RECLAMATION

Managing Water in the West

Draft Environmental Assessment

Transfer of up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to San Luis, Panoche, Del Puerto and Westlands Water Districts and up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis Water District or Westlands Water District

EA-12-006

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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Section 1 Introduction

1.1 Background

Central California Irrigation District (CCID) proposes to transfer a portion of their Central Valley Project (CVP) water allocation to San Luis Water District (SLWD), Westlands Water District (WWD), Del Puerto Water District (DPWD) or Panoche Water District (PWD). The Transfer Recipient Districts (SLWD, WWD, DPWD, and PWD) would deliver the transferred water to District members that also own land in CCID.

Similarly, the Firebaugh Canal Water District (FCWD) proposes to transfer a portion of their CVP water allocation SLWD or WWD, for use by landowners that own property in both FCWD and either SLWD or WWD.

1.2 Purpose and Need

The South-of-Delta (SOD) Central Valley Project (CVP) Agricultural allocation forecast for 2012 began at 30% and then was increased to 40% (Reclamation, 2012a). As a result, SOD water contractors have a need to find alternative sources of water to not only fulfill 2012 demands, but to prepare for demands going into 2013. The proposed transfers would allow water districts and landowners greater flexibility to manage limited water supplies during summer months in these years.

1.3 Scope

Impacts may occur in the CVP service area boundaries of CCID, FWCD, and the Transfer Recipient Districts (Figure 1-1). Facilities used in the transfer and potentially impacted include the San Luis Reservoir (SLR), Delta-Mendota Canal (DMC), Mendota Pool, and San Luis Canal (SLC).

The potential transfers would occur from July 2012, following execution of the Finding of No Significant Impact and approval by the Contracting Officer, through December 2012 and April 2013 through December 2013. This will be the study period for evaluating any direct, indirect and cumulative effects.

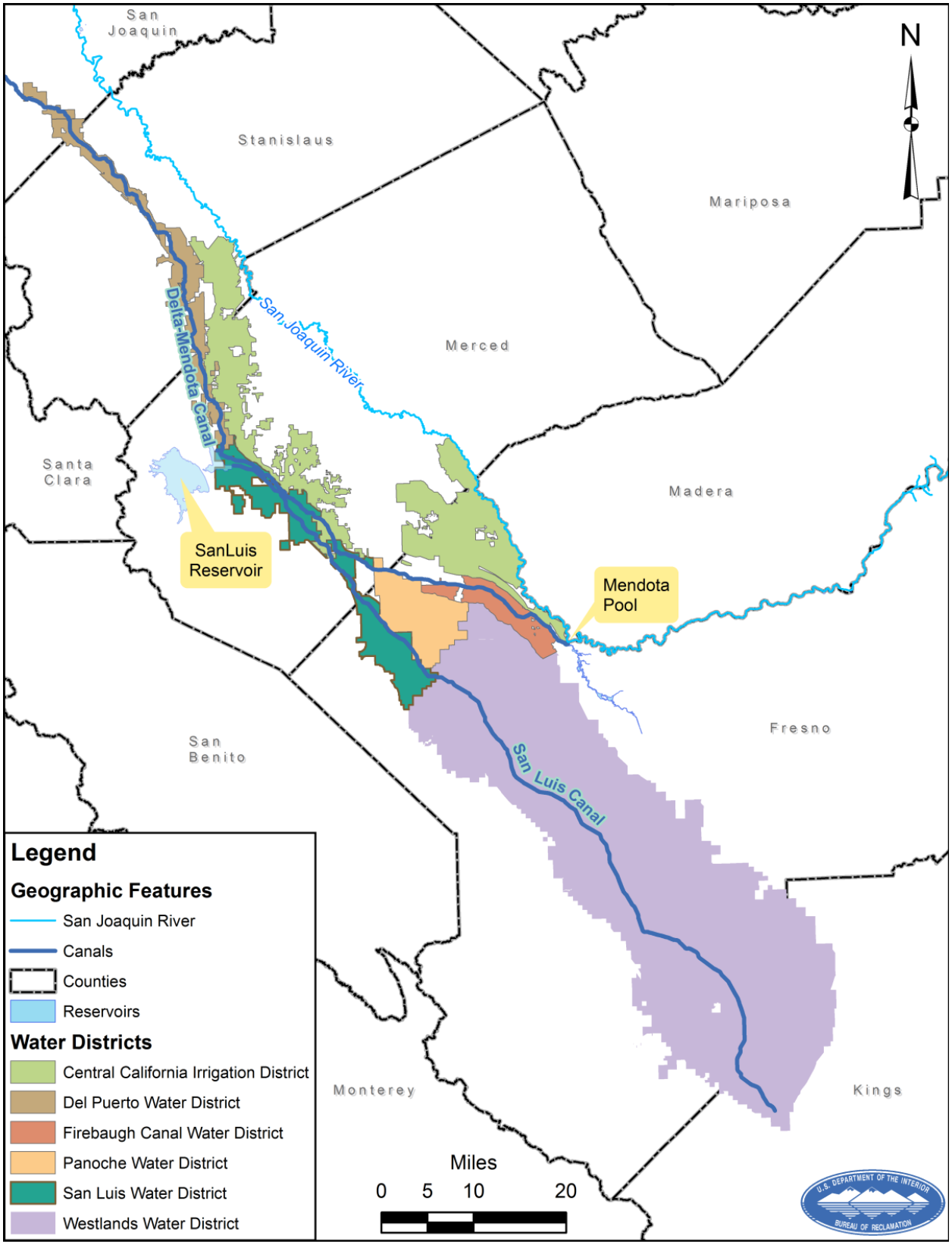

Figure 1-1 Project Area

1.4 Reclamation's Legal and Statutory Authorities

Several Federal laws, permits, licenses and policy requirements have directed, limited or guided the National Environmental Policy Act analysis and decision-making process of this Environmental Analysis (EA).

1.4.1 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 M&I, fish and wildlife, and agricultural uses. Section 305, enacted March 5, 1992 (106 Stat. 59; U.S.C.§ 2245), also authorizes Reclamation to utilize excess capacity to convey non-CVP water.

1.4.2 Reclamation Project Act

Section 14 of the Reclamation Project Act of 1939 (53 Stat. 1197; 43 U.S.C. § 389) authorizes the Secretary of the Interior, for the purpose of orderly and economical construction or operation and maintenance of any project, to enter into such contracts for exchange or replacement of water, water rights, or electrical energy, or for the adjustment of water rights, as in his judgment are necessary and in the interests of the United States and the project.

1.4.3 Central Valley Project Improvement Act

The Central Valley Project Improvement Act of 1992 (106 Stat. 4706), 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 and industrial (M&I), 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).

1.5 Previous Related Environmental Analyses

The following EAs and Findings of No Significant Impacts (FONSIs) performed by Reclamation were similar in scope and effects to the current project, and are incorporated by reference.

1.5.1 EA-09-031

Reclamation approved EA and FONSI-09-031 "Transfer of up to 4,400 Acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis Water District or Westlands Water District" on April 21, 2009. This action was similar to the FCWD portion of the Proposed Action analyzed in this document, except that the amount of water was 600 acre-feet (af) less, and the period

evaluated was from April 2009 through September 2009, and Well #5 that would pump into Mendota Pool was not included.

1.5.2 EA-09-067

Reclamation approved EA and FONSI-09-067 "Central California Irrigation District Transfer of up to 15,000 Acre Feet to San Luis, Panoche, Del Puerto and Westlands Water Districts" on May 5, 2009. This action was similar to the CCID portion of the Proposed Action analyzed in this document, except that the amount of water was 5,500 af less, and the period evaluated was from May 2009 through September 2009.

1.5.3 SEA-09-114

Reclamation approved Supplemental EA 09-114 "Amendment to Approve an Additional 5,500 Acre-Feet to Central California Irrigation District's Transfer of up to 15,000 Acre-Feet to San Luis, Panoche, Del Puerto, and Westlands Water Districts" on July 23, 2009. This action increased the amount of water involved with the project listed in 1.5.2, but didn't change the time frame. When combined with the quantity of water analyzed in the original EA, the total was 20,500 af. This means that the CCID proposed actions in 2009 differed from the currently proposed action only in the time period covered.

1.5.4 EA-10-02

Reclamation approved EA and FONSI-10-02 "Transfer of up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to San Luis, Panoche, Del Puerto and Westlands Water Districts and up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis Water District or Westlands Water District" on May 28, 2010. This action was identical to the Proposed Actions, except the time periods evaluated were May 2010 through December 2010 and April 2011 through December 2011.

1.6 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment of the Proposed Action and has determined that there is no potential for direct, indirect, or cumulative effects to the following resources; therefore they will not be considered further.

1.6.1 Cultural Resources

There would be no impacts to cultural resources under the No Action alternative as conditions would remain the same as existing conditions. There would be no impacts to cultural resources as a result of implementing the Proposed Action as 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 wells, pumps, and CVP facilities. These activities have no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

1.6.2 Indian Sacred Sites

No impact to Indian Sacred Sites would occur under the No Action alternative as conditions would remain the same as existing conditions. The Proposed Action would not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites, since no new construction or ground disturbing activities would occur as part of the Proposed Action. Therefore, there would be no impacts to Indian Sacred Sites as a result of the Proposed Action.

1.6.3 Indian Trust Assets

Indian Trust Assets are legal interests in assets that are held in trust by the United States Government for federally recognized Indian tribes or individuals. On June 26, 2012 Reclamation's Mid-Pacific Region Native American Affairs Program issued a determination that there are no Indian Trust Assets within the Proposed Action area and therefore the proposed action does not have a potential to affect Indian Trust Assets.

1.7 Resources Requiring Further Analysis

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

- Water Resources
- Land Use
- Air Quality
- Global Climate
- Biological Resources
- Socioeconomic Resources
- Environmental Justice

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 next two years without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment.

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not approve the transfer of up to 20,500 af from CCID to the Transfer Recipient Districts from July 2012 through December 2012, and April 2013 through December 2013. In addition,

Reclamation would not approve the transfer of up to 5,000 af from FCWD to SLWD and WWD for the same period. Reclamation would continue to deliver CVP water to CCID and FCWD, which would be delivered by the districts to individual landowners within the respective boundaries of CCID and FWCD.

2.2 Proposed Actions

2.2.1 Central California Irrigation District Transfers

Reclamation proposes to approve a series of annual transfers of up to 20,500 af of CCID's San Joaquin River Exchange Contractors' (Exchange Contractors) CVP Contract (Exchange Contract) supplies to the Transfer Recipient Districts. The period of the transfers would be from July 2012, following execution of the Finding of No Significant Impact and approval by the Contracting Officer, through December 2012 and April 2013 through December 2013.

Common landowners in CCID and the Transfer Recipient Districts would pump up to 75 cubic feet per second (cfs) of groundwater from up to 23 wells interspersed throughout CCID. The District has an "open enrollment" process and because of this, the exact well locations from which the water would be pumped are not yet known; wells within CCID that have previously pumped groundwater for transfer are shown in Figure 2-1. This groundwater would be discharged into CCID's conveyance system to meet in-district demands. In exchange, a portion of CCID's CVP surface water supply would be delivered to the Transfer Recipient Districts from the DMC and/or SLC.

2.2.2 Firebaugh Canal Water District Transfers

Reclamation proposes to approve a series of annual transfers of up to 5,000 af of FCWD's Exchange Contract CVP supplies to WWD and/or SLWD. The period of the transfers would be from July 2012, following execution of the Finding of No Significant Impact and approval by the Contracting Officer, through December 2012 and April 2013 through December 2013.

