS

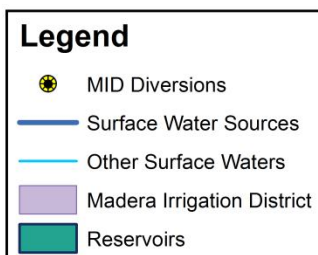


Figure 2-1 Course of the District's Non-CVP Water via the San Joaquin River, Friant Division Facilities, Fresno River, and Hidden Unit Facilities

## Section 3 Affected Environment and Environmental Consequences

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

### 3.1 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment and determined that neither Proposed Action nor the No Action Alternative have the potential to cause direct, indirect, or cumulative effects to the following resources:

**Table 3-1 Resources Eliminated from Further Analysis**

Resource	Reason Eliminated
Cultural Resources	There would be no modification of CVP storage or conveyance facilities and no activities that would result in ground disturbance under the Proposed Action or No Action Alternative. On June 4, 2013, Reclamation's Mid-Pacific Region, Cultural Resources Branch, determined that the Proposed Action and No Action Alternative involve the type of activity that has no potential to cause effects on historic properties, pursuant to 36 CFR Part 800.3(a)(1) (Appendix A).
Indian Sacred Sites	No impact to Indian Sacred Sites would occur under the No Action alternative as conditions would remain the same as existing conditions. 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, since no new construction or ground disturbing activities would occur as part of the Proposed Action. Therefore, there would be no impacts to Indian Sacred Sites as a result of the Proposed Action.
Environmental Justice	No impact to minority or low-income populations would occur under the No Action Alternative as conditions would remain the same as existing conditions. The Proposed Action does not propose any features that would result in adverse human health or environmental effects, have any physical effects on minority or low-income populations, and/or alter socioeconomic conditions of populations that reside or work in the vicinity of the Proposed Action.
Air Quality	No emissions would occur under the No Action Alternative since conditions would remain the same. No new facilities would be needed as a result of the Proposed Action, so no construction-related emissions would be produced. The water in the Proposed Action would move via gravity, hence there would be no emissions from pumping. As a result, there would be no impacts to air quality as a result of either the Proposed Action or the No Action Alternative, and a conformity analysis is not required.

### 3.2 Water Resources

#### 3.2.1 Affected Environment

##### ***CVP Facilities***

**Friant Dam / Millerton Lake** Friant Dam is located on the San Joaquin River, 25 miles northeast of Fresno, California. Completed in 1942, the dam is a concrete gravity structure, 319 feet high, with a crest length of 3,488 feet. The dam controls the San Joaquin River flows, provides downstream releases to meet requirements above Mendota Pool, and provides flood

control, conservation storage, diversion into Madera and Friant-Kern Canals, prevents salt water from destroying thousands of acres in the Sacramento-San Joaquin Delta, and delivers water to a million acres of agricultural land in Fresno, Kern, Madera, and Tulare Counties in the San Joaquin Valley. The reservoir, Millerton Lake, first stored water on February 21, 1944. It has a total capacity of 520,528 acre-feet, a surface area of 4,900 acres, and is approximately 15 miles long. The lake's 45 miles of shoreline varies from gentle slopes near the dam to steep canyon walls farther inland. The reservoir provides boating, fishing, picnicking, and swimming.

**Friant-Kern Canal** The FKC carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, four miles west of Bakersfield. The FKC has an initial capacity of 5,000 cubic feet per second (cfs) that gradually decreases to 2,000 cfs at its terminus in the Kern River. The water conveyed in the FKC is from the SJR and is considered to be of good quality because it originates from the Sierra Nevada. The water is used for M&I and agricultural purposes in Fresno, Tulare, and Kern Counties.

**Madera Canal** The 35.9 mile-long Madera Canal carries water northerly from Millerton Lake to supply lands in Madera County for M&I and agricultural use. The Madera Canal has an initial capacity of 1,000 cfs, decreasing to a capacity of 625 cfs at the Chowchilla River.

**Hidden Dam / Lake Hensley** The Hidden Dam is a 184-foot tall earthen dam that is 5730 feet long at its crest. The Dam, completed in September 1975, was constructed by the Corps for flood control, irrigation storage, and recreation. It is the only major storage dam of the Fresno River. The reservoir it creates, Lake Hensley, has a water surface of two and a half square miles, over twenty miles of shoreline, and has a maximum storage capacity of 90,259 af.

**John A. Franchi Diversion Dam** The John A. Franchi Diversion Dam was built by Reclamation in 1964, to replace the Madera Diversion Dam on the Fresno River. The current earth and sheet steel piling dam is operated by the District, under an agreement with Reclamation. The dam stands 15-feet-high and spans 263 feet across the Fresno River.

### ***Water Users and Supplies***

**Madera Irrigation District** The District and the surrounding area is within a groundwater deficient area as designated by the California State Department of Water Resources (DWR). Private landowners have constructed wells to extract groundwater when surface water supplies are insufficient or unavailable. Percolation ponds and unlined canals located throughout the district recharge groundwater in the District. The District monitors the depth to static water level within the District, although the District does not provide groundwater directly.

