RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Stone Corral Irrigation District Warren Act Approval

EA-15-031

U.S. Department of the Interior
Bureau of Reclamation

June 2015

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

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

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Section 1 Introduction

1.1 Background

The State of California is currently experiencing unprecedented water management challenges due to severe drought in recent years. On January 17, 2014, the Governor proclaimed a Drought State of Emergency (State of California 2014). On December 22, 2014, provisions within this proclamation were extended until May 31, 2016. On April 1, 2015, following the lowest snowpack ever recorded in California and the ongoing drought, the Governor proclaimed a second Drought State of Emergency and directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent (State of California 2015a). On April 23, 2015 and May 1, 2015, the State Water Resources Control Board issued curtailment notices to junior water rights holders in the San Joaquin River watershed and the Delta, respectively. The curtailment notices require junior water rights holders to stop diverting water from the watershed in order to allow it to flow to more senior water-right holders, as required by state law (State of California 2015a). On June 12, 2015, the State Water Resources Control Board issued curtailment notices to senior water rights holders with a priority date of 1903 or later in the San Joaquin and Sacramento watersheds and the Delta (State of California 2015b).

California's drought, as well as environmental and regulatory restrictions, has also reduced water supplies to many Central Valley Project (CVP) water service contractors. The Friant Division provides CVP water from Millerton Lake to over one million acres of irrigable farm land on the east side of the southern San Joaquin Valley. Currently, there are 32 Friant Division CVP contractors located in Merced, Madera, Fresno, Tulare, Kings, and Kern Counties. Water conveyed to these contractors is categorized as either Class 1 or Class 2 water as defined in their water contract with Reclamation[1]. Due to current hydrologic and regulatory conditions described above, Reclamation declared an unprecedented 0 percent allocation for Class 1 and Class 2 water supplies for Friant Division CVP contractors for the 2014 and 2015 Contract Years (a Contract Year is from March 1 through the last day of February of the following year).

[1] Class 1 water is considered as the first 800,000 acre-feet supply of CVP water stored in Millerton Lake, which would be available for delivery from the Friant-Kern Canal and/or Madera Canals as a dependable water supply during each Contract Year. Class 2 water is considered as the next approximate 1,400,000 acre-feet supply of non-storable CVP water which becomes available in addition to the Class 1 supply and, due to the uncertainty of its availability, is considered to be undependable in character and is furnished only if and when it can be made available as determined by Reclamation per Contract Year.

Stone Corral Irrigation District (see Figure 1-1), a Friant Division CVP contractor, has purchased 1,000 acre-feet (AF) of Kaweah River water (hereafter referred to as non-CVP water) from three participating Kaweah River Companies with pre-1914 water rights; Modoc Ditch Company, Jennings Ditch Company, and Lakeside Ditch Company in order to meet some of its customers' needs. Stone Corral Irrigation District has requested a Warren Act approval for conveyance of this non-CVP water in the Friant-Kern Canal.

The proposed point of introduction for Stone Corral Irrigation District's purchased non-CVP water would be Lindsay-Strathmore Irrigation District's turnout at Friant-Kern Canal milepost (MP) 69.13. Stone Corral Irrigation District is located upstream of the introduction point; therefore, an operational exchange agreement with Terra Bella Irrigation District would also be needed in order for Stone Corral Water District to receive this water.

