



## ARVIN-EDISON WATER STORAGE DISTRICT

July 30, 2014

Via email ([blawrence@usbr.gov](mailto:blawrence@usbr.gov)) and fax (559-487-5397)

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Ben Lawrence  
United States Bureau of Reclamation (USBR)  
1243 N. Street  
Fresno CA, 93721

**Re: Conveyance of Non-Central Valley Project Water from the Kaweah River in the Friant-Kern Canal draft FONSI and EA Comments**

Dear Mr. Lawrence:

### STAFF

Steven C. Collup  
Engineer-Manager  
David A. Nixon  
Assistant Manager  
Jeevan S. Muhar  
Staff Engineer  
Christ P. Krauter  
General Superintendent

Thank you for providing Arvin-Edison Water Storage District (AEWSD) the opportunity to comment on the Kaweah River Water Warren Act Agreements draft Environmental Assessment and Findings of No Significant Impact (EA/FONSI-14-037) regarding the proposed five year Warren Act Contracts involving Non-Project water supplies (Project).

AEWSD is generally supportive of water management programs such as described in the EA/FONSI. We do however request clarification and/or additions to the final EA/FONSI on the following points, both with respect to Guidelines for Accepting Non-Project Water in Friant Division Facilities (Guidelines).

EA/FONSI Section 3.2.2 page 9 states the following:

*Non-CVP water introduced into the FKC must meet Reclamation's then-current Guidelines for Accepting Non-Project Water in Friant Division Facilities prior to approval for conveyance. If testing shows that the water does not meet then-current standards, the contractors would not be allowed to discharge into the FKC until water quality concerns are addressed. This testing program is anticipated to adequately protect the quality of water and limit degradation of other users' supplies.*

### Reference to then-current Guidelines

It shall be noted the "then-current" Guidelines were not included in the EA/FONSI, it is not apparent which Guidelines are "current" and therefore the requirements set forth are unknown. Kaweah River water quality information was NOT included in the EA/FONSI and subsequently a comparison of water qualities between Friant-Kern Canal (FKC) and Kaweah River water is silent.

### Limits of Degradation

No detailed information about protection of constituent's and associated degradation of existing water supplies or to what extent degradation is allowed was described in the EA/FONSI.

**Ben Lawrence**  
**July 30, 2014**  
**Page 2**

Arvin-Edison WSD 2

Perhaps the USBR is not aware of ominous water quality regulations currently being pursued by the Central Valley Regional Water Quality Board including but not limited to Irrigated Lands Regulatory Program (ILRP) and CVSALTS Program. AEWS D also introduces water into the State Water Project California Aqueduct and administers a pump-in program that is highly regulated to limit degradation of certain constituents of concern (i.e. arsenic, chloride, chromium, nitrate, uranium, etc).

AEWS D has preliminarily been classified as a "high vulnerability" area in the ILRP, which program deals with nitrate ( $\text{NO}_3$ ) loading on agricultural irrigated land. The CVSALTS Program is envisioned to limit the salt (TDS and/or EC) loading on agricultural irrigated land. As you are aware, the FKC quality is a large part of fresh snowmelt off of the Sierra Nevada's and has been described by USBR as being a "pristine" source. AEWS D relies heavily on receiving its contracted supply from Millerton Lake and the Guidelines currently do not adequately protect this pristine supply.

Thank you, and again we appreciate the opportunity to provide input into your Project. If you have questions or comments, please don't hesitate to call or email.

Sincerely,



Steve Collup  
Engineer-Manager

Enclosure

cc: Jeevan Muhar, Staff Engineer  
Michael Jackson, USBR  
Chris Eacock, USBR  
Scott Taylor, USBR

## Response to Comments

### From Arvin-Edison Water Storage District (Arvin-Edison WSD)

#### Arvin-Edison WSD 1

The current rules for accepting non-CVP water in the FKC consist of the 2008 guidelines with which Arvin-Edison WSD is familiar, with water standards based on Title 22 California Domestic Water Standards. These have been added to the final document as Appendix D. If water quality standards change in the future, all discharges to the FKC would be subject to standards in effect at the time of discharge.

Since Kaweah River water would be tested prior to introduction into the FKC, additional analysis or comparison of water quality in the Kaweah River and the FKC would be redundant. Measures to monitor degradation of water quality in the FKC were included in proposed 2014 updates to the *Policy for Accepting Non-Project Water into the Friant-Kern and Madera Canals*. The Friant Water Authority (FWA) opposed the Policy update.

