

RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Westlands Water District – Warren Act Contract for Conveyance of Kings River Flood Flows in the San Luis Canal

EA-11-002



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

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Mission Statements

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

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

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Appendix A – Water Quality Reports

List of Acronyms and Abbreviations

AF	acre-feet
AF/y	acre-feet per year
APE	area of potential effects
cfs	cubic-feet per second
CNDDDB	California Natural Diversity Database
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DWR	Department of Water Resources
EA	environmental assessment
ESA	Endangered Species Act
FWCA	Fish and Wildlife Coordination Act
GHG	green house gases
ITA	Indian Trust Assets
KRCD	Kings River Conservation District
KRWA	Kings River Water Association
MBTA	Migratory Bird Treaty Act
M&I	municipal and industrial
MP	milepost
National Register	Nation Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
Reclamation	Bureau of Reclamation
SJR	San Joaquin River
SLC	San Luis Canal
SWP	State Water Project
USFWS	U.S. Fish and Wildlife Service
WWD	Westlands Water District

Section 1 Purpose and Need for Action

1.1 Background

The Kings River Water Association (KRWA) consists of 28 member units and is governed by a five-member Executive Committee headed by the Kings River's sixth Watermaster. All KRWA member units are public districts or canal companies with rights to provide Kings River water for beneficial irrigation use on nearly 20,000 San Joaquin Valley farms in portions of Fresno, Kings, and Tulare counties. KRWA oversees Kings River entitlements and deliveries, and protects water quality while enhancing the environment. KRWA is one of two regional agencies that oversees the river, the other is the Kings River Conservation District (KRCD), which is a public agency that deals with flood control, power, on-farm water management, and groundwater development. KRCD has no water entitlement or supply (KRWA Website 2011).

Mendota Dam is located at the confluence of the San Joaquin River (SJR) and Fresno Slough. Fresno Slough connects the Kings River to the SJR and delivers water to the south from Mendota Pool during the irrigation season. Mendota Pool is a small reservoir created by Mendota Dam, which has a capacity of about 3,000 acre-feet (AF) and a surface area of approximately 1,200 acres. Depending on hydrologic conditions, seasonal flood flows from the Kings River could reach Mendota Pool via Fresno Slough. In order to make beneficial use of these flood flows, the KRWA has historically entered into agreements with water users having access to the Mendota Pool to divert the Kings River flood flows.

Westlands Water District (WWD) currently has an agreement with the KRWA to divert Kings River flood flows into their distribution system – more specifically Laterals 6-1 and 7-1 (Figure 1). The lands that could be serviced by Laterals 6-1 and 7-1 have been retired and since there are no other in-district facilities in place that would allow the district to apply the flood flows elsewhere, WWD has requested Bureau of Reclamation (Reclamation) approval to convey the Kings River flood flows in the San Luis Canal (SLC) via a Warren Act contract. WWD would then be able to divert this non-Central Valley Project water through its turnouts on the SLC downstream of the introductory point. The SLC is a feature of Reclamation's Central Valley Project (CVP).

1.2 Purpose and Need

WWD needs a means to convey the purchased Kings River flood flows into their distribution system in order to provide supplemental surface water to agricultural lands within their service area boundary.

1.3 Scope

In accordance with Section 102 of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321, et seq.), as amended, this Environmental Assessment (EA) has been prepared to examine the potential direct, indirect, and cumulative impacts to the affected environment associated with the Proposed Action and No Action Alternative. Up to 50,000 AF per year

(AF/y) of WWD's purchased Kings River flood flows would be allowed to be conveyed through the SLC. The temporal scope of this EA analysis covers up to five years, from 2012 through 2016.

1.4 Reclamation's Legal and Statutory Authorities and Jurisdiction Relevant to the Proposed Federal Action

Several Federal laws, permits, licenses and policy requirements have directed, limited or guided the NEPA analysis and decision-making process of this EA and include the following as amended, updated, and/or superseded:

- The Warren Act (Act as of February, 21, 1911, CH. 141, {36 STAT. 925}) authorizes Reclamation to negotiate agreements to store or convey non-CVP water when excess capacity is available in Federal facilities.
- Reclamation States Emergency Drought Relief Act – Section 102 of the Reclamation States Emergency Drought Relief Act of 1991 provides for use of Federal facilities and contracts for temporary water supplies, storage and conveyance of non-CVP water inside and outside project service areas for municipal and industrial (M&I), fish and wildlife and agricultural uses. Section 305, enacted March 5, 1992 (106 Stat. 59), authorizes Reclamation to utilize excess capacity to convey non-CVP water.
- Contracts for Additional Storage and Delivery of Water – The Central Valley Project Improvement Act (CVPIA) of 1992, Title 34 (of Public Law 102-575), Section 3408, Additional Authorities (c) authorizes the Secretary of the Interior to enter into contracts pursuant to Reclamation law and this title with any Federal agency, California water user or water agency, State agency, or private nonprofit organization for the exchange, impoundment, storage, carriage, and delivery of CVP and non-CVP water for domestic, municipal, industrial, fish and wildlife, and any other beneficial purpose, except that nothing in this subsection shall be deemed to supersede the provisions of Section 103 of Public Law 99-546 (100 Stat. 3051).
- Water Quality Standards – Reclamation requires that the operation and maintenance of CVP facilities shall be performed in such a manner as is practical to maintain the quality of raw water at the highest level that is reasonably attainable. Water quality and monitoring requirements are established annually by Reclamation and are instituted to protect water quality in federal facilities by ensuring that imported non-CVP water does not impair existing uses or negatively impact existing water quality conditions. These standards are updated periodically. The water quality standards are the maximum concentration of certain contaminants that may occur in each source of non-CVP water. The water quality standards for non-CVP water to be stored and conveyed in federal facilities are currently those set out in Title 22 of the California Code of Regulations¹.

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.

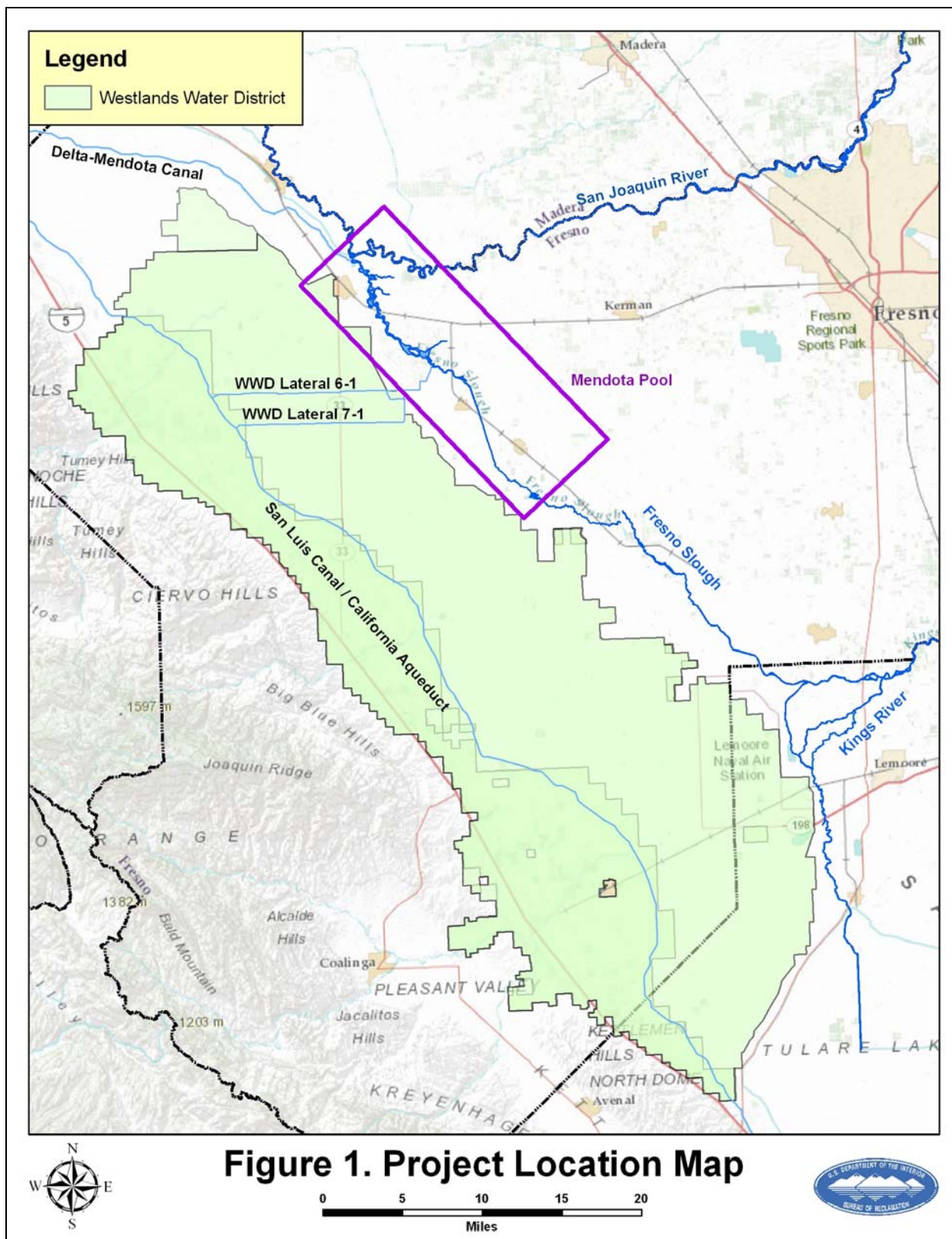
1.5 Potential Issues

Potentially affected resources and cumulative impacts in the project vicinity include:

- water resources
- land use
- biological resources
- cultural resources
- Indian Trust Assets (ITA)
- Indian sacred sites
- socioeconomic resources
- environmental justice
- global climate

The following was eliminated from detailed environmental analysis due to the reasons below:

- Air Quality
 - Comprehensive evaluation of air quality issues were eliminated from detailed environmental analysis because there would be no construction or ground disturbing activities that could lead to the introduction of fugitive dust and exhaust emissions into the Proposed Action area's air district. Water movement involved with the Proposed Action would be gravity fed through the conveyance facilities and not require the use of any gas and/or diesel pumps that could release emissions to impact air quality.



Section 2 Alternatives Including the Proposed Action

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

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not execute a Warren Act contract with WWD that would allow the district to convey its non-CVP supplies through the SLC. WWD could construct new facilities to convey their non-CVP supplies within their district service area; however, the new facilities would duplicate a portion of CVP facilities and could have more environmental impacts.

2.2 Proposed Action

Reclamation proposes to execute a Warren Act contract with WWD for up to five years, which would allow the district to convey non-CVP water in the SLC when access capacity exists. More specifically, WWD would be allowed to convey up to 50,000 AF of Kings River flood flows in the SLC each calendar year from 2012 through 2016.