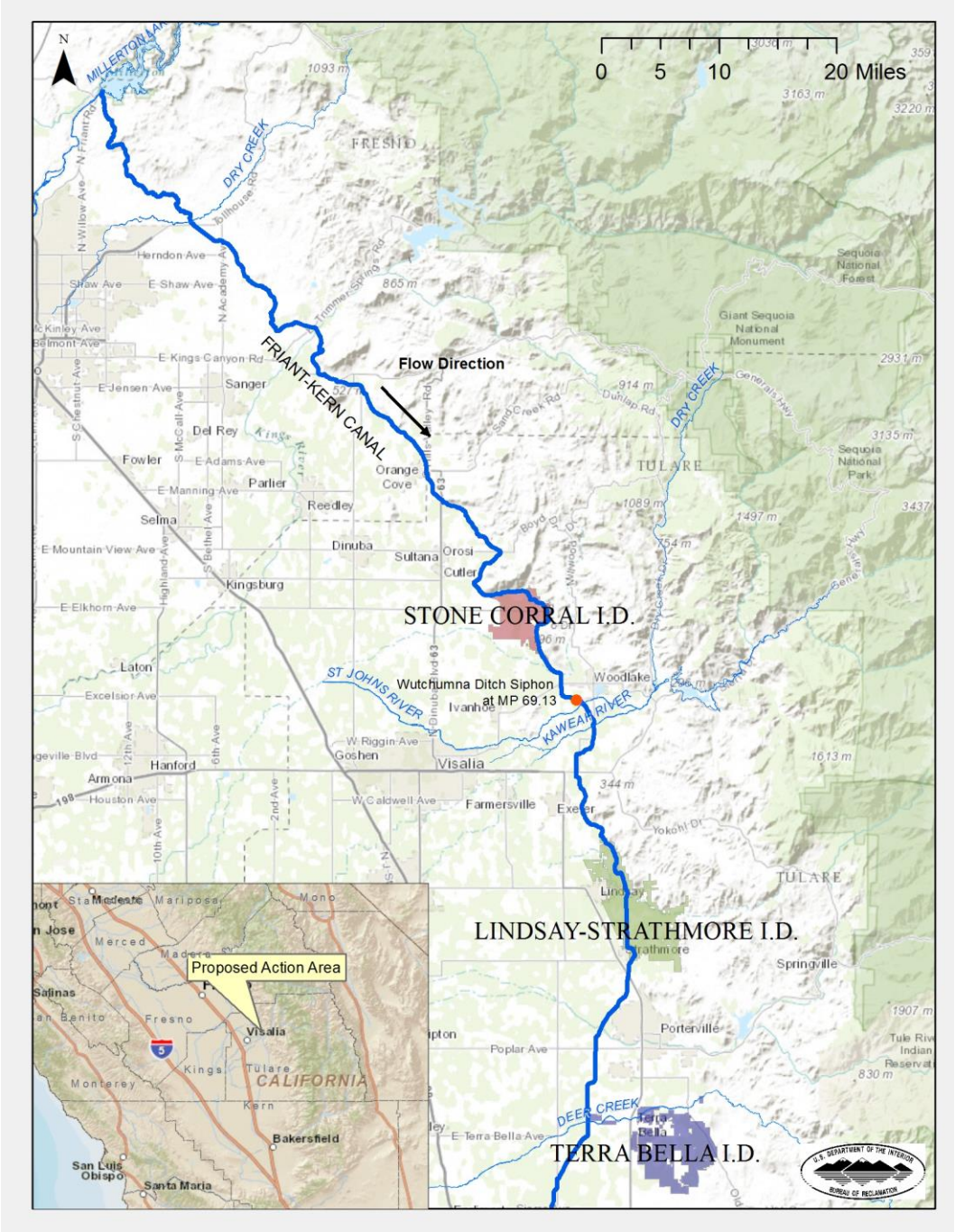

Figure 1-1 Project Location

1.2 Need for the Proposed Action

Stone Corral Irrigation District does not have adequate water supplies to meet the needs of their customers due to conditions described above. The purpose of the Proposed Action is to provide a conveyance mechanism to deliver non-CVP water supplies to support existing crops within the district.

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Section 2 Alternatives Including the Proposed Action

This Environmental Assessment 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, Stone Corral Irrigation District's purchased non-CVP Kaweah River water would not be introduced into the Friant-Kern Canal for an operational exchange with Terra Bella Irrigation District. Stone Corral would have to find an alternate water supply, or use another conveyance method to deliver this non-CVP water to their customers' crops. If no other water source or conveyance mechanism were found, fallowing of cropland could be necessary and/or existing permanent crops could be lost.