FCWD would pump up to 15 cfs of groundwater from up to 5 wells (Figure 2-2). Wells 1-4 would directly discharge into FCWD's Intake Canal, but well #5 would deliver water into Mendota Pool, where it would then enter the Intake Canal. This groundwater would be used to meet FCWD's in-district demands. A like amount of CVP water delivered to Mendota Pool by Reclamation for use by FCWD would be used by Reclamation to meet other obligations from the Mendota Pool. In exchange, a portion of FCWD's CVP surface water supply would be delivered to WWD and/or SLWD from the DMC and/or SLC.

2.2.3 Environmental Commitments/Requirements

Reclamation's CVP Transfer Restrictions

Reclamation would place the following restrictions on the CVP water associated with this action.

- No native or untilled land (fallow for three consecutive years or more) may be cultivated with CVP water involved in these actions.
- No new construction or modification of existing facilities may occur in order to complete the Proposed Action.
- Transfers and exchanges involving CVP water 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.
- All transfers and exchanges involving CVP water must comply with all applicable Federal, State and local laws, regulations, permits, guidelines and policies.
- The Proposed Action would not increase or decrease water supplies that would result in development.

Exchange Contractors' Groundwater Management Plan

Both CCID and FWCD are party to the San Joaquin River Exchange Contractors Water Authority's AB 3030 Groundwater Management Plan (Appendix A). The entire plan and its requirements are incorporated herein by reference. Transfers conducted under this action would be required to follow the plan's requirements for surface water transfers.

Central California Irrigation District Policies

In addition to the Exchange Contractors' groundwater management plan, CCID and their landowners would follow the policies entitled "*Central California Irrigation District Water Transfer Policy"* and "*Central California Irrigation District Rules Governing Pumping of Private Wells for Credits in Other Districts.*" Copies of both policies are attached to the Exchange Contractors' groundwater management plan (Appendix A).

Firebaugh Canal Water District Policies

In addition to the Exchange Contractors' groundwater management plan, FCWD and their landowners would follow the policy entitled "*Firebaugh Canal Water District Water Transfer Policy.*" A copy of the policy is attached to the Exchange Contractors' groundwater management plan (Appendix A).

Well #5 With regard to the well that would pump groundwater into Mendota Pool under this Proposed Action (Figure 2-2), FCWD would apply these additional commitments:

- Pump well water into Mendota Pool only when flow in Fresno Slough is to the south.
- Well water with Total Dissolved Solids (TDS) concentrations greater than 2,000 mg/L would not be pumped into the Mendota Pool. During the fall months, when there is reduced flow in the Mendota Pool and water quality at the Mendota Wildlife Area is most critical, well water with TDS higher than 1,200 mg/L TDS will not be pumped into Mendota Pool.
- Selenium in well water pumped into Mendota Pool would not exceed 2.0 µg/L.

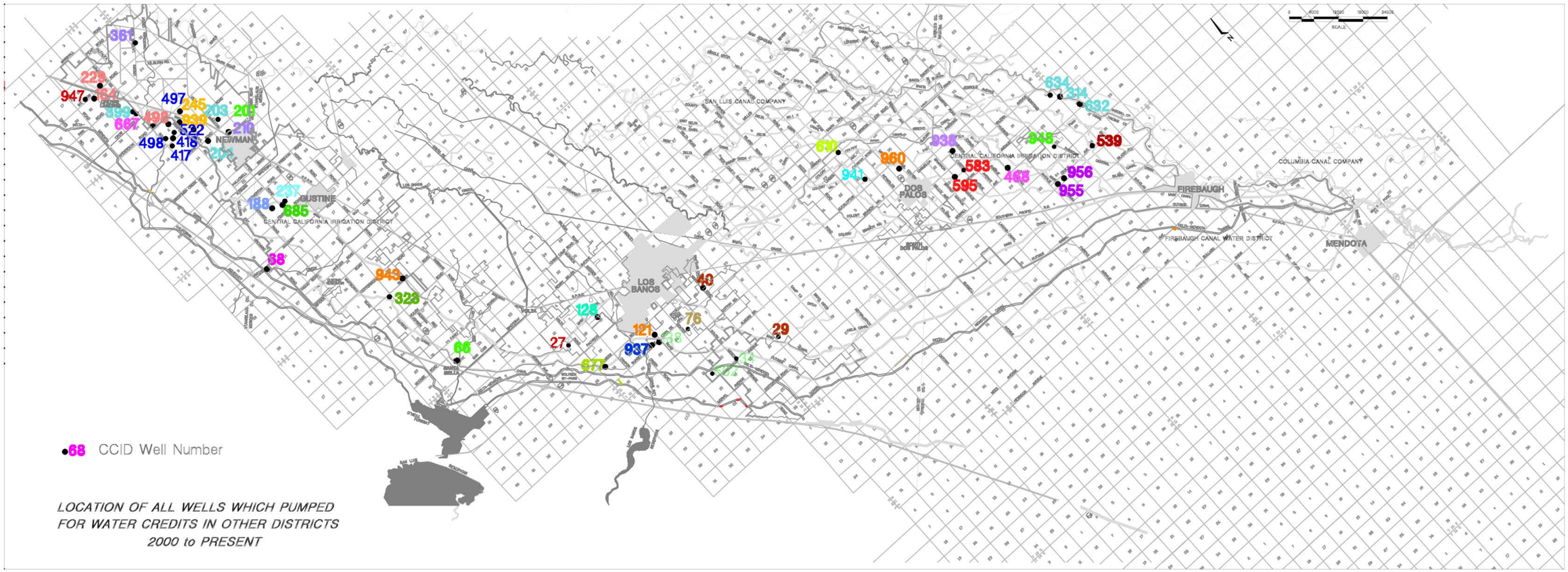

Figure 2-1 Location of Wells in CCID Which Have Pumped for Transfer Credits, 2000 to Present

Figure 2-2 Location of FCWD Wells Which Would Pump Up to 15 cfs/day

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 Water Resources

3.1.1 Affected Environment

Surface Water

Table 3-1 lists the most recent allocations for SOD CVP agricultural contractors. The five-year average is 43% of contract total. Allocations are made and refined throughout the year, based on hydrologic conditions and pumping capabilities; therefore the 2012 allocation may increase if there are additional rain and snow events. The Transfer Recipient Districts are likely to be in a water deficit even if the allocation increases.

Table 3-1 Past Decade's SOD CVP Agricultural Allocations

Year	Allocation (% of Contract Total)
2012-2013	40 %
2011-2012	80 %
2010-2011	45 %
2009-2010	10 %
2008-2009	40 %
Average	43 %

San Joaquin River Exchange Contractors The Exchange Contractors, which include CCID, FCWD, San Luis Canal Company and Columbia Canal Company, hold historic water rights to water in the San Joaquin River (SJR). Their service area is located on the west side of the San Joaquin Valley. In exchange for the CVP's regulation and diversion of the SJR at Millerton Lake (Friant Division), Reclamation agreed to supply water to the Exchange Contractors from the CVP's Delta supply. The terms of the Exchange Contract limit the quantity of surface water delivery in accordance with a five-month and seven-month schedule, and further limit the monthly quantity of water delivered.

Central California Irrigation District CCID receives its surface water supplies from Reclamation pursuant to the Exchange Contract. CCID's annual CVP supply is 532,000 af in a non-critical year. As a result of the Exchange Contract schedule constraints, CCID has historically relied on groundwater to supplement surface water especially during peak summer water demand months.

The district historically utilizes all of its annual contract supply. CCID also typically pumps approximately 49,000 af/year of groundwater and utilizes approximately 46,000 af of reclaimed water from drainage reuse (CCID, 2005).

CCID has one M&I customer, the City of Dos Palos, which typically receives approximately 1,450 af/year.

CCID's water quality is reflected by water quality analyses in CCID's Main Canal (Table 3-2). Values are in the typical range for DMC deliveries, with some variation due to additional sources of water (for example, flood flows).

Table 3-2 CCID Main Canal Headworks Salinity Data

Five Year Monthly Averages												
Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2007	550	559	521	482	457	473	350	470	593	533	548	599
2008	568	611	685	562	525	549	426	525	598	575	602	
2009		872	689	588	565	587	346	478	562	556	524	
2010	863	726	474	249	281	332	292	341	503	519	426	554
2011	140	319	218	101	73	79	140	292	295	265	285	
Avg. EC	484	587	559	529	409	361	302	408	492	481	532	618
Avg. TDS	315	379	361	343	269	239	203	268	320	313	345	398
Annual											5 Year Avg.	
Year	2007		2008		2009		2010		2011		2007 - 2011	
Avg. EC	508		301		572		454		194		468	
Avg. TDS	330		202		369		297		136		305	

Firebaugh Canal Water District Firebaugh Canal Water District provides water to 22,600 irrigable acres in northwestern Fresno County, extending from just north of the City of Mendota to northwest of the City of Firebaugh. The District shares a common boundary with Westlands, Broadview, Mercy Springs, Widren, and Panoche Water Districts. FCWD's Exchange Contract CVP supply is 85,000 af in a non-critical year. The district historically utilizes all of its annual contract supply.

Transfer Recipient Districts The Transfer Recipient Districts hold contracts with Reclamation for delivery of CVP supply via the Delta. Their service areas are located on the west side of the San Joaquin Valley. The Districts take delivery via the Delta-Mendota Canal (DMC), San Luis Canal (SLC), and/or Mendota Pool.

Del Puerto Water District Del Puerto Water District is located in San Joaquin, Stanislaus, and Merced Counties. The district annually irrigates approximately 40,000 acres and its CVP contract amount is 131,000 af/year delivered from the DMC. The district's only M&I uses are approximately 2 af/month used for commercial landscape irrigation and dust suppression.

Panoche Water District Panoche Water District is located in both Merced and Fresno Counties. The District annually irrigates approximately 35,000 acres and has a CVP contract for 93,988 af/year from either the DMC (2 turnouts), or the SLC (6 turnouts). With the exception of drought conditions, almost no groundwater is

utilized in the District. The District supplies about 50 acre-feet of water per year for M&I purposes; there is also some domestic use which is incidental to agriculture.

San Luis Water District The San Luis Water District is located near in both Merced and Fresno Counties. The District annually irrigates between approximately 30,000 and 40,000 acres. They have a CVP contract for 125,080 af/year from either the DMC or SLC. Although water deliveries by SLWD historically have been almost exclusively used for agricultural use, substantial development in and around Los Banos and Santa Nella have resulted in a shift of some water supplies to M&I use. The district currently supplies approximately 800 af/year to 1,300 homes and businesses.

Westlands Water District Westlands Water District provides water to over 570,000 acres of farmland between the California Coast Range and the trough of the San Joaquin Valley in western Fresno and Kings Counties. Westlands' CVP supply portfolio includes several contracts (Table 3-3), providing delivery from the DMC, SLC, or Mendota Pool. In addition to these CVP supplies, approximately 200,000 af of groundwater is pumped per year within the district's boundaries. The district supplies groundwater to some district farmers and owns some groundwater wells, with the remaining wells privately owned by water users within the district. Other water supply sources in the district include flood flows from the Kings River, which are available periodically and diverted from the Mendota Pool as well as transfers of supplemental water from other sources.