When Kings River floodwaters reach the Fresno Slough/Mendota Pool via the North Fork of the Kings River/James Bypass, WWD is able to pump those flood flows for its use pursuant to an existing purchase agreement with the KRWA. WWD's pumping plants 6-1 and 7-1 are capable of pumping water at a combined rate of approximately 130 cubic-feet per second (cfs) from the Fresno Slough/Mendota Pool to the SLC (refer to Figure 2). Once the non-CVP water is introduced into the SLC at Milepost (MP) 113.00 (Lateral 6-1) and/or MP 115.43 (Lateral 7-1), the water would be diverted into existing WWD turnouts (63 total) plus the Pleasant Valley Canal system and temporary diversions.

The Kings River flood flows would only be introduced into the SLC when: 1) there is excess capacity, as determined by Reclamation in coordination with the California Department of Water Resources [DWR] and 2) it meets the applicable water quality standards (see Appendix B for water quality report). WWD would monitor water quality on a monthly basis (historically, DWR required the water quality meet Title 22 standards initially, followed by monthly monitoring of constituents of concern). The non-CVP water would be introduced into the SLC through existing turnouts without modification to the SLC.

The non-CVP water would be used for irrigation purposes on established lands within WWD's service area boundary. No native or untilled land (fallow for three years or more) may be cultivated with the water involved with these actions.

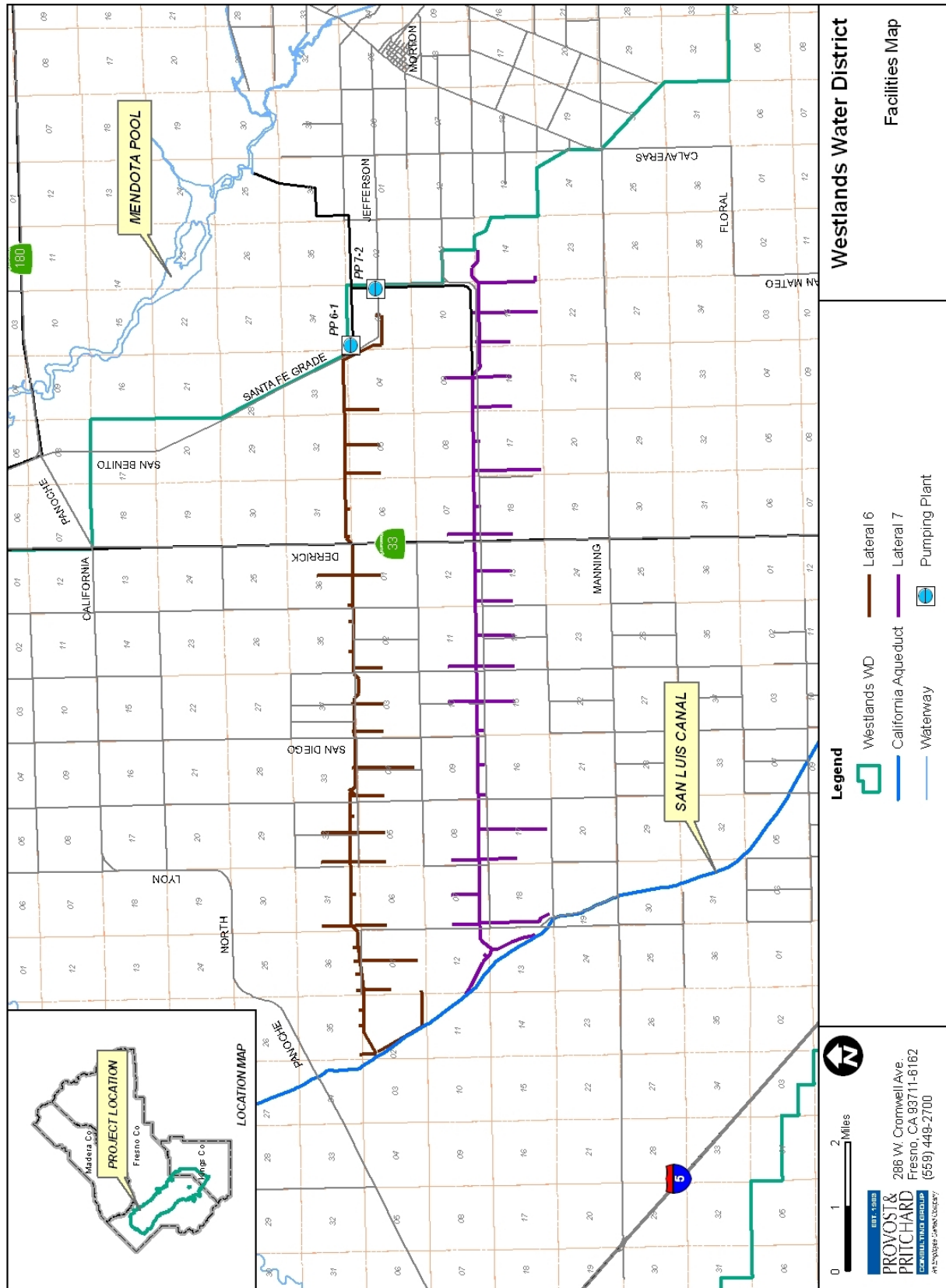


Figure 2. WWD Lateral 6-1 and 7-1

Section 3 Affected Environment and Environmental Consequences

3.1 Water Resources

3.1.1 Affected Environment

Joint-Use Facility – San Luis Canal/California Aqueduct

The SLC is the Federally-built and operated section of the California Aqueduct and extends 102.5 miles from O'Neill Forebay, near Los Banos, in a southeasterly direction to a point west of Kettleman City. The SLC is a part of the CVP, while the California Aqueduct is a part of the State Water Project (operated by the DWR). The principle purpose of the CVP portion of the facility is to furnish approximately 1.25 million AF of water as a supplemental irrigation supply to roughly 600,000 acres located in the western portion of Fresno, Kings, and Merced counties. Beyond Kettleman City, the State Water Project delivers water to southern California mainly for M&I purposes. This is almost half of the water supply for the Los Angeles region. The SLC/California Aqueduct is a concrete-lined canal with a capacity ranging from 8,350 to 13,100 cfs.

Kings River

The Kings River is about 125 miles long and drains an area of the high western Sierra Nevada (where the river originates) and the Central Valley. The Kings River is impounded in the foothills at Pine Flat Dam and then flows into the Central Valley where it is diverted for agricultural use. A large alluvial fan has formed where the river's gradient decreases in the Central Valley so the river divides into distributaries. Southern distributaries enter the endorheic basin surrounding what is now the normally dry Tulare Lake (Tulare Lake was formerly the largest freshwater lake in western North America, but heavy agriculture and urban diversions have left it dry). The northern distributaries join the SJR at Mendota Pool via the Fresno Slough when in flood.

San Joaquin River

At approximately 365 miles long, the SJR originates in the high Sierra Nevada, flows through the Central Valley, and eventually drains into the Sacramento-San Joaquin River Delta (Delta). The SJR generally flows south from the Sierra Nevada into the foothills, passing through four hydroelectric dams, and emerges from the foothills to form Millerton Lake as a result of Friant Dam. The Madera and Friant-Kern canals divert water from Millerton Lake at Friant Dam to supply agricultural, M&I, and wildlife refuge water as part of the CVP. Below Friant Dam, the SJR flows west-southwest into the Central Valley. At Mendota Pool, the SJR swings northwest, passing through many channels, some natural and some man-made, where it is joined by several tributaries on its way to the Delta.

Mendota Pool

The Mendota Pool is a regulating reservoir for more than one million AF of CVP water pumped from the Delta and delivered by the CVP. The Mendota Pool is impounded by Mendota Dam, which is owned and operated by Central California Irrigation District. Currently, Mendota Pool is sustained by the inflow from the Delta-Mendota Canal, which typically conveys 2,500 to

3,000 cfs to the Mendota Pool during the irrigation season. A lesser amount of water from the SJR enters Mendota Pool, however; more enters during periods of flood flow from the SJR and Kings River. Mendota Pool extends over 5 miles up the SJR channel and over 10 miles into Fresno Slough and varies from less than one hundred to several hundred feet wide. Water depth varies but averages about 4 feet due to siltation. Mendota Pool contains approximately 8,000 AF of water and has a surface area of approximately 2,000 acres when full. It is the largest body of ponded water on the SJV basin floor.

Westlands Water District

WWD encompasses more than 600,000 acres of farmland located in western Fresno and Kings counties and serves approximately 600 family-owned farms that average 900 acres in size. WWD is a long-term CVP contractor with a contract for 1,150,000 AF. WWD, located on the west side of the San Joaquin Valley and is a part of the San Luis Unit of the CVP, which administered by Reclamation. The San Luis Unit receives water from the CVP through the Delta-Mendota Canal and the SLC. Water is delivered directly to land in the San Luis Unit from the Delta or is stored temporarily in San Luis Reservoir for later delivery. Once diverted from the CVP facilities, water is delivered to farmers through 1,034 miles of underground pipe and over 3,300 metered delivery outlets.

For the purposes of the effect analysis, baseline conditions are described as the existing environment, and the existing environment is defined as the conditions during the past five years. The five-year average allocation of CVP water supplies delivered to WWD and other south-of-Delta contractors is described in Table 1. It lists deliveries of CVP water on a yearly basis for agriculture purposes from 2006 to 2010. The five-year average is 49 percent of contract amounts for agriculture. The annual contract amounts for the WWD is 1,150,000 AF, thus the baseline supply is 563,500 AF.

Table 1. Five-Year CVP Allocation Percentages

Year	% Allocation	CVP Contract, AF
2006	100	1,150,000
2007	50	575,000
2008	40	460,000
2009	10	115,000
2010	45	517,500
5-year Average	49	563,500

3.1.2 Environmental Consequences

3.1.2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not approve the Warren Act contract to allow conveyance of Kings River flood flows in the SLC and WWD's surface water supply would not be supplemented with these waters. Holders of water rights would either accept released floodwater that they have a right to or refuse to pump such floodwater. Similar agreements between KRW and other water districts could still divert the Kings River flood flows since those actions do not require Reclamation approval. The Kings River flood flows would be released from Mendota Pool and join the SJR, which could potentially also be in flood conditions. The SLC/California Aqueduct would not be affected.

3.1.2.2 Proposed Action

The Proposed Action would allow non-CVP water to be conveyed in the Federal portion of the SLC when excess capacity is available, which would be coordinated with DWR and Reclamation in order to not interfere with the normal operations of the SWP and CVP, respectively. As noted in Section 2.2, the quality of the Kings River flood flows would be monitored to determine changes in the quality of water in the SLC. Reclamation data for the San Joaquin River /KRCd data for the Kings River indicate flood flows may be of better quality as compared to the background SLC water quality. In addition, the Proposed Action would not require any modification or new construction to the SLC.

WWD would be able to supplement its surface water supplies in order to supply irrigation water to landowners within its service area. The Proposed Action would not cause WWD to receive more or less water from the Delta under the CVP contract (baseline supply of 563,500 AF).

The Proposed Action would not adversely impact Mendota Pool and/or water users of the pool since WWD would only divert the Kings River flood flows from Mendota Pool when such water is available. Water stored in Mendota Pool from the CVP and/or SJR would not be diverted by WWD under the Proposed Action.