2.2 Proposed Action

Reclamation proposes to issue a five year Warren Act approval (effective through February 29, 2020) to Stone Corral Irrigation District under Article 18 of their Repayment Contract. Under the Proposed Action, up to 1,000 AF of non-CVP surface water would be released from Lake Kaweah Terminus Dam and pumped from the Upper Wutchumna Ditch on the Kaweah River for annual introduction into the Friant Kern Canal (Figure 1-1). The proposed point of introduction for the non-CVP surface water would be Lindsay-Strathmore Irrigation District's existing turnout (Wutchumna Ditch Siphon) at MP 69.13 on the Friant-Kern Canal. As Stone Corral Irrigation District is located upstream of the introduction point, an operational exchange with Terra Bella Irrigation District (located downstream of the introduction point) is also proposed.

Under the operational exchange, Stone Corral Irrigation District would take delivery of Terra Bella Irrigation District's CVP water from Millerton Lake at MP 57.90, 59.33, 60.90 and 62.68, in lieu of the non-CVP surface water. In exchange, Terra Bella Irrigation District would take Stone Corral Irrigation District's purchased non-CVP surface water from their existing turnouts located downstream of the point of introduction.

2.2.1 Environmental Commitments

Stone Corral Irrigation District shall implement the following environmental protection measures to avoid and/or reduce environmental consequences associated with the Proposed Action (Table 2-1). Environmental consequences for resource areas assume the measures specified would be fully implemented. Copies of all environmental compliance reports shall be submitted to Reclamation.

Table 2-1 Environmental Protection Measures and Commitments

Resource	Protection Measure
Water Resources	The Proposed Action would not affect Friant Division CVP operations; all introductions would be previously scheduled with Reclamation and the Friant Water Authority.
Water Resources	The water would only be used for beneficial purposes and in accordance with Federal Reclamation law and guidelines, as applicable.
Various Resources	The water would not be used to place untilled or new lands into production, or to convert undeveloped land to other uses.
Various Resources	No new construction or modification of existing facilities may occur in order to complete the Proposed Action.
Various Resources	The Proposed Action cannot alter the flow regime of natural waterways or natural watercourses such as rivers, streams, creeks, ponds, pools, wetlands, etc., so as to have a detrimental effect on fish or wildlife or their habitats.
Various Resources	The Proposed Action would not increase or decrease water supplies that would result in land development.
Various Resources	Use of the water shall comply with all federal, state, local, and tribal law, and requirements imposed for protection of the environment and Indian Trust Assets.

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 the Proposed Action did not have the potential to cause direct, indirect, or cumulative adverse effects to the resources listed in Table 3-1.

Table 3-1 Resources Eliminated from Further Analysis

Resource	Reason Eliminated
Air Quality	No new facilities would be needed as a result of the Proposed Action that would cause emissions from construction activities. The pumps that would be used to convey the water under the Proposed Action are electric. These pumps would not emit pollutants at the pump; the source of the pollutants originates at the power plant. Power plants are permitted based on their maximum operating potential. The additional electricity would not result in the power plant exceeding operating capacity, and, thus, the applicable emissions permit.
Cultural Resources	The Proposed Action would facilitate the flow of water through existing facilities to existing users. As no construction or modification of facilities would be needed in order to complete the Proposed Action, Reclamation has determined that these activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1). See Appendix A for Reclamation's determination.
Environmental Justice	The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease nor would it disproportionately impact economically disadvantaged or minority populations.
Global Climate	Neither the Proposed Action nor the No Action Alternative would involve physical changes to the environment or construction activities that could impact global climate change. Generating power plants that produce electricity to operate electric pumps produce carbon dioxide that could potentially contribute to GHG emissions; however, the Proposed Action is water that would be delivered from existing facilities under either alternative and is therefore part of the existing conditions.
Indian Sacred Sites	The Proposed Action would not limit access to or ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.
Indian Trust Assets	The Proposed Action would not impact Indian Trust Assets as there are none in the Proposed Action area. The nearest Indian Trust Asset is a Public Domain Allotment approximately 5.11 miles from the Proposed Action area.
Land Use	The Proposed Action would not change historic land and water management practices. Exchanged water would move through existing facilities for delivery to the Districts for existing agricultural and municipal purposes. The water would not be used to place untilled or

Resource	Reason Eliminated
	new lands into production, or to convert undeveloped land to other uses.
Socioeconomics	The Proposed Action would have beneficial impacts on socioeconomic resources as the exchanged water would be used for existing purposes and would help sustain existing crops and maintain farming within the districts.

