

Appendix A

Reclamation's Water Quality Standards for the Friant-Kern Canal

RECLAMATION

Managing Water in the West

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



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



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

March 7, 2008

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

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

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

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

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

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

A. Types of Non-Project Water

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

1. "Type A" Non-Project Water

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

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

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

2. **“Type B” Non-Project Water**

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

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

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

3. **“Type C” Non-Project Water**

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

B. Authorization

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

C. General Requirements for Discharge of Non-Project Water

1. Contract Requirements

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

2. Facility Licensing

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

3. Prohibition When the Canal is Empty

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

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

1. General Discharge Approval Requirements

Each source of non-project water must be correctly sampled, completely analyzed, and be approved by Reclamation prior to introduction into the Friant-Kern or Madera Canals. The Contractor shall pay the cost of collection and analyses of the non-project water required under this policy².

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.

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.

(2) Cryptosporidium, Giardia, total coliform bacteria

(3) Field measurements.

(4) Location to be determined by the Contracting Officer

(5) To be determined by the Contracting Officer, if necessary.

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

Revised: 08/16/2007 SCC-107

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

Table 2a. Water Quality Constituents

| CONSTITUENT OR PARAMETER | Units | Recommended Method | California DHS Maximum Contaminant Level | | CAS Registry Number |
|---|-----------------|-----------------------|--|----|---------------------------|
| Primary Constituents (CCR § 64431) | | | | | |
| Aluminum | µg/L | EPA 200.7 | 1,000 | 1 | 7429-90-5 |
| Antimony | µg/L | EPA 200.8 | 6 | 1 | 7440-36-0 |
| Arsenic | µg/L | EPA 200.8 | 10 | 16 | 7440-38-2 |
| Asbestos | MFL > 10µm | EPA 100.2 | 7 | 1 | 1332-21-4 |
| Barium | µg/L | EPA 200.7 | 1,000 | 1 | 7440-39-3 |
| Beryllium | µg/L | EPA 200.7 | 4 | 1 | 7440-41-7 |
| Cadmium | µg/L | EPA 200.7 | 5 | 1 | 7440-43-9 |
| Chromium | µg/L | EPA 200.7 | 50 | 1 | 7440-47-3 |
| Cyanide | µg/L | EPA 335.4 | 150 | 1 | 57-12-5 |
| Fluoride | mg/L | EPA 300.1 | 2 | 1 | 16984-48-8 |
| Mercury (inorganic) | µg/L | EPA 245.1 | 2 | 1 | 7439-97-6 |
| Nickel | µg/L | EPA 200.7 | 100 | 1 | 7440-02-0 |
| Nitrate (as NO ₃) | mg/L | EPA 300.1 | 45 | 1 | 7727-37-9 |
| Total Nitrate + Nitrite (as Nitrogen) | mg/L | EPA 353.2 | 10 | 1 | |
| Nitrite (as Nitrogen) | mg/L | EPA 300.1 | 1 | 1 | 14797-65-0 |
| Selenium | µg/L | EPA 200.8 | 50 | 1 | 7782-49-2 |
| Thallium | µg/L | EPA 200.8 | 2 | 1 | 7440-28-0 |
| Secondary Constituents (CCR § 64449) | | | | | |
| Aluminum | µg/L | EPA 200.7 | 200 | 6 | 7429-90-5 |
| Chloride | mg/L | EPA 300.1 | 250/500/600 | 7 | 16887-00-6 |
| Color | units | SM 2120 B | 15 | 6 | |
| Copper | µg/L | EPA 200.7 | 1,000 | 6 | 7440-50-8 |
| Foaming agents (MBAS) | mg/L | SM 5540 C | 0.5 | 6 | |
| Iron | µg/L | EPA 200.7 | 300 | 6 | 7439-89-6 |
| Manganese | µg/L | EPA 200.7 | 50 | 6 | 7439-96-5 |
| Methyl-tert-butyl ether (MtBE) | µg/L | EPA 524.2 | 5 | 6 | 1634-04-4 |
| Odor - Threshold | threshold units | SM 2150 B | 3 | 6 | |
| Silver | µg/L | EPA 200.7 | 100 | 6 | 7440-22-4 |
| Specific conductance (EC) | µS/cm | SM 2510 B | 900/1600/2200 | 7 | |
| Sulfate | mg/L | EPA 300.1 | 250/500/600 | 7 | 14808-79-8 |
| Thiobencarb | µg/L | EPA 525.2 | 1 | 6 | 28249-77-6 |
| Total dissolved solids (TDS) | mg/L | SM 2540 C | 500/1000/1500 | 7 | |
| Turbidity | NTU | EPA 180.1 | 5 | 6 | |
| Zinc | mg/L | EPA 200.7 | 5 | 6 | 7440-66-6 |

Table 2a. Water Quality Constituents

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

Table 2a. Water Quality Constituents

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

Table 2a. Water Quality Constituents

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

Source Data:

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

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

Table 2b. Unregulated Chemicals (CCR § 64450)

| | | | 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
Friant Division, California
Water Quality Monitoring Requirements**

Notes for Tables 2a and 2b

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

- [1] Table 64431-A. Maximum Contaminant Levels, Inorganic Chemicals
- [2] Table 64432-A. Detection Limits for Purpose of Reporting (DLRs) for Regulated Inorganic Chemicals
- [3] Table 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)

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

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

Revised: 04/16/2007 MP-157