The Kings River would not be adversely impacted, since the waters involved with the Proposed Action are flood flows. King River water rights holders would have first opportunity to divert the flood flows, in addition to other water districts with an agreement with the KWRA for diversion of the flood flows. In addition, WWD has an agreement with the KWRA, which along with the KRCd, operates and/or manages the Kings River for beneficial purposes.

As a result, the Proposed Action would not have adverse impacts to water resources.

3.2 Land Use

3.2.1 Affected Environment

Agricultural production is the predominant land use in WWD. More than 60 different crops are grown commercially in WWD with the potential for more. The primary crops grown include tomatoes, garlic, almonds, melons, lettuce, grains, and safflower. In order to maintain economic viability, many farming operations shifted to permanent crops in response to water supply reductions that occurred in the early 1990s with drought and regulatory reductions. The resulting increases to average water costs began the necessity for a large shift in cropping patterns in WWD, with more land being planted in permanent crops. The acreage trend is toward vegetable and permanent crops such as fruit and nut trees, as cotton and grain acreage have decreased. Since 1993, the number of acres planted in trees and vines has more than doubled in WWD while the number of acres planted in cotton has declined.

3.2.2 Environmental Consequences

3.2.2.1 No Action

Under the No Action Alternative, WWD would not be able to supplement its surface water supplies with Kings River flood flows. Given foreseeable low CVP allocations, it would not be uncommon for WWD to fallow up to 100,000- 150,000 acres (some completely fallowed and

some not double cropped where only winter crops are planned). In addition, drainage issues have caused 100,000 acres to be retired in the last few years.

3.2.2.2 Proposed Action

The Proposed Action would convey non-CVP water to WWD, which would be used to supplement irrigation water to sustain existing agricultural lands and minimize the potential for fallowing of these agricultural lands. No new lands would be cultivated with this water. The Proposed Action would not require any new construction to convey the Kings River flood flows to the SLC. As a result, the Proposed Action would not have adverse impacts to land use.

3.3 Biological Resources

3.3.1 Affected Environment

By the mid-1940s, most of the valley's native habitat had been altered by man, and as a result, was severely degraded or destroyed. It has been estimated that more than 85 percent of the valley's wetlands had been lost by 1939. When the CVP began operations, over 30% of all natural habitats in the Central Valley and surrounding foothills had been converted to urban and agricultural land use. Prior to widespread agriculture, land within the Proposed Action area provided habitat for a variety of plants and animals. With the advent of irrigated agriculture and urban development over the last 100 years, many species have become threatened and endangered because of habitat loss. Currently of the estimated 5.6 million acres of valley grasslands and San Joaquin saltbrush scrub less than 10 percent remains (Reclamation 2011). Much of the remaining habitat consists of isolated fragments supporting small, highly vulnerable populations. The project area is now dominated by agricultural habitat that includes field crops, orchards, and pasture. The vegetation in the project area is primarily agricultural crops and areas of weedy non-native annual and biennial plants.

The following list (Table 2) was obtained on February 28, 2011, by accessing the U.S. Fish and Wildlife Service (USFWS) Database (Document Number 110228020514): http://www.fws.gov/sacramento/es/spp_list.htm. The list is for the following U.S. Geological Survey 7.5 minute quadrangles, which overlapped the district: Avenal, Broadview Farms, Burrel, Calflax, Cantua Creek, Chaney Ranch, Chounet Ranch, Coalinga, Coit Ranch, Domengine Ranch, Firebaugh, Five Points, Gujarral Hills, Hammonds Ranch, Harris Ranch, Helm, Huron, Kettleman City, La Cima, Lemoore, Levis, Lillis Ranch, Monocline Ridge, San Joaquin, Stratford, Tranquillity, Tres Picos Farms, Tumey Hills, Vanguard, Westhaven, and Westside. Reclamation also queried the California Natural Diversity Database (CNDDB), and combined the USFWS and CNDDB information with information in Reclamation's files to create the table.

Table 2. Threatened and Endangered Species List

Special status species that could potentially occur within in affected area.			
<u>Species</u>	<u>Status¹</u>	<u>Effects²</u>	<u>Summary basis for effects determination</u>
Amphibians			
California red-legged frog (<i>Rana aurora draytonii</i>)	FT	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
California tiger salamander (<i>Ambystoma californiense</i>)	FT	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Birds			

California condor (<i>Gymnogyps californianus</i>)	FE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Swainson's hawk (<i>Buteo swainsoni</i>)	ST	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	SE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Fish			
Central Valley steelhead (<i>Oncorhynchus mykiss</i>)	FT	NE	No effect on natural stream systems.
delta smelt (<i>Hypomesus transpacificus</i>)	FT	NE	No changes in Delta pumping.
Invertebrates			
valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Mammals			
Fresno kangaroo rat (<i>Dipodomys nitratoideus exilis</i>)	FE, X, SE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
giant kangaroo rat (<i>Dipodomys ingens</i>)	FE, SE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Nelson's antelope squirrel (<i>Ammospermophilus nelsoni</i>)	ST	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, ST	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Tipton kangaroo rat (<i>Dipodomys nitratoideus nitratoideus</i>)	FE, SE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Plants			
California jewelflower (<i>Caulanthus californicus</i>)	FE, SE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
palmate-bracted bird's-beak (<i>Cordylanthus palmatus</i>)	FE, SE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
San Joaquin woolly-threads (<i>Monolopia congdonii</i>)	FE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Reptiles			
blunt-nosed leopard lizard (<i>Gambelia sila</i>)	FE, SE	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
giant garter snake (<i>Thamnophis gigas</i>)	FT, ST	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.

¹Listed as Federally (F) or State (S) Endangered (E), Threatened (T), or Critical Habitat (X).

²No Effect determination.

3.3.2 Environmental Consequences

3.3.2.1 No Action

Under the No Action Alternative, this non-CVP water would not be conveyed in CVP facilities. There would be no impacts to biological resources since conditions would remain the same as existing conditions.

3.3.2.2 Proposed Action

The Proposed Action also would not change the land use patterns of the cultivated or fallowed fields that may have some value to listed species and/or birds protected by the Migratory Bird Treaty Act (MBTA). The Warren Act contract related water would not affect streams containing listed fish species.

The determination of potential affects from the Proposed Action based includes, but is not limited to, the following factors:

- The existing and ongoing baseline operations would continue as currently operated.
- The area is dominated by agricultural processes and includes field crops, orchards, and pasture.
- The Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years
- No native lands would be converted without consultation with USFWS.
- The Proposed Action also would not change the land use patterns of the cultivated or fallowed fields that may have some value to listed species or birds protected by the MBTA.
- The Warren Act contract related water would not affect streams containing listed fish species.
- The existing requirements for water quality would continue to be required.
- The short duration of the water availability for the type of action.

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

3.4 Cultural Resources

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 Code of Federal Regulations (CFR) Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking would have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking will have on historic properties, and consult with the State Historic Preservation

Office (SHPO), to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

3.4.1 Affected Environment

The San Joaquin Valley is rich in historical and prehistoric cultural resources. Cultural resources in this area are generally prehistoric in nature and include remnants of native human populations that existed before European settlement. Prior to the 18th Century, many Native American tribes inhabited the Central Valley. It is possible that many cultural resources lie undiscovered across the valley. The San Joaquin Valley supported extensive populations of Native Americans, principally the Northern Valley Yokuts, in the prehistoric period. Cultural studies in the San Joaquin Valley have been limited. The conversion of land and intensive farming practices over the last century has probably disturbed many Native American cultural sites.

Resources within the scope of this project include historic features of the built environment primarily those of the CVP and SWP. Components of the CVP have been determined eligible for inclusion in the National Register and have been prepared for inclusion in the National Register through a multiple property nomination. The CVP multiple property nomination is currently being reviewed for submission to the Keeper of the National Register for inclusion in the National Register.

3.4.2 Environmental Consequences

3.4.2.1 No Action

Under the No Action Alternative, there would be no Federal undertaking as described in the NHPA at Section 301(7). As a result, Reclamation would not be obligated to implement Section 106 of that NHPA and its implementing regulations at 36 CFR Part 800. Because there is no undertaking, impacts to cultural resources would not be evaluated through the Section 106 process. All operations would remain the same, resulting in no impacts to cultural resources.

The No Action Alternative would neither change nor modify the SLC or other CVP facilities and has no potential to affect historic properties pursuant to 36 CFR Part 800.3(a)(1).

3.4.2.2 Proposed Action

The Proposed Action would facilitate the flow of water through existing facilities to existing users. No new construction or ground disturbing activities would occur as part of the Proposed Action. The pumping, conveyance, and storage of water would be confined to existing pumps and CVP facilities. These activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1). There would be no impacts to cultural resources as a result of implementing the Proposed Action.

3.5 Indian Trust Assets

ITA are legal interests in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United

States on behalf of federally recognized Indian tribes. “Assets” are anything owned that holds monetary value. “Legal interests” means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. ITA cannot be sold, leased or otherwise alienated without the United States’ approval. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something; which may include lands, minerals and natural resources in addition to hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITA may be located off trust land.

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

3.5.1 Affected Environment

3.5.2 Environmental Consequences

3.5.2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not approve the exchange and conditions would remain the same as existing conditions; therefore, there would be no impacts to ITA.

3.5.2.2 Proposed Action

There are no tribes possessing legal property interests held in trust by the U.S. in the water involved with the Proposed Action, nor is there such a property interest in the lands designated to receive the non-CVP water. The Proposed Action has no potential to effect ITA.

3.6 Indian Sacred Sites

Executive Order 13007 provides that in managing Federal lands, each Federal agency with statutory or administrative responsibility for management of Federal lands will, to the extent practicable and as permitted by law, accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoid adversely affecting the physical integrity of such sacred sites.

3.6.1 Affected Environment

3.6.2 Environmental Consequences

3.6.2.1 No Action

Under the No Action Alternative, there would be no impacts to Indian sacred sites since conditions would remain the same as existing conditions.

3.6.2.2 Proposed Action

The Proposed Action involves conveying water within existing facilities to established agricultural lands. No construction or modifications of facilities would be required. As a result, the Proposed Action is not expected to affect Indian sacred sites and/or prohibit access to and ceremonial use of this resource.

3.7 Socioeconomic Resources

3.7.1 Affected Environment

The agricultural industry significantly contributes to the overall economic stability of the San Joaquin Valley. The CVP allocations each year allow farmers to plan for the types of crops to grow and to secure loans to purchase supplies. Depending upon the variable hydrological and economical conditions, water transfers and exchanges could be prompted. The economic variances may include fluctuating agricultural prices, insect infestation, changing hydrologic conditions, increased fuel and power costs.

3.7.2 Environmental Consequences

3.7.2.1 No Action Alternative

Under the No Action Alternative, the non-CVP water would not be available to WWD to supplement its surface CVP water supplies. Depending on hydrological conditions, this could lead to lands being fallowed and a reduction in demand for local labor and farms supplies. The No Action Alternative could lead to temporary adverse impacts to socioeconomic resources.