Table 3-3 Westlands Water District CVP Contracts

Contract or Assignment	Contract Supply (acre-feet / year)
Westlands Water District	1,150,000
Westlands Water District Distribution District #1 (full assignment from Broadview Water District)	27,000
Westlands Water District Distribution District #1 (full assignment from Centinella Water District)	2,500
Westlands Water District Distribution District # 1, Pajaro Valley Water Management Agency, and Santa Clara Valley Water District (3-way assignment from Mercy Springs Water District)	6,260
Westlands Water District Distribution District #1 (partial assignment from Oro Loma Water District)	4,000
Westlands Water District Distribution District #1 (full assignment from Widren Water District)	2,990
Westlands Water District Distribution District #2 (partial assignment from Mercy Springs Water District)	4,198
Source: Reclamation, 2012b	

Westlands delivers small amounts of untreated, non-potable CVP water which is ultimately used for M&I purposes by Lemoore Naval Air Station and by various rural commercial and residential customers located within the district boundaries

(Westlands, 2008). These M&I water deliveries are less than 0.5 percent of the water delivered by Westlands. Westlands also operates and maintains the 12-mile-long, concrete-lined Coalinga Canal, the Pleasant Valley Pumping Plant, and the laterals that supply CVP water to the cities of Coalinga and Huron, which have separate CVP supply contracts.

Mendota Pool The Mendota Pool is a regulating reservoir for water pumped from the Delta and delivered by the DMC. The Mendota Pool is impounded by Mendota Dam, which is owned and operated by CCID. Currently, Mendota Pool is sustained by the inflow from the DMC, which typically conveys 2,500 to 3,000 cubic feet per second (cfs) to the Mendota Pool during the irrigation season. A lesser amount of water from the San Joaquin River enters Mendota Pool under the San Joaquin River Restoration Program; more enters during periods of flood flow from the San Joaquin River and Kings River. Mendota Pool extends over 5 miles up the San Joaquin River 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 San Joaquin Valley basin floor.

Water quality conditions in the Mendota Pool depend on inflows from the DMC, groundwater pumped into Mendota Pool from local wells and, to a limited extent, San Joaquin River inflows. Water quality in the San Joaquin River varies considerably along the river's length. Between Friant Dam and the Mendota Pool, the quality of water is generally excellent, with TDS concentrations of less than 50 milligrams per liter (mg/L). During the irrigation season, most of the water in the Mendota Pool is imported from the Delta via the DMC. This water has higher concentrations of TDS (often more than 300 mg/L).

Panoche Creek, an ephemeral stream, also flows into Mendota Pool and, during high flows in the winter and spring, high concentrations of selenium have been brought into Mendota Pool via Panoche Creek flows (North State Resources 1999).

An additional source of water into Mendota Pool comes from adjacent landowners pumping groundwater water into Mendota Pool and taking delivery from it off the SLC via an exchange with Reclamation, at convenient timing (but within 30 days of pumping in) and at differing water quality.

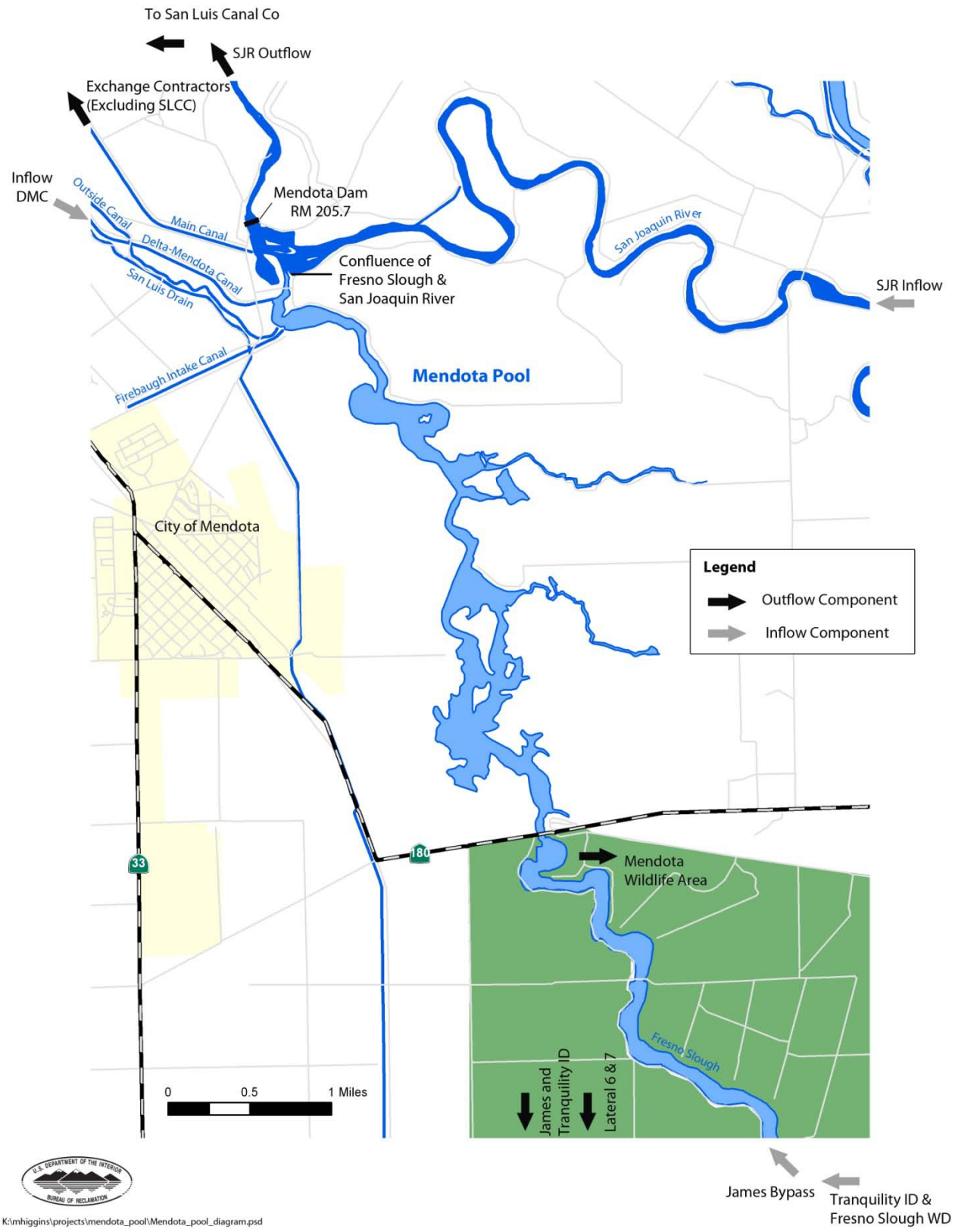

Figure 3-1 Mendota Pool

Groundwater

According to the California Department of Water Resources (DWR) Bulletin 118 (DWR, 2003), groundwater provides approximately 30 percent of the total supply for the San Joaquin River Hydrologic Region. However, the amount of groundwater use within the region varies widely, both between different areas and from one year to the next. In WWD for example, groundwater has accounted for between 5 and 60 percent of total supply over the last 15 years, while in the Exchange Contractors' service area groundwater supplies have accounted for between 10 and 40 percent of the total over the last 10 years.

Much of the San Joaquin Valley (SJV) aquifer system is in overdraft conditions, although the extent of overdraft varies widely from region to region. In the San Joaquin Basin, overdraft conditions were estimated at approximately 224,000 af, with groundwater pumping estimated at 3,520,000 af under 1990 conditions. The Tulare Basin region has experienced a greater degree of overdraft, estimated at 630,000 af, with groundwater pumping estimated at 5,190,000 af for 1990 conditions. Groundwater pumping in the SJV varies seasonally. Most groundwater is withdrawn during the spring-summer growing season, although pumping in some areas may occur throughout the entire year. Currently, the Exchange Contractors are not in an overdraft condition with the exception of the lands that lie in Madera County. No groundwater pumping for transfer would occur within Madera County.

The western SJV region has drainage problems caused by shallow clay layers of low permeability that limit recharge to groundwater. In addition, elevated concentrations of salinity, selenium, and boron exist in the semi-perched aquifer zone due to leaching from naturally occurring saline deposits from the Coast Range and have resulted in the accumulation of salts in the root zones of irrigated cropland. The San Joaquin Valley Drainage Program, established in 1984, published its recommendations for managing the drainage problem in 1990 (SJVDP 1990), culminating in a Memorandum of Understanding in 1991 that allows Federal and State agencies to coordinate activities for implementing the plan. East of the SJR, the valley is underlain by older sediments. The shallow groundwater quality is generally very good in this portion of the valley.

In the areas west of the SJR, unconfined groundwater generally flows to the northeast from the southwest, although groundwater pumping and irrigation complicates and changes local flow directions with time. Aquifer response to pumping and irrigation is relatively rapid, resulting in local changes in groundwater flow direction as associated temporary cones of depression and recharge mounds form and dissipate.

Exchange Contractors Generally, groundwater development in the Exchange Contractor's service area has not influenced shallow groundwater interaction with surface water bodies. The depth to shallow groundwater, less than 10 feet deep, has been monitored intensively since 1984. Studies performed by Kenneth D. Schmidt & Associates (KDSA) between 1997 and 2011 indicate that the

predominant trend in the Exchange Contractor's service area is a long term constancy of water levels. No long term overdrafts are indicated for the upper or lower aquifers. Over 500 agricultural wells are located in the service area, and little or no expansion of the existing groundwater production well field is projected. The projected agricultural demand for groundwater in the Exchange Contractors service area is static, while M&I demand is expected to increase moderately with time.

Agricultural pumping and transfers vary based on the availability of surface water. Table 3-4 shows historical pumping under prior years' transfer programs similar to the Proposed Action. The table gives an idea of the relationship between the Federal allocation and amounts of water pumped; for instance, in two years when the Federal allocation was 100 percent, a transfer program similar to the Proposed Action wasn't established and no water was pumped; however the table also shows that the lower the CVP allocation, the more water was transferred.

Table 3-4 Transfer Pumping in Relation to SOD CVP Agricultural Allocations

Year	SOD CVP Agricultural Allocation (% of Contract Total)	Transfer Quantity Approved (acre-feet)	Quantity Actually Pumped (acre-feet)
2011	80 %	20500	0
2010	40 %	20500	350
2009	10 %	21000	18078
2008	40 %	8900	7953
2007	50 %	14000	6202
2006	100 %	0	0
2005	100 %	0	0
2004	70 %	7629	3982
2003	75 %	5143	1957
2002	70 %	5700	4410
10-Year Average	**63.5 %**	**10337.2**	**4293.2**

Central California Irrigation District CCID is underlain by the Delta-Mendota Basin which has a usable capacity of 4,440,000 af and a safe yield of 503,000 af/year (CCID Water Conservation Plan 2005). As mentioned earlier, CCID would allow "open enrollment" in the transfer program, up to a maximum of 23 wells, which would pump an aggregate of up to 75 cfs. The wells which are part of the Proposed Action have previously been pumped (either for transfer or for landowner use); however the same wells cannot be pumped for three consecutive years under the program. While the exact location of enrolled wells is not yet known, Figure 2-1 shows wells within CCID that have previously pumped groundwater for transfers. The wells pumping under this action would be pumping from a relatively shallow level above the Corcoran clay.

CCID actively manages its surface and groundwater through tiered water price incentives and disincentives. Programs involving groundwater pumping are only approved by CCID after evaluation of any impacts of the prior year's monitoring data.

Firebaugh Canal Water District Firebaugh Canal Water District is not in a groundwater conjunctive use area. Groundwater in FCWD has generally not been pumped for direct irrigation use (without mixing), because of the high salinity (often exceeding about 3,000 mg/l of total dissolved solids) (Reclamation 2004). FCWD overlies a saline sink with very poor groundwater quality that can only be pumped and used if blended into large fresh water supplies. The wells which are part of the Proposed Action have previously been pumped from 2007 to 2009, however for 12 years prior the wells had not been used. The wells pumping under this action would also be pumping from a relatively shallow level above the Corcoran clay, from 180 to 240 feet below ground surface.