The District has a CVP repayment contract with Reclamation, providing up to 85,000 af of Class 1 and 186,000 af of Class 2 water per year from the Friant Division. The CVP water is released from Millerton Lake through the Friant Dam, and then conveyed through the Madera Canal for delivery into the District's service area. The District also entered into a CVP repayment contract with Reclamation for the entire yield from the Hidden Unit. Under the Hidden Unit contract, the average annual supply available to the District is 24,000 af per year.

The District has pre-1914 rights to divert water from Big Creek and the North Fork of Willow Creek (Soquel diversion), which provide an estimated annual average supply of 10,000 and

9,700 af respectively, depending on a fluctuating annual yield. The Big Creek diversion originates in Big Creek, a tributary of the Merced River. The diversion is located just upstream of Fish Camp, CA, where the water is redirected to flow down Lewis Fork, a tributary of the upper Fresno River. The Soquel diversion originates in North Fork Willow Creek, a tributary of the San Joaquin River. The diversion is located approximately 9 miles upstream of Bass Lake, where water can be redirected to flow through Soquel Ditch to Nelder Creek, a tributary of the upper Fresno River. Alternatively, water can be left in North Fork Willow Creek, and allowed to flow to Bass Lake and eventually to the San Joaquin River, where it can be diverted further downstream.

In 1976, the District entered into an agreement with Pacific Gas and Electric (PG&E) to allow its Soquel water to remain in the North Fork Willow Creek, which eventually flows into Bass Lake and is utilized by PG&E. This provides for additional hydroelectric power generation and increases recreational enhancement in Bass Lake. Upon release by PG&E into the San Joaquin River, the Soquel water enters Millerton Lake, passes through Friant Dam, and is then conveyed in the Madera Canal (Figure 2-1) for distribution to the District.

The District also has a senior adjudicated right to divert water from the Fresno River; the adjudicated and appropriative average annual supply is approximately 20,000 af, for the Big Creek and North Fork of Willow Creek diversions. Additionally, MID has the right to divert up to 200 cfs of water from the Fresno River year-round, which is inclusive of water imported from Big Creek and Willow Creek.

**Table Mountain Rancheria** The District has historically requested that up to 100 af of the Soquel water is diverted from Friant Dam to existing Fresno County Water Works #18 facilities for ultimate delivery to TMR. TMR has used the non-CVP water to support existing M&I uses for the Tribal Government, casino, police department and residential community on approximately 72.5 acres. TMR uses reclaimed waste water for its chillers and fire suppression at the casino, and uses some groundwater for human consumption.

**Fresno County Water Works #18** Fresno County Water Works #18 has a pipeline diversion point from the discharge works at Friant Dam, which connects to their water treatment plant nearby. Fresno County Water Works #18 provides this water for M&I use to the community of Friant and Millerton Lake State Recreation Area employees near Friant Dam.

### 3.2.2 Environmental Consequences

#### **No Action**

The District would divert their non-CVP supplies using non-Federal facilities, but the timing and use of the water may change, and its beneficial use would not be maximized without additional capital investment. In order to divert supplies downstream, MID would need to divert the Soquel water to the Fresno River via the Soquel Ditch, and both hydroelectric power generation and recreational enhancement at Bass Lake would be lost. Furthermore, TMR would not be able to receive Soquel water from MID without constructing new facilities, and would need to rely on groundwater and/or purchase other water supplies to meet their demands; however no willing sellers are identified at this time and groundwater resources are inadequate.

***Proposed Action***

Under the Proposed Action, Reclamation would approve storage, conveyance, and/or diversion of non-CVP water in Federal facilities when excess capacity exists, according to Article 18 of the District's repayment contracts. Under the Proposed Action, Reclamation would also allow Fresno County Water Works #18 to withdraw a portion of the District's non-CVP water from Millerton Lake, which it would then treat and ultimately deliver to TMR. As in the No Action Alternative, Reclamation would continue deliveries of CVP water supply in accordance with the terms and conditions of the District's CVP contracts.

MID and their predecessors have diverted the non-CVP water since the 1800's, so the diversion is part of the existing conditions. The District would continue to divert their non-CVP supplies under both the No Action Alternative and the Proposed Action, consistent with their existing water rights; therefore Reclamation's action would not result in additional impacts to the source watersheds.

The Proposed Action would not involve any construction activities or require any modifications to CVP facilities, and would not require any additional energy to convey the non-CVP water. The Proposed Action would not change any existing CVP water delivery diversion points and would not interfere with normal CVP operations. The District would only be allowed to store non-CVP water after downstream San Joaquin and Fresno River water rights have been met and when there is excess capacity so as not to impact Friant Division and Hidden Unit CVP supplies, Friant and Hidden Unit flood control operations, and the Hensley Lake minimum pool requirement of at least 5,000 AF.

The introduction of the District's non-CVP supplies into the Hidden Unit and Friant Division facilities would not degrade the quality of CVP water. The water originates in the Sierra Nevada, from water watershed, the same or substantially similar watersheds to the Federal facilities' source water. However, if Reclamation determines at any point that the Proposed Action could degrade water quality, then the applicable water quality and monitoring requirements would be followed. Reclamation's current requirements are attached in Appendix C.