3.2 Water Resources

3.2.1 Affected Environment

Friant-Kern Canal

The Friant-Kern Canal carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, four miles west of Bakersfield. The water is used for supplemental and new irrigation supplies in Fresno, Tulare, Kings and Kern Counties. The canal has an initial capacity of 5,000 cubic feet per second that gradually decreases to 2,000 cubic feet per second at its terminus near the Kern River.

Participating Kaweah River Companies

The non-CVP water is being made available by the Modoc Ditch Company, Jennings Ditch Company, and Lakeside Ditch Company. This water is stored in Lake Kaweah and would be released to the Kaweah River from Terminus Dam and then diverted into the Friant-Kern Canal at MP 69.13 at the Wutchumna Ditch Siphon.

For both Modoc Ditch Company and Jennings Ditch Company, their authorized place of use is in Tulare County for irrigation. For the Lakeside Ditch Company, the place of use is Kings County for irrigation.

Because of current drought conditions, this water is unable to meet beneficial use within the participating Kaweah River Companies due to conveyance losses. Therefore, this non-CVP water would not have been delivered to Modoc Ditch Company, Jennings Ditch Company, or Lakeside Ditch Company.

Stone Corral Irrigation District

Stone Corral Irrigation District is located in Tulare County, approximately 30 miles southeast of Fresno and 10 miles north-northeast of Visalia. Stone Corral Irrigation District is comprised of 6,495 acres, of which 5,904 acres are irrigated. Stone Corral Irrigation District entered into a long-term renewable contract with Reclamation for 7,700 AF/year of Class 1 Friant Division CVP water in 1950. In 1991, the contract was amended to 10,000 AF/year of Class 1 water. Stone Corral Irrigation District receives a small amount of water through exchange arrangements with CV Contractors. This amount is 950 AF/year of CVP water. Stone Corral Irrigation District does not have any groundwater extraction facilities.

The Friant-Kern Canal runs approximately along the north and east boundaries of the District. Stone Corral Irrigation District obtains the CVP water from the Friant-Kern Canal at MP 57.90, 59.33, 60.90 and 62.68. The District's conveyance system is 27 miles of pipeline. Stone Corral Irrigation District serves only agricultural water. The main crops are citrus, cotton, deciduous and subtropical fruit.

Terra Bella Irrigation District

Terra Bella Irrigation District is located in Tulare County, about 75 miles southeast of Fresno and about 8 miles south of Porterville. Terra Bella Irrigation District is comprised of 13,962 acres, of which 11,165 are irrigated. In 1950, Terra Bella Irrigation District entered into a long-term contract with Reclamation for 29,000 AF/y of Class 1 water. Terra Bella Irrigation District does not have any other long-term surface water supplies. Currently, Terra Bella Irrigation District owns and operates 10 wells. There are no significant privately-owned grower or landowner wells in the district.

Terra Bella Irrigation District receives its CVP water supplies from the Friant-Kern Canal at MP 103.64, MP 102.69 and Deer Creek to a percolation pond. The District provides agricultural water, in addition to, municipal and industrial water for domestic use. The District's distribution system is 152 miles of pipeline. The main crops are nuts, deciduous fruit orchards, and citrus.