San Luis Water District and Westlands Water District Groundwater conditions of the San Luis Unit are typified by those of the Westside Sub-basin. This sub-basin consists mainly of lands in WWD and is located between the Coast Range foothills on the west and the SJR drainage and Fresno Slough on the east. Primary recharge to the aquifer system is from seepage of Coast Range streams along the west side of the sub-basin and deep percolation of surface irrigation. Flood basin deposits have caused near surface soils to drain poorly, thus restricting the downward movement of percolating water. This restricts drainage of irrigation water and results in the development of irrigation problem areas.

Groundwater levels in the Westside Sub-basin were generally at their lowest levels in the late 1960s, prior to importation of surface water. After the CVP began delivery to the San Luis Unit in 1967-68, water levels gradually increased to a maximum in about 1987-88, falling briefly during the 1976-77 drought. Water levels began dropping again during the 1987-92 drought. Through a series of wet years after the drought, 1998 water levels recovered nearly to 1987-88 levels. The fluctuations in water levels illustrate both the importance of CVP deliveries in sustaining groundwater levels and the continuing influence of local and CVP-wide hydrologic conditions on surface water availability and, hence, on groundwater conditions in those areas where groundwater is pumped. Westlands Water District and SLWD both have approved groundwater management plans, an indication of the districts' involvement in management of their groundwater resources.

In addition to the CVP supply, groundwater is available to some of the lands within WWD. The safe yield of the aquifer underlying WWD is approximately 200,000 af of water. WWD supplies groundwater to some district farmers and owns some groundwater wells, with the remaining wells privately owned by water users in WWD. Other water supply sources available to the district for purchase

include floodwater diverted from the Mendota Pool in periods of high runoff (Reclamation 2007b).

Subsidence Subsidence occurs in the western SJV where land that had been used for grazing or dry farming was converted to irrigated agriculture with the use of groundwater. As a result of historic groundwater overdraft, land subsidence is widespread along the western and southern parts of the SJV. In the years since 1970, the rate of subsidence has declined because surface water was imported to the areas. The Exchange Contractors are conducting annual subsidence monitoring as part of their AB 3030 Groundwater Management Plan (Exchange Contractors 1997, 2008). The Exchange Contractors are also continuously monitoring subsidence, water levels, and compaction at two extensometers located along CCID facilities in Fresno County. The sites are located near the Mendota Pool and at the intersection of Russell Avenue and the DMC.

The Mendota Pool Group has subsidence data for the Mendota Pool area. Their data has shown that shallow wells typically do not affect subsidence. Their most recent report shows that inelastic compaction in the Mendota Pool area for 2010 was 0.002 feet per year (Luhdorff & Scalmanini and Kenneth D. Schmidt and Associates, 2011).

3.1.2 Environmental Consequences

No Action

Under the No Action Alternative Reclamation would not approve any of the proposed transfers. SLWD, PWD, DPWD and WWD's options to mitigate the current surface water supply deficits would be limited. Landowners in SLWD, PWD, DPWD and WWD would pump available groundwater or acquire other surface water as well as taking actions to strategically reduce water demand in the district through abandonment of crops or fallowing lands.

CCID would retain their 20,500 af of Exchange Contactor CVP supplies, FCWD would retain their 5,000 af of Exchange Contactor CVP supplies, and no additional groundwater due to this project would be pumped.

Proposed Action

For the CCID action, the transfer of 20,500 af would offset a small portion of the total 2012-2013 surface water supply deficit in the Transfer Recipient Districts. The water transfer would minor compared to the total surface water supply deficits in the Transfer Recipient Districts; however some individual growers would benefit.

Water supplies in CCID would continue to meet agricultural water demand despite the transfer. CCID would pump an equivalent amount of groundwater to offset surface water deliveries. This transfer would be required to follow the environmental commitments outlined above in subsection 2.2.3. Following these commitments would maintain safe yield in the groundwater basin. The CCID

groundwater pumping may be further offset by a reduction in groundwater pumping in the Transfer Recipient Districts.

The 20,500 af of lower-quality groundwater pumped into the CCID's distribution system is required to not increase the TDS in CCID's canals to more than 700 mg/L.

Under the Proposed Action CCID would have sufficient water supplies to meet their water demands. CVP and California State Water Project (SWP) facilities would not be impacted as the transferred water must be scheduled and approved by Reclamation and DWR. No natural streams or water courses would be affected since no additional pumping or diversion that would not have happened under the No Action Alternative would occur. There would be a minor positive impact to surface water resources and a no impact to groundwater resources due to the Proposed Action.

For the FCWD action, transfer of 5,000 af would offset a small portion of the total 2012-2013 surface water supply deficit in WWD and SLWD; however some individual growers would benefit.

Water supplies in FCWD would continue to meet agricultural water demand despite the transfer. FCWD would pump an equivalent amount of groundwater to offset surface water deliveries. This transfer would be required to follow the environmental commitments outlined above in subsection 2.2.3. Following these commitments would maintain safe yield in the groundwater basin. The FWCD groundwater pumping may be further offset by a reduction in groundwater pumping in the Transfer Recipient Districts.

The following wells would pump:

- 8 cfs well estimated to pump up to 1,700 af
- 4 cfs well estimated to pump up to 1,100 af
- 5 cfs well estimated to pump up to 1,000 af
- 3 cfs well estimated to pump up to 900 af
- 5 cfs well estimated to pump up to 300 af (well # 5)

Due to the shallow zone from which the wells are pumping, the groundwater being intercepted would be water that is normally replenished annually. There has been no long-term (KDSA 2011overdraft experienced in this aquifer. Additionally, since the wells are pumping a relatively small quantity from an area of no other groundwater pumping and the pumping is being done from the shallow zone, subsidence is unlikely to occur. The Mendota Pool Group reports have shown that pumping from shallow aquifers does not cause subsidence.

The 5,000 af of low quality groundwater pumped into the FCWD's distribution system has been calculated to change the TDS in FCWD's Intake Canal by no more than 30 mg/L. This water quality impact is within the normal water quality

fluctuation in the canal system due to Delta pumping tidal influences and other influences. Under the Proposed Action, FCWD would have sufficient water supplies to meet their water demands. Central Valley Project and SWP facilities would not be impacted, as the transferred water must be scheduled and approved by Reclamation and DWR. No natural streams or water courses would be affected since no additional pumping or diversion that would not have happened under the No Action Alternative would occur. There would be no impact to surface or groundwater water resources due to the Proposed Action.

Cumulative Impacts

Because the Proposed Action would not involve construction or modification, nor interfere with CVP or SWP operations, there would be no cumulative impacts to existing facilities or other contractors.

Because CCID and FCWD would follow the Exchange Contractors' AB3030 Groundwater Management Plan and pumping be restricted to below the safe yield, there would be no cumulative impacts to groundwater or subsidence in the Exchange Contractors' service area. Since the transfers may reduce groundwater pumping in the Transfer Recipient Districts, the Proposed Action may reduce the risks of groundwater overdraft and subsidence in their respective areas. As a result, the Proposed Action may have a cumulative beneficial effect on groundwater resources.

Because groundwater quality would be monitored by CCID and FCWD, there would be no cumulative impacts to water quality involving water delivered via their distribution systems. Since the transferred water delivered via the DMC and SLC would be CVP supplies, there would be no cumulative impacts to water quality delivered to the Transfer Recipient Districts.

These findings indicate that there may be beneficial effects and no adverse impact to water resources resulting from the Proposed Action.

3.2 Land Use

3.2.1 Affected Environment

Central California Irrigation District

CCID covers an area of 144,000 acres on the west side of the SJV lying between cities of Mendota on the south and Crows Landing on the north. CCID serves 1,500 agricultural customers as well as the City of Dos Palos, their sole M&I customer.

Del Puerto Water District

Del Puerto Water District is located along the DMC corridor in southern San Joaquin County, western Stanislaus County and northwestern Merced County. The district's overall area is approximately 54,671 acres in size, of which approximately 40,000 acres are developed in irrigated agriculture. The district's

only M&I uses are approximately 2 af/month used for commercial landscape irrigation and dust suppression.

Firebaugh Canal Water District

Firebaugh Canal Water District provides water to 22,600 irrigable acres in northwestern Fresno County, extending from just north of the City of Mendota to northwest of the City of Firebaugh. The District shares a common boundary with Westlands, Broadview, Mercy Springs, Widren, and Panoche Water Districts. FCWD is located within the Grassland Drainage Area boundary.

Panoche Water District

Panoche Water District is located in both Merced and Fresno Counties. The District annually irrigates approximately 35,000 acres. There are approximately 300 full-time residents living in the PWD service area. This population is comprised primarily of farm labor residents working on adjacent farms. This population has remained virtually the same for over 10 years and is not anticipated to grow due to any non-farming circumstances. Panoche Water District supplies about 50 af of water per year for M&I and domestic purposes. Panoche Water District does not have any industrial use customers.

San Luis Water District

SLWD is located on the western side of theSJV near the town of Los Banos, within both Merced and Fresno Counties. SLWD was formed in 1951 and is comprised of approximately 66,218 acres, of which 56,500 are irrigable. In recent years irrigated acreage has been between 30,000 and 40,000 acres due to declining water supply reliability. Although water deliveries by SLWD historically have been almost exclusively used for agricultural use, substantial development in and around Los Banos and Santa Nella have resulted in a shift of some water supplies to M&I use. The district currently supplies approximately 800 af/year to 1,300 homes and businesses.

Westlands Water District

Westlands covers almost 950 square miles of prime farmland and includes approximately 570,000 irrigable acres. More than 60 different crops are grown commercially in the district. The cropping patterns have changed over the years depending upon water availability, water quality and the agricultural economy and market factors. The acreage trend is toward the planting of vegetable and permanent crops while cotton and grain crops have decreased.

Westlands supplies small amounts of water for domestic and M&I uses, however the majority of their water supply is used for agriculture. The current population within the district is approximately 50,000. The major community entirely within WWD is Huron. Three Rocks and Five Points are smaller communities within WWD. The communities of Firebaugh, Mendota, Kerman, Tranquillity, San Joaquin, Lemoore, and Stratford lie just outside the district's eastern edge. Unlike many other key growing areas of California, urbanization is not a direct threat to productivity. The district's M&I deliveries include cities and governmental

agencies; however, none of this water is treated by the district before its distribution.

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative some crop failure is likely. With insufficient water to continue with current agricultural practices, row crops would likely be abandoned and additional ground fallowed. Water would most likely be diverted to sustain permanent crops.

Proposed Action

For the proposed action involving CCID, the water delivered to the Transfer Recipient Districts would offset a small portion of their surface water supply deficit. The 20,500 af/year of additional water supplies would allow continued production on lands that would have otherwise been fallowed, and sustain permanent crops that otherwise may have been abandoned.

There would be no land use changes in CCID as their water supply quantity would not change. Irrigated acreages and crop mixes would remain the same.

There would be a slight positive impact on land use in the Transfer Recipient Districts due to the ability of some established row crops to remain in production and the enhanced survival of orchards and vineyards.

For the proposed action involving FCWD, the 5,000 af/year of additional water delivered to SLWD or WWD would offset a portion of their surface water supply deficit. The 5,000 af/year of additional water supplies would allow continued production on lands that would have otherwise been fallowed, and sustain permanent crops that otherwise may have been abandoned.

There would be no land use changes in FCWD as their water supply quantity would not change. Irrigated acreages and crop mixes would remain the same.