The Proposed Action would provide the District with the ability to regulate their non-CVP supplies by diverting and/or storing it within the Friant Division or Hidden Unit for later use when the timing of delivery provides for greater beneficial use of the surface water supplies. It could result in decreased groundwater pumping in MID, providing a potential benefit to groundwater levels.

***Cumulative Impacts***

As there would be no adverse impacts and potentially beneficial impacts to surface water management and groundwater supplies, there would be no adverse cumulative impacts to water resources.

**3.3 Land Use****3.3.1 Affected Environment**

MID is located in Madera County, south of the City of Chowchilla and north of the City



of Fresno. It has approximately 101,000 acres of farmed land of which approximately 90,000 acres are permanent crops. The main crops in MID are: almonds, grapes, pistachios, cereals, and grasses.

TMR is located approximately 20 miles northeast of the City of Fresno near Millerton Lake. The TMR community lies on approximately 72.5 acres and is comprised mainly of a Tribal Government, casino, Tribal residential community, and its own police department.

Some lands around Millerton Lake and Lake Hensley are operated and maintained by the California Department of Parks and Recreation for recreational purposes.

### **3.3.2 Environmental Consequences**

#### ***No Action***

Reclamation would not approve conveyance and storage of non-CVP water in Friant Division and Hidden Unit facilities under the No Action Alternative. The District would still receive CVP water to be used on existing agricultural lands, as described in their repayment contracts; however, Reclamation anticipates 2014 and subsequent years to be dry which could reduce CVP supplies and may lead to adverse impacts to crops if additional water supplies are not used and managed properly. Farmers compete in a highly variable market with fluctuating water supplies while striving to make a profit. Under the No Action Alternative, CVP supplies in certain hydrologic years may not be adequate. While MID could divert and use their non-CVP supplies, timing and water management would suffer, and some irrigable acres may be fallowed and some permanent crops may be lost in drier years. Given that much of the lands in MID are prime and unique farmlands, and such resources could be left fallow, there would be a possibility (although unquantified) to impact prime and unique farmlands.

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

Under the Proposed Action, existing land uses would be maintained. The District would use their non-CVP supplies to irrigate existing agriculture and to supply domestic livestock ranches as has historically occurred. TMR would use the non-CVP supplies to support existing M&I uses. The Proposed Action would utilize existing facilities and would not require construction of new facilities or modifications to existing facilities that would result in ground disturbance. The District's non-CVP supplies would only be stored and conveyed within Friant Division and Hidden Unit facilities when excess capacity exists, so it would not impact recreational land use around the facilities. Therefore, the Proposed Action would not have any adverse impacts on land use; there may be an unquantified beneficial effect to prime and unique farmlands, by allowing for more flexible water management options.

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

Since the Proposed Action would not have any adverse impacts on land use, there would be no cumulative adverse impacts from the Proposed Action.

## 3.4 Biological Resources

### 3.4.1 Affected Environment

By the mid-1940s, most of the valley's native habitat had been altered by man, and as a result, was severely degraded or lost. When the CVP began operations, over 30 percent of all natural habitats in the Central Valley and surrounding foothills had been converted to urban and agricultural land use (Reclamation 1999). Prior to widespread agriculture, land within the Proposed Action area provided habitat for a variety of plants and animals. With the advent of irrigated agriculture and urban development over the last 100 years, many species have become threatened and endangered because of habitat loss. Of the approximately 5.6 million acres of valley grasslands and San Joaquin saltbrush scrub, the primary natural habitats across the valley, less than 10 percent remains today. Much of the remaining habitat consists of isolated fragments supporting small, highly vulnerable populations (Reclamation 1999).

Reclamation requested an official species list from USFWS via the Sacramento Field Office's website: [http://www.fws.gov/sacramento/es\\_species/Lists/es\\_species\\_lists-form.cfm](http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm) on June 5, 2013. The list is for Madera and Fresno Counties. Reclamation further queried the California Natural Diversity Database (CNDDDB) for records of protected species within 10 miles of the project location (CNDDDB 2013). This information, in addition to other information within Reclamation's files, was compiled (Table 3-2).