3.7.2.2 Proposed Action

Under the Proposed Action, the non-CVP water would be used by WWD to supplement its surface CVP water supplies. The additional supplies would help maintain agricultural lands, leading to less-likely potential of land fallowing and continued existing demand for farm labor and supplies. The Proposed Action would have no adverse impact on socioeconomic resources.

3.8 Environmental Justice

3.8.1 Affected Environment

Executive Order 12898, dated February 11, 1994, requires Federal agencies to ensure that their actions do not disproportionately impact minority and disadvantaged populations. The population of some small communities typically increases during late summer harvest. The market for seasonal workers on local farms draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America.

3.8.2 Environmental Consequences

3.8.2.1 No Action

Similar to Section 3.7.2.1, lands could be fallowed leading to reduced demands for farm labor. The No Action Alternative could lead to temporary adverse impacts to minority and disadvantaged populations whom rely on farm job opportunities.

3.8.2.2 Proposed Action

The availability of the non-CVP water to WWD would help maintain agricultural production and local employment; therefore, the Proposed Action would not cause any harm to minority or disadvantaged populations.

3.9 Global Climate

Climate change refers to significant change in measures of climate that last for decades or longer. Burning of fossil fuels is considered a major contributor to perceived global climate change. Carbon dioxide, which is produced when fossil fuels are burned, is a greenhouse gas (GHG) that effectively traps heat in the lower atmosphere. Some carbon dioxide is liberated naturally, but this may be augmented greatly through human activities. Increases in air temperature may lead to changes in precipitation patterns, runoff timing and volume, sea level rise, and changes in the amount of irrigation water needed due to modified evapotranspiration rates. These changes may lead to impacts to California's water resources and project operations. While there is general consensus in their trend, the magnitudes and onset-timing of impacts are uncertain and are scenario-dependent (Anderson et al. 2008).

3.9.1 Affected Environment

Climate change is an environmental trend and for the purpose of this EA refers to changes in global or regional climate over time and is expected to have some effect on the snow pack of the Sierra Nevada and the run-off regime. Current data are not yet clear on the hydrologic changes and how they would affect the San Luis Unit of the CVP as well as other federal, state and local river operations within the action area. Water allocations are made dependent on hydrologic conditions and environmental requirements. Since operations and allocations are flexible, any changes in hydrologic conditions due to climate change would be within the respective operations' flexibility and therefore water resource changes due to climate change would be the same with or without the Proposed Action.

3.9.2 Environmental Consequences

3.9.2.1 No Action Alternative

Under the No Action Alternative, there would be no affect on the composition of the atmosphere and therefore would have no direct or indirect effects to the global climate.

3.9.2.2 Proposed Action

The Proposed Action would involve no physical changes to the environment, no construction activities, and therefore, would not contribute global climate change. It is possible that climate change could affect the Proposed Action rather than vice versa; however, it would be difficult measure/define the impact(s), if any. As noted in Section 3.9.1, operations of the CVP are flexible to coincide with varying hydrologic conditions. Therefore, effects related to changes in the global climate would not result in adverse impacts to the Proposed Action.

3.10 Cumulative Impacts

The Proposed Action is temporary in nature (five years) and would not result in any construction or modifications of any facilities. WWD would only be allowed to introduce the Kings River flood flows into the SLC when capacity exists and when there are flood flows from the Kings River available at Mendota Pool. The quality of the Kings River flood flows is of better quality than that water currently in the SLC and monitoring would continue to protect the water quality of the SLC. Water resources within the affected environment would not be adversely impacted

by the Proposed Action when taking into consideration other past, existing, and foreseeable similar actions.

The Proposed Action would have no impacts on biological resources, cultural resources, ITA, Indian sacred sites, and the global climate; therefore, would not contribute to cumulative adverse impacts on these resource areas. Socioeconomic resources and conditions related to environmental justice would be short-term and within the historical variations; therefore, would not contribute to cumulative adverse impacts.

The Proposed Action would help maintain existing agricultural lands and would not contribute to adverse changes to land use caused by other actions.

The Proposed Action, when added to other past, existing, and foreseeable similar actions, does not contribute to adverse increases or decreases in environmental conditions. Overall, there would be no cumulative adverse impacts caused by the Proposed Action.

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Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation intends to provide the public with an opportunity to comment on the Draft Finding of No Significant Impact and Draft EA during a 30-day comment period.

4.2 Fish and Wildlife Coordination Act (16 USC § 661 et seq.)

The Fish and Wildlife Coordination Act (FWCA) requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. The Proposed Action does not involve federal permitting for construction and/or water development projects; therefore, the FWCA does not apply.

4.3 Endangered Species Act (16 USC § 1531 et seq.)

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

The Proposed Action would not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species. In addition, the short duration of the water availability, the requirement that no native lands be converted without consultation with the USFWS, and the stringent requirements for transfers under applicable laws would prevent any adverse impact to any federally listed species or any critical habitat. Therefore, consultation with the USFWS is not required.

4.4 Migratory Bird Treaty Act (16 USC § 703 et seq.)

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

The Proposed Action would have no effect on birds protected by the MBTA, based on the lack of construction and the implementation of stringent water quality standards.

4.5 Executive Order 11988 – Floodplain Management and Executive Order 11990 - Protection of Wetlands

Executive Order 11988 requires Federal agencies to prepare floodplain assessments for actions located within or affecting flood plains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The Proposed Action would not adversely affect floodplains or wetlands.

4.6 Clean Water Act (16 USC § 703 et seq.)

Section 401

Section 401 of the Clean Water Act [CWA] (33 USC § 1311) prohibits the discharge of any pollutants into navigable waters, except as allowed by permit issued under sections 402 and 404 of the CWA (33 USC § 1342 and 1344). If new structures (e.g., treatment plants) are proposed, that would discharge effluent into navigable waters, relevant permits under the CWA would be required for the project applicant(s). Section 401 requires any applicant for an individual United States Army Corps of Engineers dredge and fill discharge permit to first obtain certification from the state that the activity associated with dredging or filling will comply with applicable state effluent and water quality standards. This certification must be approved or waived prior to the issuance of a permit for dredging and filling.

Section 404

Section 404 of the CWA authorizes the United States Army Corps of Engineers to issue permits to regulate the discharge of “dredged or fill materials into waters of the United States” (33 USC § 1344).

The Proposed Action does not involve discharge of fill into and/or dredging of waters of the U.S. or wetlands; hence, no permit would be required.

4.7 Clean Air Act (42 USC § 7506 (C))

Section 176 of the CAA requires that any entity of the Federal government that engages in, supports, or in any way provided financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable SIP required under Section 110 (a) of the CAA (42 USC 7401 (a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements will, in fact conform to the applicable SIP before the action is taken.

There would be no impacts to air quality; therefore, a conformity analysis is not required.

Section 5 List of Preparers and Reviewers

Michael Inthavong, Natural Resources Specialist, SCCAO
Scott Williams, Archaeologist, MP-153
Patricia Rivera, Indian Trust Assets, MP-400
Dave Hyatt, Supervisory Wildlife Biologist, SCCAO
George Bushard, Repayment Specialist, SCCAO – Reviewer
Chris Eacock, Natural Resources Specialist, SCCA) - Reviewer
Valerie Curley, Chief Contracts Administration Branch, SCCAO – Reviewer

Section 6 References

Anderson, J, F Chung, M Anderson, L Brekke, D Easton, M Ejetal, R Peterson, and R Snyder.
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Appendix A – Water Quality Reports

Kings River Flood Flows – 06/2006

BSK ANALYTICAL LABORATORIES

Mark Rhodes
Westlands Water District
PO Box 6056
Fresno, CA 93703

BSK Submission #: 2006060055

BSK Sample ID #: 727295

Project ID:

Project Desc: 7-2 Pumping Plant Inlet

Submission Comments:

Sample Type: Liquid

Sample Description: Fresh Water Mendota Pool Side

Sample Comments:

Certificate of Analysis

NELAP Certificate #04227CA

ELAP Certificate #1180



Report Issue Date: 06/27/2006

Date Sampled: 06/01/2006

Time Sampled: 1345

Date Received: 06/01/2006

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
(NO3-N+NO2-N) by Calculation	EPA 300.0	ND	mg/L	0.05	1	0.05	06/20/06	06/20/06
Aggressive Index (Corrosivity)		11	-		1	N/A	06/16/06	06/16/06
Alkalinity (as CaCO3)	SM 2320 B	40	mg/L	3	1	3	06/02/06	06/02/06
Aluminum (Al)	EPA 200.7	0.86	mg/L	0.05	1	0.05	06/03/06	06/07/06
Antimony (Sb)	EPA 200.8	ND	µg/L	2	1	2	06/05/06	06/12/06
Arsenic (As)	EPA 200.8	2.7	µg/L	2	1	2	06/05/06	06/12/06
Barium (Ba)	EPA 200.7	ND	mg/L	0.05	1	0.05	06/05/06	06/07/06
Beryllium (Be)	EPA 200.8	ND	µg/L	1	1	1	06/05/06	06/12/06
Bicarbonate (as CaCO3)	SM 2320 B	40	mg/L	3	1	3	06/02/06	06/02/06
Cadmium (Cd)	EPA 200.8	ND	µg/L	1	1	1	06/05/06	06/12/06
Calcium (Ca)	EPA 200.7	10	mg/L	0.1	1	0.1	06/05/06	06/07/06
Carbonate (as CaCO3)	SM 2320 B	ND	mg/L	1	1	1	06/02/06	06/02/06
Chloride (Cl)	EPA 300.0	5.0	mg/L	1	1	1	06/02/06	06/02/06
Chromium - Total (Cr)	EPA 200.8	ND	µg/L	10	1	10	06/05/06	06/12/06
Color (A.P.H.A)	SM 2120 B	40	units	1	2	2	06/01/06 15:50	06/01/06 15:50
Conductivity - Specific (EC)	SM 2510 B	110	µmho/cm	1	1	1	06/02/06	06/02/06
Copper (Cu)	EPA 200.8	ND	µg/L	50	1	50	06/05/06	06/12/06
Cyanide (CN)	SM 4500-CN-F	ND	µg/L	20	1	20	06/02/06	06/02/06
Fluoride	EPA 300.0	ND	mg/L	0.1	1	0.1	06/02/06	06/02/06
Hardness (as CaCO3)	SM 2340 B	36	mg/L	1.0	1	1.0	06/16/06	06/16/06
Hydroxide (as CaCO3)	SM 2320 B	ND	mg/L	1	1	1	06/02/06	06/02/06
Iron (Fe)	EPA 200.7	0.91	mg/L	0.05	1	0.05	06/05/06	06/07/06
Langelier Index (Saturation Index)		-0.81	-		1	N/A	06/16/06	06/16/06
Lead (Pb)	EPA 200.8	ND	µg/L	5	1	5	06/05/06	06/12/06
Magnesium (Mg)	EPA 200.7	2.7	mg/L	0.1	1	0.1	06/05/06	06/07/06
Manganese (Mn)	EPA 200.7	0.018	mg/L	0.01	1	0.01	06/05/06	06/07/06
MBAS, Calculated as LAS, mol wt 340 SM 5540 C		ND	mg/L	0.05	1	0.05	06/01/06 16:30	06/01/06 16:30
Mercury (Hg)	EPA 200.8	ND	µg/L	0.4	1	0.4	06/05/06	06/12/06
Nickel (Ni)	EPA 200.8	ND	µg/L	10	1	10	06/05/06	06/12/06

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit

DLR: Detection Limit for Reporting

: PQL x Dilution

ND: None Detected at DLR

pCi/L: PicoCurie per Liter

H: Analyzed outside of hold time

P: Preliminary result

S: Suspect result. See Case Narrative for comments.