There would be a slight positive impact on land use in SLWD and/or WWD due to the ability of some established row crops to remain in production and the enhanced survival of orchards and vineyards.

Cumulative Impacts

There would be no new construction or excavation occurring as part of the Proposed Action. No native or untilled land (fallow for 3 years or more) would be cultivated with the CVP water involved with these actions. The Proposed Action would not increase or decrease water supplies that would result in development. Due to these requirements and since the Proposed Action supports current land use, there would be no cumulative adverse impacts to land use.

3.3 Air Quality

3.3.1 Regulatory Setting

Section 176 (c) of the Federal Clean Air Act (42 U.S.C. 7506 (c)) requires any entity of the federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan required under Section 110 (a) of the Clean Air Act (42 U.S.C. 7401(a)) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with State Implementation Plan's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards 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 would, in fact conform to the applicable State Implementation Plan before the action is taken.

On November 30, 1993, the Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 CFR § 93 Subpart B for all federal activities except those covered under transportation conformity. A federal agency that takes action in a non-attainment or maintenance area is required to make a determination of general conformity. A determination of general conformity is not required if the proposed action's total of direct and indirect emissions of the relevant criteria pollutants and their precursors are less than *de minimis* amounts (Table 3-5).

3.3.2 Affected Environment

The Action area lies within the San Joaquin Valley Air Basin, the second largest air basin in California (California Air Resources Board, 2012). Air basins share a common "air shed," the boundaries of which are defined by surrounding topography. Although mixing between adjacent air basins inevitably occurs, air quality conditions are relatively uniform within a given air basin. The San Joaquin Valley Air Basin experiences episodes of poor atmospheric mixing caused by inversion layers formed when temperature increases with elevation above ground, or when a mass of warm, dry air settles over a mass of cooler air near the ground. Despite years of improvements, the air basin does not meet state and federal health-based air quality standards (Table 3-5).

The pollutant of greatest concern in the San Joaquin Valley Air Basin is ozone. Ozone precursors include carbon monoxide, volatile organic compounds (VOC), and nitrogen oxides (NO_x). Other pollutants of concern in the air basin include inhalable particulate matter between 2.5 and 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

Table 3-5 San Joaquin Valley Air Basin Attainment Status and General Conformity *de minimis* Thresholds

Pollutant	Federal Attainment Status	40 CFR §93.153 *de minimis* Threshold (tons/year)	California Attainment Status
Ozone - One hour	No Federal Standard[f]	-	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Extreme[e]	10 tons/year VOCs or NO_x as precursors	Nonattainment
PM_{10}	Attainment/Maintenance[c]	100	Nonattainment
$PM_{2.5}$	Nonattainment[d]	100	Nonattainment
Carbon Monoxide	Attainment/Unclassified	-	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	-	Attainment
Sulfur Dioxide	Attainment/Unclassified	-	Attainment
Lead (Particulate)	No Designation or Classification	-	Attainment
Hydrogen Sulfide	No Federal Standard	-	Unclassified
Sulfates	No Federal Standard	-	Attainment
Visibility Reducing Particles	No Federal Standard	-	Unclassified
Vinyl Chloride	No Federal Standard	-	Attainment

[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
[d] The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).
[e] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
[f] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Source: San Joaquin Valley Air Pollution Control District (2012); 40 CFR §93.153

3.3.3 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not approve the proposed transfers. Private well owners could continue to pump groundwater for local use, potentially impacting air quality.

Proposed Action

Most of the wells that would be pumped have electric motors. Two wells have diesel engines that meet California Air Resources Board and Environmental Protection Agency Tier 3 specifications. As such, the engines meet the emission requirements for compression engines as outlined in San Joaquin Valley Air Pollution Control District Rule 4702, Section 5.2.4. Projected emissions from these engines would be below the *de minimis* amounts specified in 40 CFR § 93.153. Therefore, a determination of general conformity under the Clean Air Act is not required, and there would be no air quality impacts associated with this Proposed Action.

Cumulative Impacts
All emissions result in a cumulative increase in pollutants within the air basin; however emissions from the Proposed Action are well below the *de minimis* thresholds.

3.4 Global Climate

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes can contribute to climate change, such as changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, and burning fossil fuels (EPA 2011a).

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases, such as carbon dioxide, occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The principal greenhouse gases that enter the atmosphere because of human activities are: carbon dioxide, methane, nitrous oxide, and fluorinated gases (EPA 2011a).

During the past century humans have substantially added to the amount of greenhouse gases in the atmosphere by burning fossil fuels such as coal, natural gas, oil and gasoline to power our cars, factories, utilities and appliances. The added gases, primarily carbon dioxide and methane, are enhancing the natural greenhouse effect, and likely contributing to an increase in global average temperature and related climate changes. At present, there are uncertainties associated with the science of climate change (EPA 2011b).

Climate change has only recently been widely recognized as an imminent threat to the global climate, economy, and population. As a result, the national, state, and local climate change regulatory setting is complex and evolving.

In 2006, the State of California issued the California Global Warming Solutions Act of 2006, widely known as Assembly Bill 32, which requires California Air Resources Board to develop and enforce regulations for the reporting and verification of statewide greenhouse gases emissions. California Air Resources Board is further directed to set a greenhouse gases emission limit, based on 1990 levels, to be achieved by 2020.

In addition, the EPA has issued regulatory actions under the Clean Air Act as well as other statutory authorities to address climate change issues (EPA 2011c). In 2009, the EPA issued a rule (40 CFR Part 98) for mandatory reporting of greenhouse gases by large source emitters and suppliers that emit 25,000 metric tons or more of greenhouse gases as carbon dioxide equivalents per year. The rule is intended to collect accurate and timely emissions data to guide future policy

decisions on climate change and has undergone and is still undergoing revisions (EPA 2012).

3.4.1 Affected Environment

Global mean surface temperatures have increased nearly 1.8°F from 1890 to 2006 (Intergovernmental Panel on Climate Change, 2007). Models indicate that average temperature changes are likely to be greater in the northern hemisphere. Northern latitudes (above 24°North) have exhibited temperature increases of nearly 2.1°F since 1900, with nearly a 1.8°F increase since 1970 alone (Intergovernmental Panel on Climate Change, 2007). Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of greenhouse gases are likely to accelerate the rate of climate change.

More than 20 million Californians rely on the CVP and SWP. 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).

3.4.2 Environmental Consequences

No Action

The No Action Alternative could result in reduced crop production, which could reduce carbon dioxide fixation. Estimates for this are uncertain, since it is dependent on the crops grown and any processing requirements.

Proposed Action

The Proposed Action would result in the direct emissions of greenhouse gases through the use of diesel fuel. Greenhouse gases generated are expected to be extremely small compared to sources contributing to potential climate change since the movement of water under the Proposed Action would be conveyed mostly via electric pumps which would not result in the power plant exceeding operating capacity, and, thus, the applicable emissions permit. The total greenhouse gas emissions from the diesel pumps would be far below the 25,000 metric tons per year threshold for reportable greenhouse gas emissions. As such, the Proposed Action would not result in a substantial change in greenhouse gases emissions, and there would be no adverse effect to global climate.

Cumulative Impacts

Cumulative impacts from greenhouse gas emissions generated by the Proposed Action are expected to be extremely small compared to the background emissions in the area. The total emissions are well below any established threshold. While

any increase in greenhouse gases emissions would add to the global inventory of gases that would contribute to global climate change, the Proposed Action would not result in a substantial increase in local or global greenhouse gas emissions.

CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility and therefore water resource changes due to climate change would be the same with or without the Proposed Action.

3.5 Biological Resources

3.5.1 Affected Environment

The following list (Table 3-6) was obtained on March 28, 2012, (document number 120328061159) by accessing the U.S. Fish and Wildlife (FWS) Database: http://www.fws.gov/pacific/sacramento/es/spp_lists/auto_list.cfm. The database was last updated on September 18, 2011.

The list is for the Stratford, Westhaven, Kettleman City, Huron, Guijarral Hills, Avenal, La Cima, Coalinga, Burrel, Vanguard, Lemoore, Five Points, Westside, Harris Ranch, Califax, Tres Pecos Farms, Lillis Ranch, San Joaquin, Helm, Tranquillity, Coit Ranch, Levis, Cantua Creek, Chaney Ranch, Chounet Ranch, Monocline Ridge, Firebaugh, Oxalis, Dos Palos, Hammonds Ranch, Broadview Farms, Charleston School, Ortigalita Peak, Laguna Seca Ranch, Los Banos Valley, Volta, Los Banos, Tracy, Vernalis, Solyo, Patterson, Howard Ranch, Westley, Delta Ranch, Poso Farm, Mendota Dam, Crows Landing, Newman, Gustine, Hatch, Ingomar, Santa Rita Bridge and San Luis Dam quadrangles.

Table 3-6 Federal Status Species Potentially Found in the Proposed Action Area

Common Name	***Species Name***	***Federal Status under the ESA***	***Determination of Effect under ESA***	***Summary basis for ESA determination***
Blunt-nosed leopard lizard	*Gambilia sila*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
California condor	*Gymnogyps californiaus*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
California jewelflower	*Caulanthus californicus*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
California red-legged frog	*Rana draytonii*	T	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
California red-legged frog critical habitat		Proposed CH	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
California tiger salamander	*Ambystoma californiense*	T	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.

Common Name	***Species Name***	***Federal Status under the ESA***	***Determination of Effect under ESA***	***Summary basis for ESA determination***
California tiger salamander critical habitat		CH	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Central Valley spring-run chinook salmon	*Oncorhynchus tshawytscha*	T	NE	No effect on natural stream systems.
Central Valley steelhead	*Oncorhynchus mykiss*	T	NE	No effect on natural stream systems.
Central Valley steelhead critical habitat		CH	NE	No effect on natural stream systems.
Conservancy fairy shrimp	*Branchinecta conservatio*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Conservancy fairy shrimp critical habitat		CH	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Delta smelt	*Hypomesus transpacificus*	T	NE	No downstream effects from action.
Delta smelt critical habitat		CH	NE	No downstream effects from action.
Fresno kangaroo rat	*Dipodomys nitratoides exillis*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Fresno kangaroo rat critical habitat		CH	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Giant garter snake	*Thamnophis gigas*	T	NE	No land use changes would occur as a result of this action, no adverse water quality changes at Mendota Pool; no conversion of habitat, and no new facilities.
Giant kangaroo rat	*Dipodomys ingens*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Green sturgeon, North American DPS	*Hypomesus transpacificus*	T	NE	No downstream effects from action.
Large-flowered fiddleneck	*Amsinckia grandiflora*	E	NE	Does not occur in area of effect.
Least Bell's Vireo	*Vireo bellii pusillus*	E	NE	Might fly over but would not stop in area of effect.
Longhorn fairy shrimp	*Branchinecta longiantenna*	E	NE	Does not occur in area of effect.

Common Name	***Species Name***	***Federal Status under the ESA***	***Determination of Effect under ESA***	***Summary basis for ESA determination***
Longhorn fairy shrimp critical habitat		CH	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	*Cordylanthus palmatus*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Riparian brush rabbit	*Sylvilagus bachmani riparius*	E	NE	Does not occur in area of effect.
Riparian woodrat	*Neotoma fuscipes riparia*	E	NE	Does not occur in area of effect.
Sacramento River winter-run chinook salmon	*Oncorhynchus tshawytscha*	T	NE	No effect on natural stream systems.
San Joaquin kit fox	*Vulpes macrotis mutica*	E	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	*Monolopia congdonii*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	E	NE	No land use changes would occur as a result of this action, no conversion of habitat, and no new facilities.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	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	*Branchinecta lynchi*	T	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 critical habitat		CH	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	*Lepidurus packardi*	E	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 critical habitat		CH	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	*Coccyzus americanus occidentalis*	C	NE	Might fly over but would not stop in area of effect.