#### Arvin-Edison WSD 2

Regarding potential changes in water quality standards, any change in standards would result in changes to Reclamation's required testing protocol, in order to protect water quality for all users of the FKC.



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

**MP-153 Tracking Number:** 14-SCAO-196

**Project Name:** Kaweah River Water Warren Act Contract

**NEPA Document:** EA 14-037

**MP 153 Cultural Resources Reviewer:** Scott Williams 

**Date:** 5/27/14

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This proposed undertaking by Reclamation to allow Seven Friant Division contractors have made a purchase of non-Central Valley Project Kaweah River water 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). There would be no new construction or modification of facilities, but operational exchanges would be required. Reclamation has no further obligations under NHPA Section 106, pursuant to 36 CFR § 800.3(a)(1).

Seven Friant Division contractors have made a purchase of non-Central Valley Project Kaweah River water. They have asked Reclamation for a Warren Act Contract to discharge the water to the FKC using Lindsay-Strathmore Irrigation District's turnout at milepost 69.13. The participating districts would then take the water using turnouts at the following mileposts: Garfield WD – 7.57; Hills Valley ID – 41.15L; Tri-Valley WD – 35.85L; 38.74R (shared w/Orange Cove ID); Orange Cove ID – 35.85L, 35.87L, 36.79R, 38.74R, 39.82R, 41.76R, 42.89L, 44.56R, 44.56L, 45.46R, 47.03R, 48.58R, 49.87R, 50.38L, 51.62L, 52.44R, 53.32R; Ivanhoe ID – 65.04R, 67.05R, 68.13R; Exeter ID – 72.52L, 75.18L,R , 76.35R, 76.98R, 78.08R, 79.24R; Terra Bella ID – 102.65L, 103.64L.

There would be no new construction or modification of facilities, but operational exchanges would be needed for districts with turnouts upstream of the discharge point (MP 69.13).

After reviewing the project description provided on 5/22/14, I concur that this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic

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.



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## Request for Determinations, SCCAO EA 14-037, Kaweah River Water Warren Act Contracts

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

Thu, May 22, 2014 at 2:50 PM

To: "Lawrence, Benjamin" <blawrence@usbr.gov>

Cc: Kristi Seabrook <kseabrook@usbr.gov>, Mary Williams <marywilliams@usbr.gov>

Ben,

I reviewed the proposed action as noted below and determined there are no potential impacts to Indian Trust Assets.

Seven Friant Division contractors have made a purchase of non-Central Valley Project Kaweah River water. They have asked Reclamation for a Warren Act Contract to discharge the water to the FKC using Lindsay-Strathmore Irrigation District's turnout at milepost 69.13. The participating districts would then take the water using turnouts at the following mileposts: Garfield WD – 7.57; Hills Valley ID – 41.15L; Tri-Valley WD – 35.85L; 38.74R (shared w/Orange Cove ID); Orange Cove ID – 35.85L, 35.87L, 36.79R, 38.74R, 39.82R, 41.76R, 42.89L, 44.56R, 44.56L, 45.46R, 47.03R, 48.58R, 49.87R, 50.38L, 51.62L, 52.44R, 53.32R; Ivanhoe ID – 65.04R, 67.05R, 68.13R; Exeter ID – 72.52L, 75.18L,R , 76.35R, 76.98R, 78.08R, 79.24R; Terra Bella ID – 102.65L, 103.64L.

There would be no new construction or modification of facilities, but operational exchanges would be needed for districts with turnouts upstream of the discharge point.

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

# 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  
Friant Water Authority  
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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>
<b>Montgomery Watson/Harza Laboratories</b>	<b><u>Address</u></b>	750 Royal Oaks Drive Ste. 100 Monrovia, CA 91016 USA
	<b><u>Contact</u></b>	Allen Glover (project manager), Bradley Cahoon (quotes)
	<b><u>P/F</u></b>	(916) 374-8030, 916-996-5929 (AG-cell) / (916) 374-8061
	<b><u>Email</u></b>	Allen.Glover@us.mwhglobal.com, Bradley.Cahoon@us.mwhglobal.com
	<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
	<b><u>P/F</u></b>	(605) 688-5466 / (605) 688-6295
	<b><u>Email</u></b>	Nancy.Thiex@sdstate.edu
	<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
	<b><u>P/F</u></b>	(303) 236-2454 / (303) 236-3200
	<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
	<b><u>P/F</u></b>	(303) 445-2188 / (303) 445-6351
	<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
	<b><u>P/F</u></b>	(775) 355-0202 / (775) 355-0817
	<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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