E: Analysis performed by External laboratory.

See External Laboratory Report attachments.

Report Authentication Code:



1414 Stanislaus Street Fresno, CA 93706-1623

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Page 1 of 6

BSK ANALYTICAL LABORATORIES

Mark Rhodes
Westlands Water District
PO Box 6056
Fresno, CA 93703

Certificate of Analysis

NELAP Certificate #04227CA

ELAP Certificate #1180

BSK Submission #: 2006060055

BSK Sample ID #: 727295

Project ID:

Project Desc: 7-2 Pumping Plant Inlet

Submission Comments:

Sample Type: Liquid

Sample Description: Fresh Water Mendota Pool Side

Sample Comments:



Report Issue Date: 06/27/2006

Date Sampled: 06/01/2006

Time Sampled: 1345

Date Received: 06/01/2006

Inorganics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Nitrate (NO3)	EPA 300.0	ND	mg/L	1	1	1	06/02/06 19:07	06/02/06 19:07
Nitrite (NO2-N)	EPA 300.0	ND	mg/L	0.05	1	0.05	06/02/06 19:07	06/02/06 19:07
Odor	SM 2150 B	1.0	TON	1	1	1	06/01/06 15:50	06/01/06 15:50
pH at 23.70°C	SM 4500-H+ B	7.8	Std. Unit	-	1	N/A	06/02/06 14:05	06/02/06 14:05
Potassium (K)	EPA 200.7	3.3	mg/L	2	1	2	06/05/06	06/07/06
Selenium (Se) - Total	EPA 200.8	ND	µg/L	2	1	2	06/05/06	06/12/06
Silver (Ag)	EPA 200.8	ND	µg/L	10	1	10	06/05/06	06/12/06
Sodium (Na)	EPA 200.7	9.5	mg/L	1	1	1	06/05/06	06/07/06
Sulfate (SO4)	EPA 300.0	8.0	mg/L	2	1	2	06/02/06	06/02/06
Thallium (Tl)	EPA 200.8	ND	µg/L	1	1	1	06/05/06	06/12/06
Total Dissolved Solids (TDS)	SM 2540 C	87	mg/L	5	1	5	06/07/06	06/09/06
Turbidity	SM 2130 B	14	NTU	0.1	2	0.2	06/01/06 15:50	06/01/06 15:50
Zinc (Zn)	EPA 200.7	ND	mg/L	0.05	1	0.05	06/05/06	06/07/06

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
1,1,1,2-Tetrachloroethane	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,1,1-Trichloroethane	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,1,2,2-Tetrachloroethane	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 502.2	ND	µg/L	10.0	1	10	06/07/06	06/07/06
1,1,2-Trichloroethane	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,1-Dichloroethane	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,1-Dichloroethene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,1-Dichloropropene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,2,3-Trichlorobenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,2,3-Trichloropropane	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,2,4-Trichlorobenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,2,4-Trimethylbenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
1,2-Dichlorobenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit

DLR: Detection Limit for Reporting
: PQL x Dilution

ND: None Detected at DLR

pCi/L: PicoCurie per Liter

H: Analyzed outside of hold time

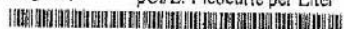
P: Preliminary result

S: Suspect result. See Case Narrative for comments.

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PO Box 6056
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BSK Submission #: 2006060055

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Project ID:

Project Desc: 7-2 Pumping Plant Inlet

Submission Comments:

Sample Type: Liquid

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Certificate of Analysis

NELAP Certificate #04227CA

ELAP Certificate #1180



Report Issue Date: 06/27/2006

Date Sampled: 06/01/2006

Time Sampled: 1345

Date Received: 06/01/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Methylene chloride	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Methyl-t-Butyl Ether	EPA 502.2	ND	µg/L	3.0	1	3.0	06/07/06	06/07/06
Naphthalene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
n-Butylbenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
n-Propylbenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
p-Isopropyltoluene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
sec-Butylbenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Styrene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
t-Amyl Methyl Ether	EPA 502.2	ND	µg/L	3.0	1	3.0	06/07/06	06/07/06
tert-Butylbenzene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Tetrachloroethene (PCE)	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Toluene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Total 1,3-Dichloropropene	EPA 502.2	ND	µg/L	0.5	1	0.5		
Total Trihalomethanes	EPA 502.2	ND	µg/L	0.5	1	0.5		
Total Xylene Isomers	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
trans-1,2-Dichloroethene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
trans-1,3-Dichloropropene	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Trichloroethene (TCE)	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Trichlorofluoromethane	EPA 502.2	ND	µg/L	5.0	1	5.0	06/07/06	06/07/06
Vinyl chloride	EPA 502.2	ND	µg/L	0.5	1	0.5	06/07/06	06/07/06
Dibromochloropropane	EPA 504.1	ND	µg/L	0.01	1	0.01	06/06/06	06/07/06
Ethylendibromide	EPA 504.1	ND	µg/L	0.02	1	0.02	06/06/06	06/07/06
Aldrin	EPA 505	ND	µg/L	0.075	1	0.075	06/05/06	06/06/06
Chlordane	EPA 505	ND	µg/L	0.1	1	0.1	06/05/06	06/06/06
Chlorothalonil (Daconil, Bravo)	EPA 505	ND	µg/L	5.0	1	5.0	06/05/06	06/06/06
Dieldrin	EPA 505	ND	µg/L	0.02	1	0.02	06/05/06	06/06/06
Endrin	EPA 505	ND	µg/L	0.1	1	0.1	06/05/06	06/06/06
Heptachlor	EPA 505	ND	µg/L	0.01	1	0.01	06/05/06	06/06/06
Heptachlor epoxide	EPA 505	ND	µg/L	0.01	1	0.01	06/05/06	06/06/06

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

%Rec: Percent Recovered (surrogates)

Report Authentication Code:

PQL: Practical Quantitation Limit

DLR: Detection Limit for Reporting

: PQL x Dilution

ND: None Detected at DLR

pCi/L: Picocurie per Liter

H: Analyzed outside of hold time

P: Preliminary result

S: Suspect result. See Case Narrative for comments.

E: Analysis performed by External laboratory.

See External Laboratory Report attachments.

BSK ANALYTICAL LABORATORIES

Mark Rhodes
Westlands Water District
PO Box 6056
Fresno, CA 93703

Certificate of Analysis

NELAP Certificate #04227CA

ELAP Certificate #1180

BSK Submission #: 2006060055

BSK Sample ID #: 727295

Project ID:

Project Desc: 7-2 Pumping Plant Inlet

Submission Comments:

Sample Type: Liquid

Sample Description: Fresh Water Mendota Pool Side

Sample Comments:



Report Issue Date: 06/27/2006

Date Sampled: 06/01/2006

Time Sampled: 1345

Date Received: 06/01/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Hexachlorobenzene	EPA 505	ND	µg/L	0.50	1	0.50	06/05/06	06/06/06
Hexachlorocyclopentadiene	EPA 505	ND	µg/L	1.0	1	1.0	06/05/06	06/06/06
Lindane	EPA 505	ND	µg/L	0.2	1	0.2	06/05/06	06/06/06
Methoxychlor	EPA 505	ND	µg/L	10	1	10	06/05/06	06/06/06
PCBs: Arochlor Screen	EPA 505	ND	µg/L	0.5	1	0.5	06/05/06	06/06/06
Toxaphene	EPA 505	ND	µg/L	1.0	1	1.0	06/05/06	06/06/06
Trifluralin	EPA 505	ND	µg/L	1.0	1	1.0	06/05/06	06/06/06
2,4,5-T	EPA 515.3	ND	µg/L	1.0	1	1.0	06/06/06	06/06/06
2,4,5-TP (Silvex)	EPA 515.3	ND	µg/L	1.0	1	1.0	06/06/06	06/06/06
2,4-D	EPA 515.3	ND	µg/L	10	1	10	06/06/06	06/06/06
Bentazon (Basagran)	EPA 515.3	ND	µg/L	2.0	1	2.0	06/06/06	06/06/06
Dalapon	EPA 515.3	ND	µg/L	10	1	10	06/06/06	06/06/06
Dicamba (Banvel)	EPA 515.3	ND	µg/L	1.5	1	1.5	06/06/06	06/06/06
Dinoseb (DNBP)	EPA 515.3	ND	µg/L	2.0	1	2.0	06/06/06	06/06/06
Pentachlorophenol (PCP)	EPA 515.3	ND	µg/L	0.2	1	0.2	06/06/06	06/06/06
Picloram	EPA 515.3	ND	µg/L	1.0	1	1.0	06/06/06	06/06/06
Alachlor (Alamex)	EPA 525.2	ND	µg/L	1.0	1	1.0	06/14/06	06/22/06
Atrazine (AATrex)	EPA 525.2	ND	µg/L	0.5	1	0.5	06/14/06	06/22/06
Benzo(a)pyrene	EPA 525.2	ND	µg/L	0.1	1	0.1	06/14/06	06/22/06
bis(2-ethylhexyl) adipate	EPA 525.2	ND	µg/L	3.0	1	3.0	06/14/06	06/22/06
bis(2-ethylhexyl) phthalate	EPA 525.2	ND	µg/L	3.0	1	3.0	06/14/06	06/22/06
Bromacil (Hyvar)	EPA 525.2	ND	µg/L	10	1	10	06/14/06	06/22/06
Butachlor	EPA 525.2	ND	µg/L	0.38	1	0.38	06/14/06	06/22/06
Diazinon	EPA 525.2	ND	µg/L	0.25	1	0.25	06/14/06	06/22/06
Dimethoate (Cygon)	EPA 525.2	ND	µg/L	10	1	10	06/14/06	06/22/06
Metolachlor	EPA 525.2	ND	µg/L	0.5	1	0.5	06/14/06	06/22/06
Metribuzin	EPA 525.2	ND	µg/L	0.5	1	0.5	06/14/06	06/22/06
Molinate (Ordram)	EPA 525.2	ND	µg/L	2.0	1	2.0	06/14/06	06/22/06
Propachlor	EPA 525.2	ND	µg/L	0.5	1	0.5	06/14/06	06/22/06

mg/L: Milligrams/Liter (ppm)

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µg/Kg: Micrograms/Kilogram (ppb)