3.5.2 Environmental Consequences

The action area consists of agricultural fields that provide some habitat values for a few species listed above, particularly the San Joaquin kit fox. However there is routine disturbance due to on-going farming practices, and so even the San

Joaquin kit fox would have very limited use of the area and would generally not be able to den there.

The giant garter snake can potentially be affected by low water quality, and in this portion of its range, the species is threatened with extirpation. Its status has been detailed in the recent biological opinion issued by the USFWS for the third use agreement for the Grassland Bypass Project (FWS 2010). The biological opinion also explains the risks that elevated selenium pose for the giant garter snake. Water that the snakes are exposed to should not exceed 2 ppb selenium, in order to avoid selenium toxicosis. Water quality for the giant garter snake would be of issue for water pumped into Mendota Pool, and for water that would be pumped into any canal that also serves as a water supply channel for Grasslands wetlands. The Main Canal conveys wetlands water supplies. The monthly average TDS in southern Mendota Pool normally ranges from slightly less than 350 mg/L TDS to slightly less than 570 mg/L TDS. These levels take into account cumulative actions by the City of Mendota, the Mendota Pool Group, and Meyers Farm Water Bank; these levels are taken from Reclamation (2007c).

CCID would not increase the receiving water's salinity above 700 mg/L TDS, and FCWD would not increase the level by more than 30 mg/L.

The giant garter snake, because of extensive losses of suitable natural wetlands, now relies on rice fields in parts of its range. Some rice is grown in portions of some of the districts involved in these proposed actions. As recently as 2008, the giant garter snake was sighted in the Mendota Pool area (J. Winckel, pers comm.).

No Action

Under the No Action Alternative, there would be no impacts to biological resources since conditions would remain the same as existing conditions.

Proposed Action

Most of the habitat types required by species protected by the ESA do not occur in the project area. The Proposed Action would not involve the conversion of any land fallowed and untilled for three or more years. The Proposed Action also would not change the land use patterns of the cultivated or fallowed fields that do have some value to listed species or birds protected by the Migratory Bird Treaty Act (MBTA). Since no natural stream courses or additional surface water pumping would occur, there would be no effects on listed fish species. No critical habitat occurs within the area affected by the Proposed Action and so none of the primary constituent elements of any critical habitat would be affected.
Based on the two districts' commitments and the background salinity levels, TDS would remain at or below 700 mg/L, which would be low enough to protect the giant garter snake both in Mendota Pool and in suitable habitat in the Grasslands wetlands. Requirements by CCID for non-detect levels of selenium, and the fact that FCWD will not approve any water transfer involving a substitution of groundwater that FCWD determines would interfere with their ability to meet water quality objectives imposed by the Central Valley Regional Water Quality

Control Board would protect the giant garter snake from effects of elevated selenium. There would be no loss of acres of land planted with rice as a result of these proposed actions. Although these are transfers with regard to Reclamation's involvement, there would be groundwater substitution.

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 preclude any impacts to wildlife, whether Federally listed or not.

Cumulative Impacts

As the Proposed Action is not expected to result in any direct or indirect impacts to biological resources, there would be no cumulative impacts.

3.6 Socioeconomic Resources

3.6.1 Affected Environment

The agricultural industry significantly contributes to the overall economic stability of the SJV. 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 economical variances may include fluctuating agricultural prices, pest outbreaks, changing hydrologic conditions, increased fuel and power costs.

3.6.2 Environmental Consequences

No Action

Under the No Action Alternative economic conditions in the vicinity of SLWD, DPWD, PWD and WWD would worsen. As agricultural land is taken out of production there would be a decreasing need for farm labor, and farm equipment and supplies. The economic impacts of reduced agricultural production would reverberate through the central SJV's economy at a time when it is already shaky.

Proposed Action

The Proposed Action would allow for continued water deliveries to SLWD, DPWD, PWD and WWD and would maintain the stability of the agricultural market and economical vitality for the SJV to some degree. The proposed transfer would not interfere with SWP or CVP priorities or operations.

The water service transactions are temporary actions and do not result in long-term increases in water supplies that would encourage urbanization or construction.

Cumulative Impacts

The Proposed Action may result in a stronger local agricultural economy during the program timeframe. Since water supply availability may allow permanent

crops to be sustained during dry years, there may be beneficial cumulative impacts to socioeconomic resources as a result of the Proposed Action.

3.7 Environmental Justice

Executive Order 12898 (February 11, 1994) mandates Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

3.7.1 Affected Environment

The market for seasonal workers on local farms draws thousands of migrant workers, commonly of Hispanic origin from Mexico and Central America. The population of some small communities typically increases during late summer harvest.

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.

3.7.2 Environmental Consequences

No Action

The No Action Alternative could result in harm to minority or disadvantaged populations within the vicinity of the Transfer Recipient Districts. Lands would be temporarily or permanently taken out of agricultural production with resulting reduction in the need for farm labor.

Proposed Action

The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease. The Proposed Action would not disproportionately impact economically disadvantaged or minority populations. Some amount of agricultural production that would not be sustained with the current water availability would continue with the resulting preservation of jobs. The unemployment rate in the vicinity of the Transfer Recipient Districts suggests that any actions that maintain seasonal jobs should be considered beneficial. Employment opportunities for low-income wage earners and minority population groups would be within historical conditions. Disadvantaged populations would not be subject to disproportionate impacts.

Cumulative Impacts

Similar to the evaluation performed in socioeconomic resources, water supply availability may allow permanent crops to be sustained during dry years. Since there may be beneficial cumulative impacts to the local agricultural economy as a result of the Proposed Action, employment would remain the same as historical

levels for minority and low-income wage earners. Therefore, there may be a beneficial cumulative impact to low-income and minority populations.

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 between June 27 and July 5, 2012.

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

The Fish and Wildlife Coordination Act 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 water development projects. Therefore the Fish and Wildlife Coordination Act 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. Reclamation notified the Service when the DEA was being developed; additionally, Reclamation corresponded with the Service regarding ESA concerns during the draft and comment period of EA-10-002, which involved an action similar to the current Proposed Action. Since there would be no ground disturbance, no adverse water quality changes in giant garter snake habitat, no change in rice acreage, and because water would move in existing facilities, there would be no effect on endangered species.

4.4 National Historic Preservation Act (16 USC § 470 et seq.)

The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary Federal legislation outlining the Federal government's responsibility to cultural resources. Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on cultural resources eligible for inclusion in the NRHP. Such cultural resources are referred to as historic

properties. The 36 CFR Part 800 regulations that implement Section 106 of the NHPA describe how Federal agencies assess and resolve the effects of undertakings on historic properties. The current Proposed Action has no potential to cause effects on historic properties pursuant to 36 CFR Part 800.3(a)(1).

4.5 Indian Trust Assets

ITA are legal interests in property held in trust by the United States for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITA can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the United States is the trustee. By definition, ITA cannot be sold, leased, or otherwise encumbered without approval of the United States. The characterization and application of the United States trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

4.6 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 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 would be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns.

The Proposed Action would not affect birds protected under the MBTA.

4.7 Floodplain Management (Executive Order 11988) and Protection of Wetlands (Executive Order 11990)

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

4.8 Clean Air Act (42 USC § 7506(C))

Section 176 (c) of the Clean Air Act [42 U.S.C. 7506 (c)] requires 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 State Implementation Plan (SIP) required under Section 110 (a) of the Federal Clean Air Act (42 U.S.C. 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 National Ambient Air Quality Standards 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.

On November 30, 1993, USEPA promulgated final general conformity regulations at 40 CFR 93 Subpart B for all Federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed Federal action in a non-attainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutant caused by the Proposed Action equal or exceed certain de minimis amounts thus requiring the Federal agency to make a determination of general conformity.

Most of the wells that would be pumped have electric motors and the other two have the latest tier three diesel engines. These low emission engines would not reach the de minimis threshold and therefore a conformity analysis is not required under the Clean Air Act and there would be a slight impact on air quality.

4.9 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 Corps 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.

No dredged or fill material would be discharged into any waters of the U.S. under the Proposed Action so no water quality certifications under Section 401 of the CWA are required.

Section 404

Section 404 of the CWA authorizes the Corps to issue permits to regulate the discharge of "dredged or fill materials into waters of the United States" (33 USC § 1344). No activities such as dredging or filling of wetlands or surface waters would be required for implementation of the Proposed Action, therefore permits obtained in compliance with CWA section 404 are not required.

Section 5 Preparers and Reviewers

Nicholas Kilb – Natural Resource Specialist
Shauna McDonald– Wildlife Biologist
Patricia Rivera – Indian Affairs Officer
Joanne Goodsell – Archeologist
Chuck Siek – Supervisory Natural Resource Specialist

Section 6 Acronyms & Abbreviations

af	acre-feet; the amount of water required to cover an area of one acre with one foot of water.
CCID	Central California Irrigation District
CVP	Central Valley Project
DMC	Delta-Mendota Canal
DPWD	Del Puerto Water District
DWR	California Department of Water Resources
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
Exchange Contract	San Joaquin Exchange Contractors' CVP contract
Exchange Contractors	San Joaquin River Exchange Contractors Water Authority
FCWD	Firebaugh Canal Water District
FWS	Fish and Wildlife Service
ITA	Indian Trust Assets
KDSA	Kenneth D. Schmidt & Associates
M&I	municipal and industrial
MBTA	Migratory Bird Treaty Act
Mendota WA	Mendota Wildlife Area
NAAQS	National Ambient Air Quality Standards
NHPA	National Historic Preservation Act
PWD	Panoche Water District
Reclamation	Bureau of Reclamation
SIP	State Implementation Plan
SJR	San Joaquin River
SJV	San Joaquin Valley
SLC	San Luis Canal
SLR	San Luis Reservoir
SLWD	San Luis Water District
SOD	South-of-Delta
SWP	California State Water Project
TDS	Total dissolved solids
Transfer Recipient Districts	SLWD, PWD, DPWD, and WWD
WWD	Westlands Water District

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Appendix A San Joaquin River Exchange Contractors' AB3030 Groundwater Management Plan

UPDATED 3030 GROUNDWATER MANAGEMENT PLAN FOR THE SAN JOAQUIN EXCHANGE CONTRACTORS

Prepared for:
San Joaquin River Exchange Contractors Water Authority
Los Banos, California

by
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February 2008

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February 12, 2008

Mr. Steve Chedester
Executive Director
San Joaquin River Exchange
Contractors Water Authority
541 H Street
Los Banos, CA 93635

Re: Groundwater Management Plan

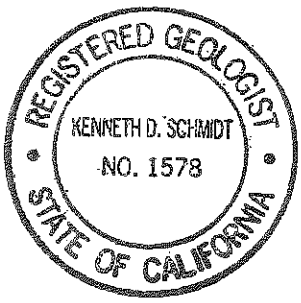
Dear Steve:

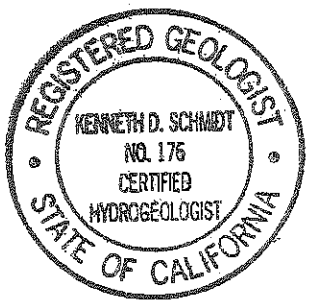
Submitted herewith is our report on Updated 3030 Groundwater Management Plan within the Exchange Contractors services area.