3.2.2 Environmental Consequences

No Action

If no action were taken, Stone Corral Irrigation District's non-CVP water would not be conveyed in the Friant-Kern Canal. They would have to find an alternate water supply, or use another conveyance method to deliver this non-CVP water to their customers' crops. If no alternative conveyance method could be found, the non-CVP water would remain in storage and the district would either have to find a way to exchange it for other, usable water supplies, or crops would be fallowed.

Proposed Action

The Proposed Action would allow non-CVP Kaweah River water purchased from Modoc Ditch Company, Jennings Ditch Company, and Lakeside Ditch Company to be introduced and conveyed in the Friant-Kern Canal when excess capacity is available. The total quantity of water that would be introduced and conveyed in the Friant-Kern Canal under the Proposed Action would be limited to 1,000 AF/year through February 29, 2020, less conveyance losses.

As described in Section 2.2, an operational exchange would be necessary to deliver the non-CVP water to Stone Corral Irrigation District as its turnouts are located upstream of the introduction point (MP 69.13). Under the operational exchange, the non-CVP water would be delivered to Terra Bella Irrigation District for existing agricultural use. In exchange, a like amount of Terra Bella Irrigation

District's CVP water from Millerton Lake would be delivered to Stone Corral Irrigation District for existing agricultural use. This, as well as all introductions of the non-CVP water into the Friant-Kern Canal, would be scheduled in advance with Reclamation and the Friant Water Authority. In addition, there would be no modification of the Friant-Kern Canal, and the capacity of the facility would remain the same. Therefore, there would be no impact to operation of the canal.

The Kaweah River water is already allocated for use by Modoc Ditch Company, Jennings Ditch Company, and Lakeside Ditch Company, but they are unable to use this amount of water for irrigation purposes because of high evapotranspiration losses through their conveyance facilities. Instead, pursuant to their water rights, the Companies have sold this water to Stone Corral Irrigation District for beneficial use. The Proposed Action does not represent a new diversion of the non-CVP water, or a new water right, but an alternate use for an existing supply. In addition, all participants are required to follow local, State, and Federal laws and regulations for movement of this water.

Non-CVP water introduced into the Friant-Kern Canal must meet Reclamation's then current water quality requirements prior to approval for conveyance (see Appendix B for Reclamation's existing water quality requirements and monitoring plan). If testing under the monitoring program shows that the water does not meet the standards, Stone Corral Irrigation District would not be allowed to introduce the non-CVP water into the Friant-Kern Canal until water quality concerns are addressed. The water quality monitoring program is anticipated to adequately protect the quality of water in the canal and limit degradation of other users' supplies. There would be no adverse impacts to water resources as a result of the Proposed Action.

Cumulative Impacts

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

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

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

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

3.3 Biological Resources

3.3.1 Affected Environment

The Proposed Action Area includes all areas where conditions will change as a result of the Proposed Action, and includes: the Friant-Kern Canal from MP 57.90 to the Terra Bella Irrigation District's existing points of delivery, and the CVP service areas of the Stone Corral Irrigation District and the Terra Bella Irrigation District. The Proposed Action Area begins at MP 57.90 because under the Proposed Action the Terra Bella Irrigation District's CVP water will be taken out of the Friant-Kern Canal at this point for delivery to the Stone Corral Irrigation District instead of continuing down the canal to the Terra Bella Water District, as it would under the No Action Alternative. The Proposed Action Area consists primarily of actively cultivated agricultural lands, which include row crops, vineyards, and orchards; some limited urban development is also present. Undeveloped land is rare in the Proposed Action Area, and where present consists largely of annual grasses.

Reclamation requested an official species list from the U.S. Fish and Wildlife Service (Service) via the Service's website, http://ecos.fws.gov/ipac/, on June 18, 2015 (Consultation Code: 08ESMF00-2015-SLI-0716). The species list covers the Stone Corral Irrigation District, the Terra Bella Irrigation District, and the Friant-Kern Canal from approximate MP 57.90 to the Terra Bella Irrigation District's existing turn-outs. The California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) was also queried for records of protected species near the Proposed Action Area (CNDDB 2015). The information collected above, in addition to information within Reclamation's files, was combined to determine the likelihood of protected species occurrence within the Proposed Action Area (Table 3-2).