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Report Authentication Code:

1 2006060055 727295 06/01/2006 06/27/2006

Page 5 of 6

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BSK ANALYTICAL LABORATORIES

Mark Rhodes
Westlands Water District
PO Box 6056
Fresno, CA 93703

BSK Submission #: 2006060055

BSK Sample ID #: 727295

Project ID:

Project Desc: 7-2 Pumping Plant Inlet

Submission Comments:

Sample Type: Liquid

Sample Description: Fresh Water Mendota Pool Side

Sample Comments:

Certificate of Analysis

NELAP Certificate #04227CA

ELAP Certificate #1180



Report Issue Date: 06/27/2006

Date Sampled: 06/01/2006

Time Sampled: 1345

Date Received: 06/01/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Simazine (Princep)	EPA 525.2	ND	µg/L	1.0	1	1.0	06/14/06	06/22/06
Thiobencarb (Bolero)	EPA 525.2	ND	µg/L	1.0	1	1.0	06/14/06	06/22/06
3-Hydroxycarbofuran	EPA 531.1	ND	µg/L	3.0	1	3.0	06/09/06	06/10/06
Aldicarb	EPA 531.1	ND	µg/L	3.0	1	3.0	06/09/06	06/10/06
Aldicarb Sulfone	EPA 531.1	ND	µg/L	2.0	1	2.0	06/09/06	06/10/06
Aldicarb Sulfoxide	EPA 531.1	ND	µg/L	3.0	1	3.0	06/09/06	06/10/06
Carbaryl	EPA 531.1	ND	µg/L	5.0	1	5.0	06/09/06	06/10/06
Carbofuran	EPA 531.1	ND	µg/L	5.0	1	5.0	06/09/06	06/10/06
Methomyl	EPA 531.1	ND	µg/L	2.0	1	2.0	06/09/06	06/10/06
Oxamyl	EPA 531.1	ND	µg/L	20.0	1	20	06/09/06	06/10/06
Glyphosate	EPA 547	ND	µg/L	25	1	25	06/09/06	06/12/06
Endosulf	EPA 548.1	ND	µg/L	45	1	45	06/02/06	06/13/06
Diquat	EPA 549.2	ND	µg/L	4	1	4	06/06/06	06/09/06

Surrogate

1-Chloro-2-fluorobenzene	EPA 502.2	94	% Rec	-	1	N/A	06/07/06	06/07/06
Bromoforn	EPA 504.1	110	% Rec	-	1	N/A	06/06/06	06/07/06
Tetrachloro-m-xylene	EPA 505	110	% Rec	-	1	N/A	06/05/06	06/06/06
DCPAA	EPA 515.3	110	% Rec	-	1	N/A	06/06/06	06/06/06
1,3-Dimethyl-2-nitrobenzene	EPA 525.2	94	% Rec	-	1	N/A	06/14/06	06/22/06
BDMC	EPA 531.1	94	% Rec	-	1	N/A	06/09/06	06/10/06
AMPA	EPA 547	110	% Rec	-	1	N/A	06/09/06	06/12/06

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: PQL x Dilution

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San Luis Canal/California Aqueduct Water Quality – 06/2006

Water Quality Report State Water Project

	CA Aqueduct, Ck	CA Aqueduct, Ck
Site	13, O'Neill Outlet	21, Kettleman
Site Code	KA007089	KA017226
Sample Date	6/21/2006	6/20/2006

Analyte	Form	Ch 13 Result	Ch 21 Result	Rpt Limit	Units	Method
1,1,1,2-Tetrachloroethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,1,1-Trichloroethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,1,2,2-Tetrachloroethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,1,2-Trichloroethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,1-Dichloroethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,1-Dichloroethene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,1-Dichloropropene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2,3-Trichlorobenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2,3-Trichloropropane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2,4-Trichlorobenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2,4-Trimethylbenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2-Dibromo-3-chloropropane (DBCP)		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2-Dibromoethane (EDB)		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2-Dichlorobenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2-Dichloroethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,2-Dichloropropane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,3,5-Trimethylbenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,3-Dichlorobenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,3-Dichloropropane		<0.5	<0.5	0.5	µg/L	EPA 502.2
1,4-Dichlorobenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
2,2-Dichloropropane		<0.5	<0.5	0.5	µg/L	EPA 502.2
2,4,5-T		<0.1	<0.1	0.1	µg/L	EPA 615
2,4,5-TP (Silvex)		<0.1	<0.1	0.1	µg/L	EPA 615
2,4-D		<0.1	<0.1	0.1	µg/L	EPA 615
2,4-DB		<0.1	<0.1	0.1	µg/L	EPA 615
2-Chlorotoluene		<0.5	<0.5	0.5	µg/L	EPA 502.2
3-Hydroxycarbofuran		<2	<2	2	µg/L	EPA 531.1
4-Chlorotoluene		<0.5	<0.5	0.5	µg/L	EPA 502.2
4-Isopropyltoluene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Alachlor		<0.05	<0.05	0.05	µg/L	EPA 608
Aldicarb		<2	<2	2	µg/L	EPA 531.1
Aldicarb sulfone		<2	<2	2	µg/L	EPA 531.1
Aldicarb sulfoxide		<2	<2	2	µg/L	EPA 531.1
Aldrin		<0.01	<0.01	0.01	µg/L	EPA 608
Ammonia	Dissolved	0.01	0.0089	0.01	mg/L as N	EPA 350.1
Antimony	Dissolved	<0.001	<0.001	0.001	mg/L	EPA 200.8
Arsenic	Dissolved	0.002	0.002	0.001	mg/L	EPA 200.8
Atrazine		<0.02	<0.02	0.02	µg/L	EPA 608
Azinphos methyl (Guthion)		<0.05	<0.05	0.05	µg/L	EPA 614
Benfluralin		<0.01	<0.01	0.01	µg/L	EPA 614
Benzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Beryllium	Dissolved	<0.001	<0.001	0.001	mg/L	EPA 200.8
BHC-alpha		<0.01	<0.01	0.01	µg/L	EPA 608
BHC-beta		<0.01	<0.01	0.01	µg/L	EPA 608
BHC-delta		<0.01	<0.01	0.01	µg/L	EPA 608
BHC-gamma (Lindane)		<0.01	<0.01	0.01	µg/L	EPA 608
Boron	Dissolved	<0.1	<0.1	0.1	mg/L	EPA 200.7
Bromacil		<0.1	<0.1	0.1	µg/L	EPA 614
Bromide	Dissolved	0.15	0.11	0.01	mg/L	EPA 300.0 28d Hold
Bromobenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Bromochloromethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Bromodichloromethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Bromoform		<0.5	<0.5	0.5	µg/L	EPA 502.2
Bromomethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Calcium	Dissolved	16	14	1	mg/L	EPA 200.7
Captan		<0.05	<0.05	0.05	µg/L	EPA 608
Carbaryl		<2	<2	2	µg/L	EPA 531.1
Carbofuran		<2	<2	2	µg/L	EPA 531.1
Carbon tetrachloride		<0.5	<0.5	0.5	µg/L	EPA 502.2
Carbophenothion (Trithion)		<0.02	<0.02	0.02	µg/L	EPA 614
Chlordane		<0.05	<0.05	0.05	µg/L	EPA 608
Chloride	Dissolved	45	35	1	mg/L	EPA 300.0 28d Hold
Chlorobenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Chloroethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Chloroform		<0.5	<0.5	0.5	µg/L	EPA 502.2
Chloromethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Chlorothalonil		<0.01	<0.01	0.01	µg/L	EPA 608
Chlorpropham		<0.02	<0.02	0.02	µg/L	EPA 608
Chlorpyrifos		<0.01	<0.01	0.01	µg/L	EPA 614

San Luis Canal/California Aqueduct Water Quality – 06/2006

Analyte	Form	Ch 13 Result	Ch 21 Result	Rpt Limit	Units	Method
Chlorpyrifos		<0.01	<0.01	0.01	µg/L	EPA 608
Chromium	Dissolved	0.002	0.002	0.001	mg/L	EPA 200.8
cis-1,2-Dichloroethene		<0.5	<0.5	0.5	µg/L	EPA 502.2
cis-1,3-Dichloropropene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Conductance (EC)		300	242	1	µS/cm	Std Method 2510-B
Copper	Dissolved	0.002	0.003	0.001	mg/L	EPA 200.8
Cyanazine		<0.1	<0.1	0.1	µg/L	EPA 614
Cyanazine		<0.1	<0.1	0.1	µg/L	EPA 608
Dacthal (DCPA)		<0.01	<0.01	0.01	µg/L	EPA 608
Dacthal (DCPA)		<0.1	<0.1	0.1	µg/L	EPA 615
Demeton (Demeton O + Demeton S)		<0.1	<0.1	0.1	µg/L	EPA 614
Diazinon		<0.02	<0.02	0.02	µg/L	EPA 614
Dibromochloromethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Dibromomethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Dicamba		<0.1	<0.1	0.1	µg/L	EPA 615
Dichloran		<0.01	<0.01	0.01	µg/L	EPA 608
Dichlorodifluoromethane		<0.5	<0.5	0.5	µg/L	EPA 502.2
Dichloroprop		<0.1	<0.1	0.1	µg/L	EPA 615
Dicofol		<0.05	<0.05	0.05	µg/L	EPA 608
Dieldrin		<0.01	<0.01	0.01	µg/L	EPA 608
Dimethoate		<0.01	<0.01	0.01	µg/L	EPA 614
Dinoseb (DNPB)		<0.1	<0.1	0.1	µg/L	EPA 615
Disulfoton		<0.1	<0.1	0.1	µg/L	EPA 614
Diuron		<0.25	<0.25	0.25	µg/L	EPA 608
Endosulfan sulfate		<0.02	<0.02	0.02	µg/L	EPA 608
Endosulfan-I		<0.01	<0.01	0.01	µg/L	EPA 608
Endosulfan-II		<0.01	<0.01	0.01	µg/L	EPA 608
Endrin		<0.01	<0.01	0.01	µg/L	EPA 608
Endrin aldehyde		<0.01	<0.01	0.01	µg/L	EPA 608
Esfenvalerate		<0.02	<0.02	0.02	µg/L	EPA 614
Ethion		<0.01	<0.01	0.01	µg/L	EPA 614
Ethyl benzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Fluoride	Dissolved	<0.1	<0.1	0.1	mg/L	EPA 300.0 28d Hold
Formetanate hydrochloride		<100	<100	100	µg/L	EPA 531.1
Glyphosate		<25	<25	25	µg/L	EPA 547
Hardness	Dissolved	73	68	1	mg/L as CaCO3	Std Method 2340 B
Heptachlor		<0.01	<0.01	0.01	µg/L	EPA 608
Heptachlor epoxide		<0.01	<0.01	0.01	µg/L	EPA 608
Hexachlorobutadiene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Iron	Dissolved	0.014	0.018	0.005	mg/L	EPA 200.8
Isopropylbenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Lead	Dissolved	<0.001	<0.001	0.001	mg/L	EPA 200.8
m + p Xylene		<0.5	<0.5	0.5	µg/L	EPA 502.2
Magnesium	Dissolved	8	8	1	mg/L	EPA 200.7
Malathion		<0.01	<0.01	0.01	µg/L	EPA 614
Manganese	Dissolved	<0.005	<0.005	0.005	mg/L	EPA 200.8
MCPA		<0.1	<0.1	0.1	µg/L	EPA 615
MCPP		<0.1	<0.1	0.1	µg/L	EPA 615
Mercury						
Methidathion		<0.02	<0.02	0.02	µg/L	EPA 614 [1]
Methiocarb		<4	<4	4	µg/L	EPA 531.1 [1]
Methomyl		<2	<2	2	µg/L	EPA 531.1 [1]
Methoxychlor		<0.05	<0.05	0.05	µg/L	EPA 608 [1]
Methyl tert-butyl ether (MTBE)		<1	<1	1	µg/L	EPA 502.2 [1]
Methylene chloride		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Metolachlor		<0.05	<0.05	0.05	µg/L	EPA 608 [1]
Mevinphos		<0.01	<0.01	0.01	µg/L	EPA 614 [1]
Molinate		<0.02	<0.02	0.02	µg/L	EPA 614 [1]
Naled		<0.02	<0.02	0.02	µg/L	EPA 614 [1]
Naphthalene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Napropamide		<0.05	<0.05	0.05	µg/L	EPA 614 [1]
n-Butylbenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Nickel	Dissolved	0.001	0.001	0.001	mg/L	EPA 200.8 (D) [1]
Nitrate	Dissolved	1.6	1.7	0.1	mg/L	EPA 300.0 28d Hold [1]
Nitrate	Dissolved	0.38	0.35	0.01	mg/L as N	Std Method 4500-NO3-F (28Day) [1]
Nitrite						
Norflurazon		<0.05	<0.05	0.05	µg/L	EPA 614 [1]
n-Propylbenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
o,p'-DDE		<0.01	<0.01	0.01	µg/L	EPA 608 [1]
Organic	Dissolved	3	3	0.5	mg/L as C	EPA 415.1 (D) Ox [PS-3]
Ortho-phosphate	Dissolved	0.07	0.08	0.01	mg/L as P	EPA 385.1 (DWR Modified) [1]
Oxamyl		<2	<2	2	µg/L	EPA 531.1 [1]
Oxyfluorfen		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
o-Xylene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
p,p'-DDD		<0.01	<0.01	0.01	µg/L	EPA 608 [1]
p,p'-DDE		<0.01	<0.01	0.01	µg/L	EPA 608 [1]