Sincerely yours,

Kenneth D. Schmidt
Geologist 1578
Certified Hydrogeologist 176

KDS/pe





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INTRODUCTION

General

The San Joaquin River Exchange Contractors Water Authority ("Exchange Contractors" or "Authority") is a Joint Powers Authority organized under the Joint Exercise of Power Act. The member agencies are Central California Irrigation District ("CCID"), Firebaugh Canal Water District ("FCWD"), Columbia Canal Company ("CCC") and San Luis Canal Company ("SLCC"). Each of the entities is a holder in common of certain priority water rights, which are the subject matter of an agreement executed on February 14, 1968, between the United Sates of America ("Bureau of Reclamation, Department of Interior" or "USBR") and the Exchange Contractors. The title of the agreement is the "Second Amended Contract for Exchange of Waters" (Contract No. Ilr-1144), commonly known and referred to as the "Exchange Contract". The Exchange Contract confers upon the USBR the right to utilize the subject water so long as USBR delivers specified quantities of substitute water at specified locations via the Delta-Mendota Canal.

The Authority

The Authority is empowered to administer and protect the jointly held water rights under the Exchange Contract and power

incidental, necessary and convenient thereto, administer operation under the Division of Water Agreement and represent the Exchange Contractors in many water matters, including, but not limited to, operation of the Central Valley Project, conjunctive use of groundwater and surface supplies, water conservation, reclamation, transfers, drainage, management of the San Francisco Bay-Delta Estuary, environmental considerations and related legislation, litigation, and administrative proceedings. The Exchange Contractors Water Authority is committed to managing its ground and surface water resources to replenish and preserve its groundwater.

AB 3030

The State Legislature enacted AB 3030 (Costa), the Groundwater Management Act, in 1992. The act was codified as Part 2.75, commencing with Section 10750 of Division 6 of the Water Code and became effective January 1, 1993.

1. The act applies to all groundwater basins in the state, except any portion of a groundwater basin that is subject to groundwater management by a local agency or a water master pursuant to other provisions of law, court order, judgement, or decree, unless the local or water master agrees.

2. It provides that any local agency, whose service area includes an applicable groundwater basin, may by ordinance or resolution,

adopt and implement a groundwater management plan within a part or all of its service area in accordance with certain procedures.

The Role of Groundwater in the Exchange Contractors Water Operations

The conjunctive use of groundwater within the Exchange Contractors service area is required due to surface water delivery restrictions contained within the Exchange Contract. In addition, peak irrigation demands within certain areas exceed surface water distribution channel capacities. Groundwater is pumped and delivered into the system to make up capacity shortfalls.

1. The Exchange Contract provides both non-critical and critical surface water entitlement maximums on a per month basis, on a five-month basis (January, February, March, November, and December), and on a seven-month basis (April through October). In addition, monthly maximum instantaneous delivery flow rates are defined. Provisions are made to allow deliveries in excess of these rates if it can be done without detriment to the United States or its other obligations.

2. The Exchange Contract entitlement maximums and the instantaneous flow limits require conjunctive use of surface and groundwater to meet peak crop water demands during June, July, and August. While USBR has historically allowed instantaneous flow deliv-

eries (except in 1992) in excess of the limits, the five-month and seven-month entitlement maximums remain in effect. When USBR provides this flexibility, the Contractors must pump groundwater from District owned wells during April, May, and early June to "bank" sufficient Exchange Contract water for use during peak demands in June, July, and August. Groundwater pumpage from District owned wells must continue through June, July, and August, due to the seven-month Exchange Contract maximum for surface water. During the rest of the water year, there are sufficient quantities of surface water to meet crop water demands and provide necessary quantities for storage in the aquifer for use during the critical months.

3. During critical water years the necessity for conjunctive use of water increases. The seven-month surface water entitlement maximums decrease during critical water years. The five month maximums are not reduced.

4. Private well pumpage within the Exchange Contractors service area also fluctuates in response to the non-critical or critical surface supply. As shown in Table 1, the total groundwater pumpage within the Exchange Contractors service area averaged about 160,000 acre-feet per year from 1996 to 2006. The pumping ranged from about 80,400 acre-feet in 1998 to 212,000 acre-feet in 2004. Tiered water prices are analyzed yearly based on the annual "deep

TABLE 1-WELL PUMPAGE INSIDE AND OUTSIDE OF THE EXCHANGE CONTRACTORS SERVICE AREA

USING SAME METHODOLOGY FOR CALC'S (1996–2006)

CCID's WELLS (NO.)	TOTAL NO. OF WELLS (included in AREAS summary)	AB3030 SUB-AREAS	1996 REV.2002	1997 REV.2002	1998 REV.2002	1999 REV.2002	2000 REV.5/2002	2001	2002	2003	2004	2005	2006	96-05 AVERAGE (ALL WELLS) col. (h)	2006 DATA AS A PERCENT OF AVG. (% of col. h)	2006 PUMPAGE WELL LOCATION BRAKEDOWN: ALL WELLS IN (CCID) (a)	WELLS OUT of (CCID) (b)	CCID's WELLS already included in col. a	DMC PUMP-ER'S /AREA (already incl'd)
12	88	A	9,858	12,667	4,680	11,010	11,597	14,337	11,609	13,016	17,505	6,886	3,768	11,353	33%	3,768			
7	105	B	9,832	10,531	6,625	12,560	16,986	17,629	12,104	16,767	17,091	7,972	7,424	12,500	59%	7,424		64	
4	85	C	12,907	13,003	4,009	10,218	13,289	14,288	9,900	14,343	21,362	11,697	12,614	12,489	101%	12,614		21	812
1	32	D	2,672	4,316	3,534	3,402	2,060	2,908	1,413	2,061	2,834	1,582	187	2,602	7%	187			
26	122	E	20,773	29,962	8,666	27,042	32,335	30,720	34,358	39,720	39,639	21,515	11,860	25,977	49%	11,860		1,751	
	4	F		373				2,707	804	804			343	409	84%	343			
9	16	G	5,002	6,609	539	5,172	8,656	6,929	7,545	7,446	10,967	1,994	1,098	6,388	17%	1,098		120	
	86	H	4,842	10,680	4,652	8,431	30,240	24,452	23,108	15,889	22,669	8,861	11,667	16,078	73%		11,667		
	10	I			727	3	22		19	19			1,198	79	1500%		1,198		
	36	J	259			48	13,633	16,617	11,490	11,130	17,567	4,810	20,861	7,615	278%		20,861		
	9A	O/S A	12,719	16,196	16,337	16,167	10,861	19,982	3,787	21,889	14,654	18,588	11,857	15,373	76%		11,857		
	63	O/S B	11,177	12,496	8,741	11,077	7,418	9,458	7,877	9,828	15,184	9,125	7,691	9,305	82%		7,691		
	184	O/S C	27,191	41,302	16,831	32,340	33,415	33,466	14,466	24,917	28,449	24,087	30,507	28,633	108%		30,507		1,958
	2	O/S D																	
	18	O/S E	3,294	3,274	2,224	4,992	1,652	919	2,685	5,129	3,682	2,610	3,430	3,044	113%		3,430		
	26	O/S G	1,616	4,362	3,766	387	324	1,430	621	3,461	3,637	3,284	976	2,526	39%		976		
	2	O/S H																	
	8	O/S I	64	1,329	10	869				59				242					
	8	O/S J					1,667	2,637	3,609	3,807	3,866	1,163	3,439	1,673	206%		3,439		
		USBR EXCHANGE CONTRACT WATER YEAR STATUS :	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	AVERAGE		(percent of 2006 pumpage) 29%	71%		
31	994	TOTALS=>	153,278	166,739	80,404	144,361	191,869	204,445	144,084	198,332	212,013	121,661	128,019	159,786		37,283	91,636	1,955	2,000

1050 = TOTAL NO. OF WELLS IN STUDY

1996 -> 2006 AVE. = 159,786 - 128,019 REPRESENTS A -19% (INCREASE OR DECREASE OVER THE PREVIOUS 10 YR. RUNNING AVG.)

NOTES:

1. PUMPAGE BY C.C.I.D. CONSUMERS IN THE CENTRAL CALIFORNIA IRRIGATION DISTRICT:
   37,283 - 1,955 (CCID) = 35,328 AF for 0.25 AF/AC
2. PUMPAGE OUTSIDE C.C.I.D. INCLUDES ALL DEEP WELLS WITHIN CITY LIMITS IN ADDITION TO DEEP WELLS USED FOR INDUSTRY AN[D]
3. THIS ORIGINAL STUDY INCLUDED ALL KNOWN DEEP WELLS W[EST OF] RIVER FROM MARSHALL ROAD (CROWS LANDING) TO THE CAMP 13 AREA, EX[CEPT] THOSE IN THE SAN LUIS CANAL COMPANY AREA; THEN SOUTH FOR THE AREA BETWEEN THE SJR AND DELTA MENDOTA CANAL ON THE WES[T TO MENDOTA] DAM AREA. A JULY 1998 REVISION MAKES THE SAN LUIS C.C. AND THE COL[UMBIA] C.C. AREA NOW INCLUDED.
4. C.C.I.D.'S (OWNED) WELL PUMPAGE IS INCLUDED IN THE "ALL WELLS IN CCID"
5. ADDITIONAL PUMPAGE (NOT INCLUDED ABOVE) FROM THE MENDOTA POOL PUMPERS IS AS FOLLOWS:

1995 --	@NA	@NA	1997 --	39,431 AF	1999 --	24,899 AF	2001 --	45,130 AF	2003 --	15,036 AF	2006 --	10069 AF
1996 --	2,572 AF	2,572 AF	1998 --	2,024 AF	2000 --	37,622 AF	2002 --	34,125 AF	2004 --	15,505 AF	2005 --	3041 AF

6.

1995 --	0 AF	0 AF	1997 --	26,882 AF	1999 --	6,467 AF	2001 --	6,378 AF	2003 --	4,982 AF	2005 --	935 AF
1996 --	4,766 AF	4,766 AF	1998 --	12,722 AF	2000 --	3,831 AF	2002 --	3,637 AF	2004 --	3,098 AF	2006 --	2,060 AF

7. DATA IS INCOMPLETE IN THE COLUMBIA CANAL COMPANY AREA.
8. PUMPAGE IS CALCULATED FROM THE ANNUAL READINGS OF PG&E, HOUR, PROPELLER AF METERS AND OR A COMBINATION, AND BY USING PAST OR AVERAGE PUMP TEST KWH/AF DATA, OR FROM REQUESTED DATA.
9. UP TO 1/1/1999 THERE WERE 619 WELLS IN INVENTORY; AS OF 1/1/2006, THE INVENTORY IS AT 850 WELLS; IN ADDITION THERE ARE SOME 108 WELLS +- IN THE POOL PUMPER AREA AS OF 1/1/1999.
10. DATA WAS CALCULATED USING A NEW METHODOLOGY IN REGARDS TO PG&E METER DATA, FOR THE PRESENT TO THE 2001 STUDY, PREVIOUS YEARS OF 1996,1997, 1998, 1999 AND 2000 WERE REDONE THE SAME WAY.

PAST C.C.I.D. CONSUMER PUMPAGE

for 2005	=	0.19	AF / AC
for 2004	=	0.34	AF / AC
for 2003	=	0.31	AF / AC
for 2002	=	0.17	AF / AC
for 2001	=	0.34	AF / AC
for 2000	=	0.28	AF / AC-r
for 1999	=	0.27	AF / AC-r
for 1998	=	0.15	AF / AC-r
for 1997	=	0.30	AF / AC-r
for 1996	=	0.32	AF / AC-r
for 1995	=	0.59	AF / AC
for 1994	=	1.00	AF / AC
for 1993	=	0.63	AF / AC

well" study. This mechanism has been effectively utilized to implement conjunctive use of ground-water from both private and District owned wells.