**Table 3-2 Federally protected species with the potential to be present within or near the Proposed Action area**

Species	Status <sup>1</sup>	Effects <sup>2</sup>	Potential to Occur in Study Area <sup>3</sup>
<b>Amphibians</b>			
California red-legged frog ( <i>Rana draytonii</i> )	T, X	NE	<b>Absent.</b> Suitable habitat absent. Extirpated from Proposed Action Area (USFWS 2002).
California tiger salamander ( <i>Ambystoma californiense</i> )	T, X	NE	<b>Present.</b> Records exist from the Proposed Action Area. Suitable habitat present; no conversion of native lands or lands fallowed for three years or more.
mountain yellow-legged frog ( <i>Rana muscosa</i> )	PE, PX	NE	<b>Absent.</b> Proposed Action Area is outside the species' range.
Yosemite toad ( <i>Bufo canorus</i> )	PT, PX	NE	<b>Absent.</b> Proposed Action Area is outside the species' range.
<b>Birds</b>			
western burrowing owl ( <i>Athene cunicularia</i> )	MBTA	NE	<b>Present.</b> Suitable habitat present; no conversion of native lands or lands fallowed for three years or more.
California condor ( <i>Gymnogyps californianus</i> )	E, X	NE	<b>Absent.</b> Only known from further south; no conversion of native lands or lands fallowed for three years or more; current cropping patterns not expected to change.
Swainson's hawk ( <i>Buteo swainsoni</i> )	MBTA	NE	<b>Present.</b> Documented near the District. Suitable habitat present; no conversion of native lands or lands fallowed for three years or more; current cropping patterns not expected to change.
western yellow-billed cuckoo ( <i>Coccyzus americanus occidentalis</i> )	C	NE	<b>Absent.</b> Needs extensive areas of cottonwood-willow riparian forest. At most would only fly over the Proposed Action Area but would not use it.



Fish			
delta smelt ( <i>Hypomesus transpacificus</i> )	T, X	NE	<b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action. There will be no effect on Delta pumping.
Central Valley steelhead ( <i>Oncorhynchus mykiss</i> )	T, X	NE	<b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action. There will be no effect on Delta pumping.
Lahontan cutthroat trout ( <i>Oncorhynchus</i> (=Salmo) <i>clarki henshawi</i> )	T	NE	<b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.
Owens tui chub ( <i>Gila bicolor snyderi</i> )	E, X	NE	<b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.
Paiute cutthroat trout ( <i>Oncorhynchus</i> (=Salmo) <i>clarki seleniris</i> )	T	NE	<b>Absent.</b> No natural waterways within the species' range will be affected by the proposed action.
Invertebrates			
Conservancy fairy shrimp ( <i>Branchinecta conservatio</i> )	E, X	NE	<b>Possible.</b> Suitable habitat present; no conversion of native lands or lands fallowed for three years or more.
longhorn fairy shrimp ( <i>Branchinecta longiantenna</i> )	E, X		<b>Possible.</b> Suitable habitat present; no conversion of native lands or lands fallowed for three years or more.
valley elderberry longhorn beetle ( <i>Desmocerus californicus dimorphus</i> )	T, X	NE	<b>Possible.</b> Known from nearby the District's service area. Suitable habitat present; no conversion of native lands or lands fallowed for three years or more and no construction.
vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> )	T, X	NE	<b>Present.</b> Suitable habitat present; no conversion of native lands or lands fallowed for three years or more.
vernal pool tadpole shrimp ( <i>Lepidurus packardii</i> )	E, X	NE	<b>Possible.</b> Suitable habitat present; no conversion of native lands or lands fallowed for three years or more.
Mammals			
Fresno kangaroo rat ( <i>Dipodomys nigratoides exilis</i> )	E, X	NE	<b>Absent.</b> Habitat that may harbor the Fresno kangaroo rat is outside of the Proposed Action Area.
giant kangaroo rat ( <i>Dipodomys ingens</i> )	E	NE	<b>Absent.</b> The Proposed Action Area is outside of the species' range.
fisher ( <i>Martes pennantii</i> )	C	NE	<b>Absent.</b> The Proposed Action Area is outside of the species' range.
San Joaquin kit fox ( <i>Vulpes macrotis mutica</i> )	E	NE	<b>Possible.</b> Can use agricultural lands to some degree. CNDDB records near but not in the District's service area and near TMR; no conversion of native lands or lands fallowed for three years or more.
Sierra Nevada bighorn sheep ( <i>Ovis canadensis californiana</i> )	E, X	NE	<b>Absent.</b> The Proposed Action Area is outside of the species' range.

Plants			
California jewelflower ( <i>Caulanthus californicus</i> )	E	NE	<b>Absent.</b> The nearest record is from Fresno County and was extirpated.
Greene's tuctoria ( <i>Tuctoria greenei</i> )	E, X	NE	<b>Possible.</b> CNDDDB records near but not in the District's service area and designated critical habitat overlaps part of the service area; no conversion of native lands or lands fallowed for three years or more.
hairy Orcutt grass ( <i>Orcuttia pilosa</i> )	E, X	NE	<b>Possible.</b> CNDDDB records overlapping but not in the District's service area; no conversion of native lands or lands fallowed for three years or more.
Hartweg's golden sunburst ( <i>Pseudobahia bahiifolia</i> )	E	NE	<b>Possible.</b> Known from near TMR, but no conversion of native lands or lands fallowed for three years or more.
Keck's checker-mallow ( <i>Sidalcea keckii</i> )	E, X	NE	<b>Possible.</b> No conversion of native lands or lands fallowed for three years or more.
Mariposa pussy-paws ( <i>Calyptridium pulchellum</i> )	T	NE	<b>Absent.</b> The Proposed Action Area is outside of the species' range.
palmate-bracted bird's-beak ( <i>Cordylanthus palmatus</i> )	E	NE	<b>Unlikely.</b> Requires seasonally flooded alkali grasslands and alkali scrub; no habitat is inside the District's service area; no conversion of native lands or lands fallowed for three years or more.
San Benito evening-primrose ( <i>Camissonia benitensis</i> )	T	NE	<b>Absent.</b> The Proposed Action Area is outside of the species' range.
San Joaquin adobe sunburst ( <i>Pseudobahia peirsonii</i> )	T	NE	<b>Absent.</b> The Proposed Action Area is outside of the species' range.
San Joaquin Valley Orcutt grass ( <i>Orcuttia inaequalis</i> )	T, X	NE	<b>Possible.</b> CNDDDB records overlapping the District's service area; no conversion of native lands or lands fallowed for three years or more.
San Joaquin woolly-threads ( <i>Monolopia congdonii</i> )	E	NE	<b>Absent.</b> The Proposed Action Area is outside of the species' range.
succulent owl's-clover ( <i>Castilleja campestris</i> ssp. <i>succulenta</i> )	T, X	NE	<b>Possible.</b> CNDDDB records near but not in the District's service area; no conversion of native lands or lands fallowed for three years or more.
Reptiles			
blunt-nosed leopard lizard ( <i>Gambelia sila</i> )	E	NE	<b>Possible.</b> Known from around the western edge of the District; no conversion of native lands or lands fallowed for three years or more.
giant garter snake ( <i>Thamnophis gigas</i> )	T	NE	<b>Absent.</b> Suitable habitat is absent from Proposed Action Area. Believed extirpated from Tulare Basin and other parts of the San Joaquin Valley outside of the Mendota Pool area (Hansen and Brode 1980).