San Luis Canal/California Aqueduct Water Quality – 06/2006

Analyte	Form	Ch 13 Result	Ch 21 Result	Rpt Limit	Units	Method
p,p'-DDT		<0.05	<0.05	0.05	µg/L	EPA 608 [1]
Parathion (Ethyl)		<0.01	<0.01	0.01	µg/L	EPA 614 [1]
Parathion, Methyl		<0.01	<0.01	0.01	µg/L	EPA 614 [1]
PCB-1016		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
PCB-1221		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
PCB-1232		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
PCB-1242		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
PCB-1248		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
PCB-1254		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
PCB-1260		<0.1	<0.1	0.1	µg/L	EPA 608 [1]
Pendimethalin		<0.05	<0.05	0.05	µg/L	EPA 614 [1]
Pentachloronitrobenzene (PCNB)		<0.01	<0.01	0.01	µg/L	EPA 608 [1]
Pentachlorophenol (PCP)		<0.1	<0.1	0.1	µg/L	EPA 615 [1]
Permethrin		<0.02	<0.02	0.02	µg/L	EPA 608 [1]
pH		8.2	7.8	0.1	pH Units	Std Method 2320 B [1]
Phorate		<0.01	<0.01	0.01	µg/L	EPA 614 [1]
Phosalone		<0.02	<0.02	0.02	µg/L	EPA 614 [1]
Phosmet		<0.02	<0.02	0.02	µg/L	EPA 614 [1]
Picloram		<0.1	<0.1	0.1	µg/L	EPA 615 [1]
Profenofos		<0.01	<0.01	0.01	µg/L	EPA 614 [1]
Prometryn		<0.05	<0.05	0.05	µg/L	EPA 614 [1]
Propargite		<1	na	1	µg/L	DWR Sulfur Pesticides [1]
Propetamphos		<0.1	<0.1	0.1	µg/L	EPA 614 [1]
s,s,s-Tributyl Phosphorothioate (DEF)		<0.01	<0.01	0.01	µg/L	EPA 614 [1]
sec-Butylbenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Selenium	Dissolved	0.001	0.001	0.001	mg/L	EPA 200.8 (D) [1]
Simazine		0.02	0.0199	0.02	µg/L	EPA 608 [1]
Sodium	Dissolved	34	29	1	mg/L	EPA 200.7 (D) [1]
Styrene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Sulfate	Dissolved	26	22	1	mg/L	EPA 300.0 28d Hold [1]
tert-Butylbenzene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Tetrachloroethene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Thiobencarb		<0.02	<0.02	0.02	µg/L	EPA 614 [1]
Thiobencarb		<0.02	<0.02	0.02	µg/L	EPA 608 [1]
Toluene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Total Dissolved Solids		175	146	1	mg/L	Std Method 2540 C [1]
Total Suspended Solids		5	9	1	mg/L	EPA 160.2 [1]
Total Alkalinity		53	47	1	mg/L as CaCO3	Std Method 2320 B [1]
Total Kjeldahl Nitrogen		0.2	0.1	0.1	mg/L as N	EPA 351.2 [1]
Total Organic Carbon		3.3	4.2	0.5	mg/L as C	EPA 415.1 (T) Cmbst [PS-2]
Total Organic Carbon		3.4	3.6	0.5	mg/L as C	EPA 415.1 (T) Ox [PS-3]
Total Phosphorus		0.06	0.1	0.01	mg/L	EPA 365.4 [1]
Toxaphene		<0.4	<0.4	0.4	µg/L	EPA 608 [1]
trans-1,2-Dichloroethene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
trans-1,3-Dichloropropene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Trichloroethene		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Trichlorofluoromethane		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Triclopyr		<0.1	<0.1	0.1	µg/L	EPA 615 [1]
Trifluralin		<0.01	<0.01	0.01	µg/L	EPA 614 [1]
Turbidity		5	10	1	N.T.U.	EPA 180.1 [D-2]
UV Absorbance @254nm		0.081	na	0.001	absorbance/cm	Std Method 5910B [1]
Vinyl chloride		<0.5	<0.5	0.5	µg/L	EPA 502.2 [1]
Volatile Suspended Solids		1	1	1	mg/L	EPA 160.4 [1]
Zinc	Dissolved	<0.005	<0.005	0.005	mg/L	EPA 200.8 (D) [1]

Kings River Flood Flows – 06/2011



Certificate of Analysis

Russ Freeman
Westlands Water District
PO Box 6056
Fresno, CA 93703

Report Issue Date: 06/08/2011 16:48
Received Date: 06/03/2011
Received Time: 11:30

Lab Sample ID: A1F0311-01
Sample Date: 06/03/2011 10:30
Sample Type: Grab

Client Project: PKG quote - compliance
Sampled by: Kiti Buelna
Matrix: Water

Sample Description: 6-1

General Chemistry

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Bromide	EPA 300.1	0.014	0.0050	mg/L	1	A106791	06/08/11	06/08/11	
Chloride	EPA 300.0	2.4	1.0	mg/L	1	A106605	06/04/11	06/04/11	
Conductivity @ 25C	SM 2510 B	50	1.0	umhos/cm	1	A106653	06/06/11	06/06/11	
Nitrate as NO3	EPA 300.0	ND	1.0	mg/L	1	A106605	06/04/11 00:04	06/04/11 00:04	
Sulfate as SO4	EPA 300.0	2.6	2.0	mg/L	1	A106605	06/04/11	06/04/11	
Total Dissolved Solids	SM 2540C	44	5.0	mg/L	1	A106574	06/03/11	06/06/11	

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Arsenic	EPA 200.8	ND	2.0	ug/L	1	A106633	06/06/11	06/06/11	
Boron	EPA 200.7	ND	0.10	mg/L	1	A106633	06/06/11	06/07/11	
Manganese	EPA 200.7	0.068	0.010	mg/L	1	A106633	06/06/11	06/07/11	
Selenium	EPA 200.8	ND	2.0	ug/L	1	A106633	06/06/11	06/06/11	

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Kings River Flood Flows – 06/2011



Certificate of Analysis

Russ Freeman
Westlands Water District
PO Box 6056
Fresno, CA 93703

Report Issue Date: 06/08/2011 16:48
Received Date: 06/03/2011
Received Time: 11:30

Lab Sample ID: A1F0311-02
Sample Date: 06/03/2011 10:00
Sample Type: Grab

Client Project: PKG quote - compliance
Sampled by: Kiti Buelna
Matrix: Water

Sample Description: 7-2

General Chemistry

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Bromide	EPA 300.1	ND	0.0050	mg/L	1	A106713	06/06/11	06/06/11	
Chloride	EPA 300.0	2.3	1.0	mg/L	1	A106605	06/04/11	06/04/11	
Conductivity @ 25C	SM 2510 B	47	1.0	umhos/cm	1	A106653	06/06/11	06/06/11	
Nitrate as NO3	EPA 300.0	ND	1.0	mg/L	1	A106605	06/04/11 00:13	06/04/11 00:13	
Sulfate as SO4	EPA 300.0	2.4	2.0	mg/L	1	A106605	06/04/11	06/04/11	
Total Dissolved Solids	SM 2540C	39	5.0	mg/L	1	A106574	06/03/11	06/06/11	

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Arsenic	EPA 200.8	ND	2.0	ug/L	1	A106633	06/06/11	06/06/11	
Boron	EPA 200.7	ND	0.10	mg/L	1	A106633	06/06/11	06/07/11	
Manganese	EPA 200.7	0.038	0.010	mg/L	1	A106633	06/06/11	06/07/11	
Selenium	EPA 200.8	ND	2.0	ug/L	1	A106633	06/06/11	06/06/11	

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Kings River Flood Flows – 06/2011



General Chemistry Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Date Analyzed	Qual
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Batch: A106574

Analyst: DEH

Prepared: 06/03/2011

Blank (A106574-BLK1) SM 2540C - Quality Control

Total Dissolved Solids	ND	5.0	mg/L							06/06/11	
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Blank (A106574-BLK2) SM 2540C - Quality Control

Total Dissolved Solids	ND	5.0	mg/L							06/06/11	
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Duplicate (A106574-DUP1) SM 2540C - Quality Control

Source: A1F0228-01

Total Dissolved Solids	990	5.0	mg/L	990		0	20			06/06/11	
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Duplicate (A106574-DUP2) SM 2540C - Quality Control

Source: A1F0230-01

Total Dissolved Solids	750	5.0	mg/L	750		0	20			06/06/11	
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Batch: A106605