Table 3-2 Effects Determination for Federally Protected Species with the Potential to occur in or near the Proposed Action Area

Listed Species	Status[1]	ESA Effects[2]	Basis for Effects Determination
Amphibians			
California red-legged frog (*Rana draytonii*)	T, X	NE	This species has not been observed in California's Central Valley since before 1960, and is presumed extirpated from the Proposed Action Area. The Proposed Action would not involve any ground disturbance or land conversion, so there would be No Effect to this species.
California tiger salamander, central population (*Ambystoma californiense*)	T, X	NE	This species may occur within the Proposed Action Area; however, the Proposed Action would not involve any ground disturbance or land conversion, so there would be No Effect to this species.
Birds			
California condor (*Gymnogyps californianus*)	E, X	NE	This species may fly over or forage within the Proposed Action Area. The Proposed Action would not involve any construction or land conversion, so there would be No Effect to this species.
Critical Habitat California condor (*Gymnogyps californianus*)	X	NE	Critical habitat for this species is present along the eastern edge of the Lindsay-Strathmore Irrigation District. The Proposed Action would not result in any land conversion, and would therefore have No Effect on Critical Habitat for this species.
Southwestern willow flycatcher (*Empidonax traillii extimus*)	E	NE	There are no records of this species within at least 10 miles of the Proposed Action Area, and suitable habitat is not present. The Proposed Action would not involve any construction or land conversion, so there would be No Effect to this species.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	T, PX	NE	There are no records of this species within at least 10 miles of the Proposed Action Area, and suitable habitat is not present. The Proposed Action would not involve any construction or land conversion, so there would be No Effect to this species.
Fish			
Delta smelt (*Hypomesus transpacificus*)	T	NE	The Proposed Action would not affect any waterway within this species' range; there would be No Effect to this species.
Invertebrates			
Conservancy fairy shrimp (*Branchinecta conservatio*)	E	NE	This species is not expected to occur within the Proposed Action Area due to a lack of suitable vernal pool habitat. The Proposed Action would not involve any ground disturbance or land conversion, so there would be No Effect to this species.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	T, X	NE	This species is not expected to occur within the Proposed Action Area due to a lack of suitable vernal pool habitat. The Proposed Action would not involve any ground disturbance or land conversion, so there would be No Effect to this species.

Listed Species	Status[1]	ESA Effects[2]	Basis for Effects Determination
Critical Habitat Vernal pool fairy shrimp (*Branchinecta lynchi*)	X	NE	A small portion of Critical Habitat for this species overlaps the western edge of the Stone Corral Irrigation District, but does not contain the habitat elements required by this species. The Proposed Action would have No Effect on Critical Habitat for this species.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	E, X	NE	This species is not expected to occur within the Proposed Action Area due to a lack of suitable vernal pool habitat. The Proposed Action would not involve any ground disturbance or land conversion, so there would be No Effect to this species.
Critical habitat Vernal pool tadpole shrimp (*Lepidurus packardi*)	X	NE	A small portion of Critical Habitat for this species overlaps the western edge of the Stone Corral Irrigation District, but does not contain the habitat elements required by this species. The Proposed Action would have No Effect on Critical Habitat for this species.
Mammals			
San Joaquin kit fox (*Vulpes macrotis mutica*)	E	NE	This species has been documented in the Proposed Action Area. No changes in land use, no conversion of cultivated or fallowed fields, and no construction or modification of existing facilities would occur as a result of the Proposed Action; therefore, there would be No Effect to this species.
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	E	NE	This species has not been documented in the Proposed Action Area and suitable habitat is not present. The Proposed Action would have No Effect on this species.
Plants			
Greene's tuctoria (*Tuctoria greenei*)	E	NE	The Proposed Action would not involve any ground disturbance or conversion of land. There would be No Effect to this species.
Hoover's spurge (*Chamaesyce hooveri*)	T, X	NE	The Proposed Action would not involve any ground disturbance or conversion of land. There would be No Effect to this species.
Critical Habitat Hoover's spurge (*Chamaesyce hooveri*)	X	NE	Designated Critical Habitat for this species is present along the northern and eastern edges of the Stone Corral Irrigation District. The Proposed Action would not involve any ground disturbance or conversion of land, so there would be No Effect to this species' Critical Habitat.
Keck's checker-mallow (*Sidalcea keckii*)	E, X	NE	The Proposed Action would not involve any ground disturbance or conversion of land. There would be No Effect to this species.
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	T	NE	The Proposed Action would not involve any ground disturbance or conversion of land. There would be No Effect to this species.
San Joaquin Orcutt grass (*Orcuttia inaequalis*)	T, X	NE	The Proposed Action would not involve any ground disturbance or conversion of land. There would be No Effect to this species.
Critical Habitat San Joaquin Orcutt grass	X	NE	Designated Critical Habitat for this species overlaps a very small area along the western edge of the Stone Corral Irrigation