- 1 Status= Listing of Federally protected species  
 E: Listed as Endangered  
 PE: Proposed for listing as Endangered  
 MBTA: Birds protected under the Migratory Bird Treaty Act  
 T: Listed as Threatened  
 PT: Proposed for listing as Threatened  
 X: Critical Habitat designated for this species  
 PX: Critical Habitat proposed for this species  
 C: Candidate for listing
- 2 Effects = Effect determination  
 NE: No Effect
- 3 Definition Of Occurrence Indicators  
 Present: Species observed in area  
 Possible: Species not observed at least in the last 10 years  
 Absent: Species not observed in study area and habitat requirements not met
- 4 CNDDB = California Natural Diversity Database 2010

There is designated critical habitat within the District for the California tiger salamander, vernal pool fairy shrimp, hairy Orcutt grass, San Joaquin Valley Orcutt grass, and Greene's tuctoria.

### 3.4.2 Environmental Consequences

#### **No Action**

Under the No Action Alternative, other projects near the Proposed Action Area would proceed and could impact biological resources. These include the District's Water Supply Enhancement Project, the Friant Ranch housing development, and the Winchell Cove pipeline project. These projects have already undergone compliance with the National Environmental Policy Act and with the Endangered Species Act and would occur regardless of the Proposed Action.

#### **Proposed Action**

No effects to biological resources would occur under the Proposed Action. Most of the habitat types required by species protected by the Endangered Species Act (ESA) do not occur in the project area. The Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years. The Proposed Action also would not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the Migratory Bird Treaty Act (MBTA). Since no modifications to natural stream courses or additional pumping would occur, there would be no effects on listed fish species. Critical habitat occurs within the area affected by the Proposed Action, but the restrictions against land conversion would prevent effects on critical habitat.

#### **Cumulative Impacts**

As the Proposed Action would not result in any direct or indirect impacts to biological resources, it would not contribute cumulatively to any impacts.

## 3.5 Indian Trust Assets

Indian trust assets (ITA) are legal interests in assets that are held in trust by the United States Government for federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. "Assets" are anything owned that holds monetary value. "Legal interests" means there is a property interest

for which there is a legal remedy, such a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. ITA cannot be sold, leased or otherwise alienated without United States' approval. Trust assets may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land.

Reclamation shares the Indian trust responsibility with all other agencies of the Executive Branch to protect and maintain ITA reserved by or granted to Indian tribes, or Indian individuals by treaty, statute, or Executive Order.

### **3.5.1 Affected Environment**

TMR is an ITA within the Action area. TMR has historically used up to 100 af of the District's non-CVP water to support existing M&I uses for the Tribal Government, casino, police department and residential community on approximately 72.5 acres.

### **3.5.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, Reclamation would not approve storage and conveyance of the District's non-CVP water in Friant Division facilities. Reclamation would therefore not approve diversion of a portion of the non-CVP water to Fresno County Water Works #18 for ultimate delivery to TMR. Without the District's supply, TMR would have to find alternate sources of water for the Tribal Government, casino, police department, and residential community. Water service to these facilities, and hence their use, may be impacted until alternate water sources are found.

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

Under the Proposed Action, TMR would receive up to 500 af of the District's non-CVP water. Existing and future M&I uses on TMR would have a more secure water supply. This would provide a beneficial effect to ITA.

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

Since the Proposed Action would provide a beneficial effect to M&I uses on TMR, it would provide a cumulatively beneficial effect compared to the No Action Alternative, when combined with any other past, present, and reasonably foreseeable actions on TMR.