Analyst: AJT

Prepared: 06/03/2011

Blank (A106605-BLK1) EPA 300.0 - Quality Control

Chloride	ND	1.0	mg/L							06/03/11	
Nitrate as NO3	ND	1.0	mg/L							06/03/11	
Sulfate as SO4	ND	2.0	mg/L							06/03/11	

Blank Spike (A106605-BS1) EPA 300.0 - Quality Control

Chloride	50	1.0	mg/L	50	100	90-110				06/03/11	
Nitrate as NO3	50	1.0	mg/L	50	100	90-110				06/03/11	
Sulfate as SO4	50	2.0	mg/L	50	101	90-110				06/03/11	

Blank Spike Dup (A106605-BSD1) EPA 300.0 - Quality Control

Chloride	51	1.0	mg/L	50	102	90-110	2	10		06/03/11	
Nitrate as NO3	51	1.0	mg/L	50	102	90-110	2	10		06/03/11	
Sulfate as SO4	51	2.0	mg/L	50	103	90-110	2	10		06/03/11	

Matrix Spike (A106605-MS1) EPA 300.0 - Quality Control

Source: A1F0270-01

Chloride	120	2.0	mg/L	100	12	104	80-120			06/03/11	
Nitrate as NO3	120	2.0	mg/L	100	20	105	80-120			06/03/11	
Sulfate as SO4	130	4.0	mg/L	100	25	105	80-120			06/03/11	

Matrix Spike (A106605-MS2) EPA 300.0 - Quality Control

Source: A1F0290-03

Chloride	130	2.0	mg/L	100	28	105	80-120			06/03/11	
Nitrate as NO3	130	2.0	mg/L	100	27	107	80-120			06/03/11	
Sulfate as SO4	110	4.0	mg/L	100	ND	106	80-120			06/03/11	

Matrix Spike Dup (A106605-MSD1) EPA 300.0 - Quality Control

Source: A1F0270-01

Chloride	120	2.0	mg/L	100	12	104	80-120	0	10	06/03/11	
Nitrate as NO3	130	2.0	mg/L	100	20	106	80-120	0	10	06/03/11	
Sulfate as SO4	130	4.0	mg/L	100	25	105	80-120	0	10	06/03/11	

Matrix Spike Dup (A106605-MSD2) EPA 300.0 - Quality Control

Source: A1F0290-03

Chloride	130	2.0	mg/L	100	28	103	80-120	2	10	06/03/11	
Nitrate as NO3	130	2.0	mg/L	100	27	105	80-120	1	10	06/03/11	
Sulfate as SO4	110	4.0	mg/L	100	ND	105	80-120	1	10	06/03/11	

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General Chemistry Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Analyzed	Qual
Batch: A106653				Analyst: CEG		Prepared: 06/06/2011					
Blank (A106653-BLK1) SM 2510 B - Quality Control											
Conductivity @ 25C	ND	1.0	umhos/cm							06/06/11	
Duplicate (A106653-DUP1) SM 2510 B - Quality Control				Source: A1F0307-01							
Conductivity @ 25C	52	1.0	umhos/cm		52			0	20	06/06/11	
Duplicate (A106653-DUP2) SM 2510 B - Quality Control				Source: A1F0322-01							
Conductivity @ 25C	520	1.0	umhos/cm		520			0	20	06/06/11	
Batch: A106713				Analyst: MAT		Prepared: 06/06/2011					
Blank (A106713-BLK1) EPA 300.1 - Quality Control											
Bromide	ND	0.0050	mg/L							06/06/11	
Blank Spike (A106713-BS1) EPA 300.1 - Quality Control											
Bromide	0.20	0.0050	mg/L	0.20		99	85-115			06/06/11	
Blank Spike Dup (A106713-BSD1) EPA 300.1 - Quality Control											
Bromide	0.20	0.0050	mg/L	0.20		99	85-115	0	10	06/06/11	
Matrix Spike (A106713-MS1) EPA 300.1 - Quality Control				Source: A1F0311-02							
Bromide	0.21	0.0050	mg/L	0.20	ND	105	75-125			06/06/11	
Matrix Spike Dup (A106713-MSD1) EPA 300.1 - Quality Control				Source: A1F0311-02							
Bromide	0.21	0.0050	mg/L	0.20	ND	106	75-125	1	10	06/06/11	
Batch: A106791				Analyst: MAT		Prepared: 06/07/2011					
Blank (A106791-BLK1) EPA 300.1 - Quality Control											
Bromide	ND	0.0050	mg/L							06/07/11	
Blank Spike (A106791-BS1) EPA 300.1 - Quality Control											
Bromide	0.19	0.0050	mg/L	0.20		97	85-115			06/07/11	
Blank Spike Dup (A106791-BSD1) EPA 300.1 - Quality Control											
Bromide	0.20	0.0050	mg/L	0.20		101	85-115	3	10	06/07/11	
Matrix Spike (A106791-MS1) EPA 300.1 - Quality Control				Source: A1F0311-01							
Bromide	0.22	0.0050	mg/L	0.20	0.014	102	75-125			06/08/11	
Matrix Spike Dup (A106791-MSD1) EPA 300.1 - Quality Control				Source: A1F0311-01							
Bromide	0.21	0.0050	mg/L	0.20	0.014	99	75-125	3	10	06/08/11	

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Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Date Analyzed	Qual
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Batch: A106633

Analyst: NRE

Prepared: 06/06/2011

Blank (A106633-BLK2) EPA 200.7 - Quality Control

Boron	ND	0.10	mg/L							06/06/11	
Manganese	ND	0.010	mg/L							06/06/11	

Blank Spike (A106633-BS2) EPA 200.7 - Quality Control

Boron	0.60	0.10	mg/L	0.60		99	85-115			06/06/11	
Manganese	0.20	0.010	mg/L	0.20		99	85-115			06/06/11	

Blank Spike Dup (A106633-BS2) EPA 200.7 - Quality Control

Boron	0.59	0.10	mg/L	0.60		98	85-115	1	20	06/06/11	
Manganese	0.19	0.010	mg/L	0.20		95	85-115	4	20	06/06/11	

Matrix Spike (A106633-MS3) EPA 200.7 - Quality Control

Source: A1E2084-02

Boron	0.60	0.10	mg/L	0.60	ND	100	70-130			06/06/11	
Manganese	0.19	0.010	mg/L	0.20	ND	97	70-130			06/06/11	

Matrix Spike (A106633-MS4) EPA 200.7 - Quality Control

Source: A1F0299-06

Boron	0.60	0.10	mg/L	0.60	ND	100	70-130			06/06/11	
Manganese	0.26	0.010	mg/L	0.20	0.067	96	70-130			06/06/11	

Matrix Spike Dup (A106633-MSD3) EPA 200.7 - Quality Control

Source: A1E2084-02

Boron	0.59	0.10	mg/L	0.60	ND	98	70-130	2	20	06/06/11	
Manganese	0.19	0.010	mg/L	0.20	ND	95	70-130	3	20	06/06/11	

Matrix Spike Dup (A106633-MSD4) EPA 200.7 - Quality Control

Source: A1F0299-06

Boron	0.62	0.10	mg/L	0.60	ND	103	70-130	4	20	06/06/11	
Manganese	0.27	0.010	mg/L	0.20	0.067	99	70-130	3	20	06/06/11	

Blank (A106633-BLK1) EPA 200.8 - Quality Control

Arsenic	ND	2.0	ug/L							06/06/11	
Selenium	ND	2.0	ug/L							06/06/11	

Blank Spike (A106633-BS1) EPA 200.8 - Quality Control

Arsenic	190	2.0	ug/L	200		97	85-115			06/06/11	
Selenium	190	2.0	ug/L	200		97	85-115			06/06/11	

Blank Spike Dup (A106633-BS1) EPA 200.8 - Quality Control

Arsenic	190	2.0	ug/L	200		94	85-115	3	20	06/06/11	
Selenium	190	2.0	ug/L	200		93	85-115	3	20	06/06/11	

Matrix Spike (A106633-MS1) EPA 200.8 - Quality Control

Source: A1E2084-02

Arsenic	190	2.0	ug/L	200	ND	96	70-130			06/06/11	
Selenium	190	2.0	ug/L	200	ND	95	70-130			06/06/11	

Matrix Spike (A106633-MS2) EPA 200.8 - Quality Control

Source: A1F0299-06

Arsenic	190	2.0	ug/L	200	ND	94	70-130			06/06/11	
Selenium	180	2.0	ug/L	200	ND	92	70-130			06/06/11	

Matrix Spike Dup (A106633-MSD1) EPA 200.8 - Quality Control

Source: A1E2084-02

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Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Date Analyzed	Qual
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Batch: A106633

Analyst: MAS

Prepared: 06/06/2011

Matrix Spike Dup (A106633-MSD1)		EPA 200.8 - Quality Control				Source: A1E2084-02					
Arsenic	190	2.0	ug/L	200	ND	93	70-130	2	20	06/06/11	
Selenium	180	2.0	ug/L	200	ND	92	70-130	3	20	06/06/11	
Matrix Spike Dup (A106633-MSD2)		EPA 200.8 - Quality Control				Source: A1F0299-06					
Arsenic	190	2.0	ug/L	200	ND	97	70-130	3	20	06/06/11	
Selenium	190	2.0	ug/L	200	ND	97	70-130	4	20	06/06/11	

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Certificate of Analysis

06/08/2011

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
- Sample(s) received, prepared, and analyzed within the method specified criteria unless otherwise noted within this report.
- The results relate only to the samples analyzed in accordance with test(s) requested by the client on the Chain of Custody document. Any analytical quality control exceptions to method criteria that are to be considered when evaluating these results have been flagged and are defined in the data qualifiers section.
- All results are expressed on wet weight basis unless otherwise specified.
- All positive results for EPA Methods 504.1, 502.2, and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Results contained in this analytical report must be reproduced in its entirety.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- BSK Analytical Laboratories certifies that the test results contained in this report meet all requirements of the NELAC Standards for applicable certified drinking water chemistry analyses unless qualified or noted in the Case Narrative.
- Analytical data contained in this report may be used for regulatory purposes to meet the requirements of the Federal or State drinking water, wastewater, and hazardous waste programs.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals. Samples submitted to the laboratory have been analyzed outside of this holding time requirement.
- * - This is not a NELAP accredited analyte.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- (2) The digestion used to produce this result deviated from EPA 200.2 by excluding hydrochloric acid in order to produce acceptable recoveries for affected metals.
- (2C) Result reported from secondary analytical column.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.

Certifications:

State of California - CDPH - ELAP	1180
State of California - CDPH - NELAP	04227CA
State of New Mexico - NMED-DWB	
State of Nevada - NDEP	CA000792009A

Definitions and Flags for Data Qualifiers

mg/L:	Milligrams/Liter (ppm)	M:	Method Detection Limit	MDA:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)		:DL x Dilution	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	ND:	None Detected at RL	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	pCi/L:	Picocuries per Liter	Present:	1 or more CFU/100mLs
		NR:	Non-Reportable	RL Mult:	RL Multiplier

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