Listed Species	Status[1]	ESA Effects[2]	Basis for Effects Determination
(*Orcuttia inaequalis*)			District. The Proposed Action would not involve any ground disturbance or conversion of land, so there would be No Effect to this species' Critical Habitat.
Springville clarkia (*Clarkia springvillensis*)	T	NE	The Proposed Action would not involve any ground disturbance or conversion of land. There would be No Effect to this species.
Reptiles			
Blunt-nosed leopard lizard (*Gambelia sila*)	E	NE	This species has not been documented in the Proposed Action Area, and is not expected to occur due to a lack of suitable habitat. The Proposed Action would not involve any construction, ground disturbance, or changes in land use, so there would be No Effect to this species.
Giant garter snake (*Thamnophis gigas*)	T	NE	This species is presumed extirpated from the Proposed Action Area. No land use changes, adverse water quality changes, or construction or modification of existing facilities would occur as a result of the Proposed Action. There would be No Effect to this species.

1 Status= Federally protected species under the Endangered Species Act (ESA), unless otherwise specified
E: Listed as Endangered
T: Listed as Threatened
PX: Proposed Critical Habitat – critical habitat proposed for a species already listed
X: Critical Habitat designated for this species
2 ESA Effects = Effect determination for Endangered Species Act Analysis
NE: No Effect from the Proposed Action to federally listed species

3.3.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not permit the non-CVP water purchased by Stone Corral Irrigation District to be introduced and conveyed in the Friant-Kern Canal to Terra Bella Irrigation District for an operational exchange. Stone Corral Irrigation District would need to find another way to convey its purchased non-CVP water, or find an alternate water supply, otherwise fallowing of croplands may be necessary. Some fallowed lands could be used temporarily by federally listed species, such as the San Joaquin kit fox; however, the fields would probably be disked regularly and would provide only low quality temporary habitat.

Proposed Action

Under the Proposed Action, Reclamation would allow the non-CVP water purchased by Stone Corral Irrigation District to be introduced and conveyed in the Friant-Kern Canal for an operational exchange with Terra Bella Irrigation District. In exchange for receiving Stone Corral Irrigation District's non-CVP water, Terra Bella Irrigation District would deliver its CVP water, from Millerton Lake, to the Stone Corral Irrigation District via the Friant-Kern Canal. The

Proposed Action Area consists largely of actively cultivated agricultural lands which provide little to no habitat value to federally listed species. The Proposed Action would not require any ground disturbing activities or construction or modification of existing facilities. The water associated with the Proposed Action would not be used to convert land that has been fallowed and untilled for three or more years, and the land use patterns of cultivated or fallowed fields that have some value to listed species or birds protected under the Migratory Bird Treaty Act would not change. Based upon the nature of the Proposed Action, and with the implementation of the provided avoidance measures, Reclamation has determined there would be No Effect to proposed or listed species or critical habitat under the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et seq.) and No Take of birds protected under the Migratory Bird Treaty Act (16 U.S.C. §703 et seq.).