## **3.6 Socioeconomic Resources**

### **3.6.1 Affected Environment**

The agricultural industry significantly contributes to the overall economic stability of the San Joaquin Valley. CVP allocations allow farmers to plan for the types of crops to grow and to secure loans to hire labor and purchase supplies from local businesses. Other conditions that influence farm profits include: fluctuating crop prices; insect infestation; changing hydrologic conditions; increased fuel and power costs.

TMR's facilities that use the District's non-CVP water, such as the casino and police department, provide jobs and income to the Tribe and surrounding community.

### **3.6.2 Environmental Consequences**

#### ***No Action***

Under the No Action Alternative, Reclamation would not approve conveyance and storage of the District's non-CVP water in CVP facilities. Construction of new facilities or use of alternative supplies such as groundwater could increase costs to the District or individual farms.

Without the District's non-CVP water, operations at TMR facilities could be temporarily impacted until other water sources are found, which could cause a substantial loss of income.

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

The ability to store and deliver water at a schedule most beneficial to the District would allow them to provide reliable water to their customers during the irrigation season and help maintain the local agricultural industry. It would also provide a more reliable source of water for TMR, which would help sustain existing government and business functions. The Proposed Action would have beneficial impacts to socioeconomic resources.

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

Since the Proposed Action would provide a beneficial effect to socioeconomic resources, it would provide a cumulatively beneficial effect when combined with any other past, present, and reasonably foreseeable actions.

## **3.7 Global Climate and Energy Use**

### **3.7.1 Affected Environment**

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes can contribute to climate change: changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, burning fossil fuels, etc. (EPA 2013).

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). Some GHG, such as carbon dioxide (CO<sub>2</sub>), occur naturally and are emitted to the atmosphere through natural processes and human activities. Other GHG (e.g., fluorinated gases) are created and emitted solely through human activities. The principal GHG that enter the atmosphere because of human activities are: carbon dioxide, methane, nitrous oxide, and fluorinated gases (EPA 2013).

During the past century humans have substantially added to the amount of GHG in the atmosphere by burning fossil fuels such as coal, natural gas, oil and gasoline to power our cars, factories, utilities and appliances. The added GHG, primarily CO<sub>2</sub> and CH<sub>4</sub>, are enhancing the natural greenhouse effect, and likely contributing to an increase in global average temperature and related climate changes (EPA 2013).

### **3.7.2 Environmental Consequences**

#### ***No Action***

The No Action Alternative would neither involve physical changes to the environment nor construction activities that could impact global climate change. The water in the No Action Alternative would move via gravity, hence there would be no energy used to move the water. However, limited management options for the District's non-CVP supply could result in GHG emissions from groundwater pumping.

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

The Proposed Action would neither involve physical changes to the environment nor construction activities that could impact global climate change. No new facilities would be needed as a result of the Proposed Action, so no construction-related emissions would be produced. The water in the Proposed Action would move via gravity, hence there would be no energy used or GHG from pumping.

Since the Proposed Action would facilitate the District's diversion of their Soquel water to Bass Lake, hydroelectric power generation may be enhanced. Additionally, more flexible management of surface supplies may result in less groundwater pumping than the No Action Alternative. Due to energy production and reduction in pumping, the Proposed Action could have a beneficial effect on energy production and use; thus causing fewer indirect effects on global climate.

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

Since any increase in greenhouse gas emissions would result in a cumulative effect to the environment, any effects of the Proposed Action would be cumulative. As discussed under the Proposed Action, there may be a beneficial effect regarding energy use, and hence a reduction in greenhouse gas emissions.

## **Section 4 Consultation and Coordination**

### **4.1 Public Review Period**

Reclamation intends to provide the public with an opportunity to comment on the Draft Finding of No Significant Impact and Draft EA between November 12 and December 13, 2013.

### **4.2 Endangered Species Act (16 U.S.C. § 1531 et seq.)**

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

Reclamation has determined that the Proposed Action would not affect any Federally listed or proposed species or any critical habitat. Therefore, consultation is not required.

### **4.3 Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.)**

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

The Proposed Action would not impact any migratory birds.

### **4.4 Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq.)**

The Magnuson-Stevens Fishery Conservation and Management is the primary law governing marine fisheries management in United States federal waters. The Act was first enacted in 1976 and amended in 1996.

The Proposed Action would not impact any waterways that are designated Essential Fish Habitat (EFH) for Pacific salmon, which is the nearest EFH. Therefore, no consultation is required.

## **Section 5 Preparers and Reviewers**

Nicholas Kilb, Natural Resources Specialist, SCCAO

Shauna McDonald, Wildlife Biologist, SCCAO

William Soule, Archaeologist, MP-153

Patricia Rivera, Native American Affairs Specialist, MP-400

Chuck Siek, Supervisory Natural Resources Specialist, SCCAO – reviewer

George Bushard, Repayment Specialist – reviewer

Dina Cadenazzi Nolan, PE, Engineer, Madera Irrigation District – reviewer

Tommy Greci, PE, General Manager, Madera Irrigation District – reviewer

## **Section 6 Acronyms and Abbreviations**

Corps	U.S. Army Corps of Engineers
District	Madera Irrigation District
EA	Environmental Assessment
EPA	Environmental Protection Agency
FKC	Friant-Kern Canal
FONSI	Finding of No Significant Impact
ITA	Indian Trust Assets
M&I	Municipal and Industrial
PG&E	Pacific Gas and Electric
Reclamation	Bureau of Reclamation
TMR	Table Mountain Ranchería



## Section 7 References

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Environmental Protection Agency (EPA). 2013. Climate Change – Basic Information. Website: <http://www.epa.gov/climatechange/basics/>.

Hansen, G. E., and J. M. Brode. 1980. Status of the giant garter snake, *Thamnophis couchi gigas* (Fitch). California Department of Fish & Game, Inland Fisheries Endangered Species Program Special Publication Report. 80-5: 1-14.

Taylor, D. W., and W. B. Davilla. 1986. Status survey of three plants endemic to the San Joaquin Valley and adjacent areas, California. U.S. Fish and Wildlife Service, Sacramento, CA, 131 pp.

U.S. Fish and Wildlife Service (USFWS). 2013. Species List

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# **Appendix A    Cultural Resources Determination**



## United States Department of the Interior

### BUREAU OF RECLAMATION

Mid-Pacific Regional Office  
2800 Cottage Way  
Sacramento, California 95825-1898

IN REPLY  
REFER TO:  
MP-153  
ENV-3.00

VIA ELECTRONIC MAIL ONLY

June 04, 2013  
MEMORANDUM

To: Nicholas Kilb  
Natural Resource Specialist – South-Central California Area Office

From: William Soule  
Archaeologist – Division of Environmental Affairs

Subject: 13-SCAO-204: Madera Irrigation District (MID) Storage and Conveyance of Non-Project Water in Friant Division and Hidden Unit Facilities, 2013-2043

This proposed undertaking by Reclamation is to approve MID's proposal to store, convey, and/or divert non-Central Valley Project (CVP) water in Friant Division and Hidden Unit facilities. 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 National Historic Preservation Act (NHPA) Section 106 regulations codified at 36 CFR Part 800.3(a)(1). Reclamation has no further obligations under NHPA Section 106, pursuant to 36 CFR § 800.3(a)(1).

Previously, Reclamation entered into temporary Warren Act contracts (1-5 years) with MID for conveyance of their non-CVP Soquel water in Friant Division facilities. Under this proposed action MID requests approval of storage and conveyance of up to 25,000 AF of non-CVP water in Friant Division facilities, and/or storage of up to 36,000 AF of non-CVP water at any one time in Hidden Unit facilities. Due to regulatory, contractual, and policy changes, MID may now store, convey and/or divert non-CVP water according to article 18 of their repayment contracts, with Reclamation's approval, but without the need for Separate Warren Act contracts. There is no ground disturbance, construction of new facilities, or change in land use associated with this proposed action.

After reviewing the materials provided for the Section 106 determination of effect for this undertaking, I concur with the evaluation in the Environmental Assessment (EA) for this action which states that both the Proposed Action and the No Action Alternative have no potential to cause effects on historic properties pursuant to 36 CFR § 800.3(a)(1). This memorandum 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.

CC: Cultural Resources Branch (MP-153), Anastasia Leigh – Regional Environmental Officer (MP-150)

# **Appendix B Indian Trust Assets Determination**



Kilb, Nicholas <nkilb@usbr.gov>

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## **Request for Determinations, Madera Irrigation District – Storage and Conveyance of Non-Project Water in Friant Division and Hidden Unit Facilities, 2013-2043**

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**RIVERA, PATRICIA** <privera@usbr.gov>

Fri, Jun 7, 2013 at 1:18 PM

To: "Kilb, Nicholas" <nkilb@usbr.gov>

I reviewed the proposed action to approve storage and conveyance of Madera Irrigation District's (District) non-CVP water in Friant Division and Hidden Unit facilities. Approval would include up to 25,000 af of the District's non-CVP water in Friant Division facilities, and/or storage of up to 36,000 af of the District's non-CVP water at any one time in Hidden Unit facilities. Reclamation would also approve an additional point of delivery of up to 500 af of the District's non-CVP water to be delivered to Fresno County Water Works #18 facilities for ultimate delivery to Table Mountain Rancheria (TMR). Approvals would be for varying lengths of time between the 2013 through 2042 Contract Years (March 1, 2013 - February 28, 2043).

The proposed action has a beneficial affect Indian Trust Assets. Table Mountain Rahcheria is the nearest ITA and this Rancheria would use the non-CVP water to support existing M&I uses for the Tribal Government, casino, police department and residential community on approximately 73 acres.

Patricia Rivera  
Native American Affairs Program Manager  
US Bureau of Reclamation  
Mid-Pacific Region  
2800 Sacramento, California 95825  
(916) 978-5194

[Quoted text hidden]

# **Appendix C     Reclamation's Water Quality Requirements for the Friant-Kern and Madera Canals**

# 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)<sup>1</sup>, 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

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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<sup>2</sup>.