Cumulative Impacts

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

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 Environmental Assessment during a 7 day public review period.

Section 5 Preparers and Reviewers

Bureau of Reclamation

Jennifer L. Lewis Natural Resources Specialist, SCCAO
Lisa Carlson, Biology Technician, SCCAO
Scott Williams, Archaeologist, MP-153
Rain L. Emerson, Supervisory Natural Resources Specialist, SCCAO – reviewer
George Bushard, Repayment Specialist, SCCAO – reviewer
David E. Hyatt, Resources Management Division Chief, SCCAO – reviewer

District

Nicholas I. Keller, Staff Engineer, Keller/Wegley Engineering

Section 6 References

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Appendix A

Cultural Resources Determination

CULTURAL RESOURCES COMPLIANCE
Division of Environmental Affairs
Cultural Resources Branch (MP-153)

MP-153 Tracking Number: 15-SCAO-170

Project Name: Stone Corral Irrigation District Warren Act Approval

NEPA Document: EA-15-031

NEPA Contact: Jennifer Lewis, Natural Resource Specialist

MP 153 Cultural Resources Reviewer: Scott Williams, Archaeologist

Date: June 17, 2015

Reclamation proposes to issue a five year Warren Act approval) to Stone Corral Irrigation District under Article 18 of their Repayment Contract. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such properties be present, pursuant to the NHPA Section 106 regulations codified at 36 CFR § 800.3(a)(1). Reclamation has no further obligations under NHPA Section 106, pursuant to 36 CFR § 800.3(a)(1).

Under the Proposed Action, up to 1,000 AF of non-CVP surface water would be released from Terminus Dam and pumped from the Upper Wutchumna Ditch on the Kaweah River for annual introduction into the Friant Kern Canal. As Stone Corral Irrigation District is located upstream of the introduction point, an operational exchange with Terra Bella Irrigation District (located downstream of the introduction point) is also proposed. Under the operational exchange, Stone Corral Irrigation District would take delivery of Terra Bella Irrigation District's CVP water from Millerton Lake at MP 57.90, 59.33, 60.90 and 62.68, in lieu of the non-CVP surface water. In exchange, Terra Bella Irrigation District would take Stone Corral Irrigation District's purchased non-CVP surface water from their existing turnouts located downstream of the point of introduction. No new construction or modification of existing facilities may occur in order to complete the Proposed Action.

After reviewing documentation provided within EA-15-031, Reclamation has concluded this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places. This document serves as notification that Section 106 compliance has been completed for this undertaking. Please note that if project activities subsequently change, additional NHPA Section 106 review, including further consultation with the SHPO, may be required.

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

Appendix B

Reclamation's Water Quality Requirements and Monitoring Plan

RECLAMATION

Managing Water in the West

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

Water Quality Monitoring Requirements

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

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

March 7, 2008

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

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

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

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

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

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

A. Types of Non-Project Water

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

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

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

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

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

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

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

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

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

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

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

B. Authorization

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

C. General Requirements for Discharge of Non-Project Water

1. Contract Requirements

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

2. Facility Licensing

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

3. Prohibition When the Canal is Empty

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

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

1. General Discharge Approval Requirements

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

2. Water Quality Sampling and Analyses

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

3. Water Quality Reporting Requirements

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

4. Type B Water Quality Monitoring

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

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

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

E. Control of Water Quality in the Friant Division

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

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

F. Baseline Water Quality Analysis

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

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

G. Water Quality Data Review and Management

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

Definitions

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

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

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

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

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

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

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

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

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

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

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

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

Revised: 08/16/2007 SCC-107

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

Table 2a. Water Quality Constituents

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

Table 2a. Water Quality Constituents

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

Table 2a. Water Quality Constituents

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

Table 2a. Water Quality Constituents

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

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

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

Table 2b. Unregulated Chemicals (CCR § 64450)

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

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

Notes for Tables 2a and 2b

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

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

RECLAMATION
Managing Water in the West

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

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

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

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