### **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 these 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 in the Friant Division  
Table 2. Title 22 California Drinking Water Standards  
Table 3. List of Labs Approved by Reclamation

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](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
<b>Primary Constituents (CCR § 64431)</b>					
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 NO <sub>3</sub> )	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
<b>Secondary Constituents (CCR § 64449)</b>					
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
<b>EPA 515.3 Method</b>					
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
<b>EPA 524.2 Method (Volatile Organic Chemicals)</b>					
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
<b>EPA 525.2 Method</b>					
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
<b>EPA 531.1 Method</b>					
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
<b>EPA 547 Method</b>					
Glyphosate	µg/L	EPA 547	700	4	1071-83-6
<b>EPA 548.1 Method</b>					
Endothal	µg/L	EPA 548.1	100	4	145-73-3
<b>EPA 549.2 Method</b>					
Diquat	µg/L	EPA 549.2	20	4	85-00-7
<b>EPA 613 Method</b>					
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.

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Table 2b. Unregulated Chemicals (CCR § 64450)

			California Department of Health Services				CAS
CONSTITUENT OR PARAMETER	Units	Recommended Method	Notification Level		Response Level	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  
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**Notes for Tables 2a and 2b**

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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 64442. 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)

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

<b>Fruit Growers Laboratory</b>	<b><u>Address</u></b>	853 Corporation Street Santa Paula, CA 93060 USA
	<b><u>Contact</u></b>	David Terz, QA Director
	<b><u>P/F</u></b>	(805) 392-2024 / (805) 525-4172
	<b><u>Email</u></b>	davidt@fglinc.com
	<b><u>Methods</u></b>	<i>Approved for all inorganic and organic parameters in drinking water.</i>
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	<b><u>Contact</u></b>	Allen Glover (project manager), Bradley Cahoon (quotes)
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	<b><u>CC Info</u></b>	cc. Sam on all communications to Allen. Samer.Momani@us.mwhglobal.com
<b>Olson Biochemistry Laboratories</b>	<b><u>Address</u></b>	SDSU: Box 2170, ACS Rm. 133 Brookings, SD 57007 USA
	<b><u>Contact</u></b>	Nancy Thiex, Laboratory Director
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	<b><u>CC Info</u></b>	For re-analysis: contact Zelda McGinnis-Schlobohm and Nancy Anderson Zelda.Schlobohm@SDSTATE.EDU, Nancy.Anderson@SDSTATE.EDU For analysis questions only: just CC. Nancy Anderson
<b>Severn Trent Laboratories</b>	<b><u>Address</u></b>	880 Riverside Parkway West Sacramento, CA 95605 USA
	<b><u>Contact</u></b>	Jeremy Sadler
	<b><u>P/F</u></b>	(916) 374-4381 / (916) 372-1059
	<b><u>Email</u></b>	jsadler@stl-inc.com
	<b><u>Methods</u></b>	<i>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</i>
<b>Sierra Foothill Laboratory, Inc.</b>	<b><u>Address</u></b>	255 Scottsville Blvd, Jackson, CA 95642
	<b><u>Contact</u></b>	Sandy Nurse (Owner) or Dale Gimble (QA Officer)
	<b><u>P/F</u></b>	(209) 223-2800 / (209) 223-2747
	<b><u>Email</u></b>	sandy@sierralab.com, CC: dale@sierralab.com
	<b><u>Methods</u></b>	<i>Approved for all inorganic parameters, microbiological parameters, acute and chronic toxicity.</i>
<b>Twining Laboratories, Inc.</b>	<b><u>Address</u></b>	2527 Fresno Street Fresno, CA 93721 USA
	<b><u>Contact</u></b>	Jim Brownfield (QA Officer), Sample Control (for Bottle Orders)
	<b><u>P/F</u></b>	(559) 268-7021 / (559) 268-0740
	<b><u>Email</u></b>	JimB@twining.com cc. to JosephU@twining.com
	<b><u>Methods</u></b>	<i>Approved only for general chemistry and boron analysis.</i>
<b>U.S. Geological Survey - Denver</b>	<b><u>Address</u></b>	Denver Federal Center Building 20, MS 973 Denver, CO 80225 USA
	<b><u>Contact</u></b>	Stephen A. Wilson
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	<b><u>Email</u></b>	swilson@usgs.gov
	<b><u>Methods</u></b>	<i>Approved only for inorganic parameters in soil .</i>
<b>USBR Technical Service Center Denver Soils</b>	<b><u>Address</u></b>	Denver Federal Center Building 67, D-8750 Denver, CO 80225-0007 USA
	<b><u>Contact</u></b>	Juli Fahy or Stan Conway
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	<b><u>Email</u></b>	jfahy@do.usbr.gov
	<b><u>Methods</u></b>	<i>Approved only for general physical analysis in soils.</i>
<b>Western Environmental Testing Laboratories</b>	<b><u>Address</u></b>	475 East Greg Street # 119 Sparks, NV 89431 USA
	<b><u>Contact</u></b>	Ginger Peppard (Customer Service Manager), Andy Smith (Lab Director), Michelle Kramer
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	<b><u>Email</u></b>	ginger@WETLaboratory.com, andy@WETLaboratory.com, michelle@WETLaboratory.com
	<b><u>Methods</u></b>	<i>Approved only for inorganic parameters (metals, general chemistry).</i>

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