5. In the FCWD, the groundwater has become unusable for agricultural purposes because of high levels of total dissolved solids (TDS), boron, and selenium. FCWD is able to provide surface water capacity to the other Exchange Contractors in return for their cooperation in utilizing groundwater during periods in which FCWD needs amounts of water in excess of that available from its share of the Exchange Contract supply. As a result, groundwater within CCID, SLCC, and CCC is conjunctively used, not simply with the surface deliveries within the service areas for those specific entities, but also within service areas of the other entities, as the availability of surface water under the Exchange Contract is not sufficient to meet crop water demands.

Entrix, Inc. (2007) reported on the Environmental Assessment/ Initial Study for the Groundwater Pumping/Water Transfer Project for 25 consecutive years. The primary source of of the water to be transferred is pumpage of poor quality shallow groundwater in the area west and northwest of Firebaugh. The easterly and northeasterly migration of the poor quality groundwater above the Corcoran Clay has been identified as a major groundwater management concern in Madera County.

GENERAL CONDITIONS OF THE EXCHANGE CONTRACTORS GROUNDWATER BASIN

Figure 1 is the AB 3030 basemap of the Exchange Contractors service area. The service area is divided into sub-areas of generally similar aquifer, water supply, and drainage characteristics. Detailed evaluations of the groundwater conditions within the boundaries was performed by Kenneth D. Schmidt and Associates in 1997 ("Groundwater Conditions in and near Central California Irrigation District") and in 2007 "Update on Groundwater Conditions in the San Joaquin River Exchange Contractors Service Area". The evaluations included: 1) subsurface geologic conditions, 2) depth to water, water-levels elevations, the direction of groundwater flow, and water-level trends, 3) aquifer characteristics, based on numerous pump tests and aquifer tests on about two dozen wells, 4) land surface subsidence, and 5) groundwater quality in both the upper and lower aquifers.

DEMANDS ON THE GROUNDWATER BASIN

In addition to the yearly demands placed upon groundwater to meet the conjunctive use requirements to supplement the Exchange Contract surface water, other demands are placed upon the basin.

Surface Water Transfers

Each of the four entities comprising the Exchange Contractors have developed and adopted transfer policies as shown in Attachment

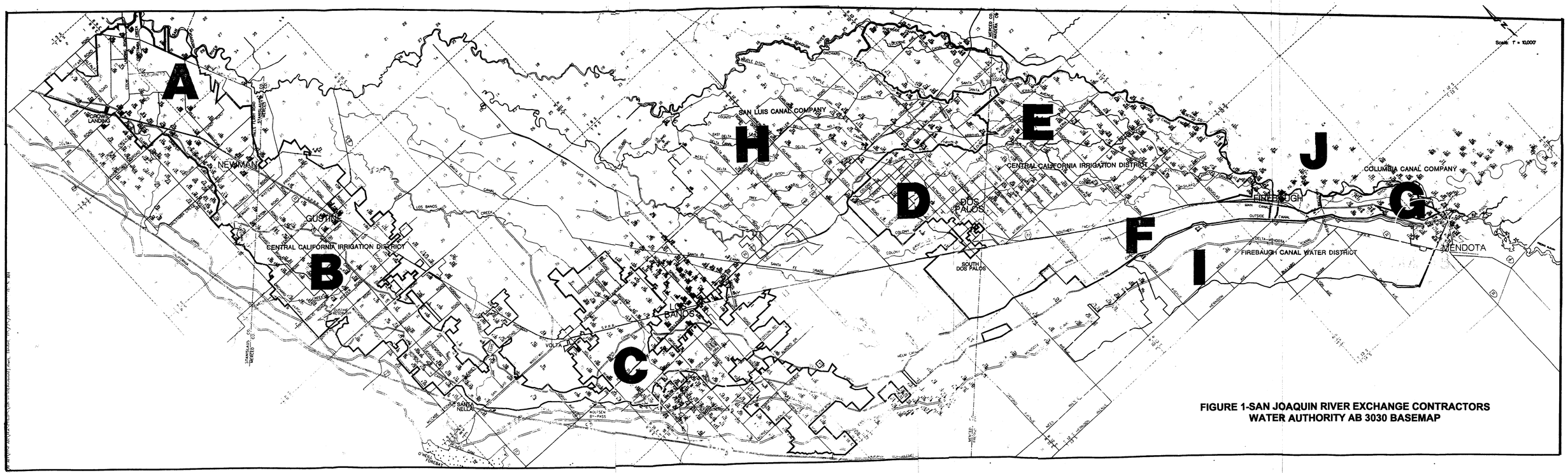

FIGURE 1-SAN JOAQUIN RIVER EXCHANGE CONTRACTORS WATER AUTHORITY AB 3030 BASEMAP

A. All water transfers have potential impacts on the aquifer. Three types of transfers are possible based on: 1) groundwater substitution, 2) fallowing of crops, and 3) conservation. Of these, groundwater substitution has the highest potential impact to groundwater. CCID, FCWD, and SLCC allow groundwater substitution type transfers, but the CCC does not allow groundwater substitution. Its policy states that "no transfer of groundwater to areas outside the Company service area will be approved and no transfer of surface water without fallowing the land to which such surface supply would have been delivered will be approved."

Groundwater Pumping into the Delta-Mendota Canal

The San Luis and Delta-Mendota Water Authority (SL&DMWA) has administered a program to allow groundwater pumping into the Delta-Mendota Canal for drought contingency. Figure 1, (the AB 3030 basemap), shows the groundwater pumping management areas developed by the SL&DMWA groundwater management committee. The potential impacts to the Exchange Contractors are 1) degradation of the surface water quality delivered through the Delta-Mendota Canal, and 2) land surface subsidence along the CCID outside canal and the Delta-Mendota Canal. High salinity and boron concentrations have been problems in many wells. For the most part, the pumped water is generally not suitable for use on crops without blending with the better quality surface water. Land surface subsidence along the

Outside Canal was discussed by KDSA (1997). The CCID is presently undertaking a five million dollar improvement project on the Outside Canal, to raise banks and replace structures due to subsidence. Subsidence along the Delta-Mendota Canal is shown in Figure 2.

Groundwater Pumping into the Mendota Pool

The Mendota Pool, on the San Joaquin River, is the location were the Exchange Contractors receive most of the substitute water under the Exchange Contract. For almost two decades, there has been concentrated groundwater pumping in the Mendota Pool area. The magnitude of the pumping depends in large part on the yearly allocations by the USBR to Central Valley Project agricultural contractors. In response to reduced allocations, groundwater pumped near the Mendota Pool is introduced into the Pool and either delivered to adjacent Central Valley Project agricultural contractors directly through pumping facilities or given credit for the groundwater pumped into the Pool and, in exchange, the USBR provides deliveries to Westlands Water District. The potential impacts of the pumping program are water quality degradation, well interference, and land surface subsidence affecting the Exchange Contractors gravity canal system headworks facilities and the Mendota Dam.

The Mendota Pool Group (MPG) transfer pumping began in 1989 to

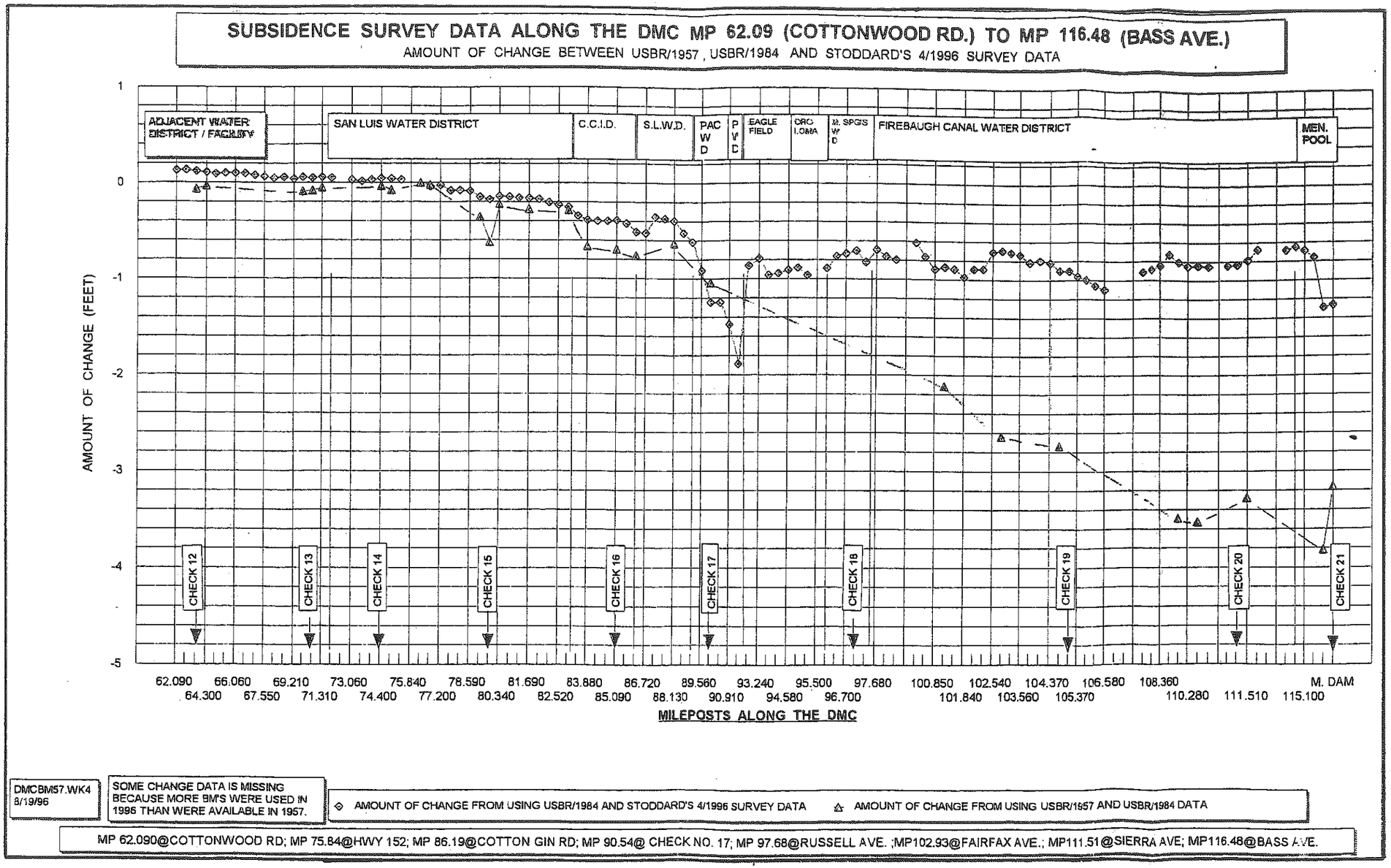

FIGURE 2-SUBSIDENCE ALONG THE DELTA-MENDOTA LAND

make up for some of the cutbacks in deliveries of Central Valley Project and State Water Project surface water during the drought. The greatest MPG transfer pumping was during 1991-1992 and 1994. There was little MPG transfer pumping between 1995 and 1999, except for a four-month period in 1997.

A pilot pumping and monitoring program was undertaken in 1999 to determine the impacts of MPG transfer pumping on water users within the San Joaquin River Exchange Contractors Water Authority (SJREC) and Newhall Land and Farming Company (NLF) service areas. Extensive monitoring of pumpage, water levels, water quality, and compaction was initiated in 1999 and continues to the present. This led to a settlement agreement, that provided for continued MPG pumping, constrained by the results of monitoring and other factors.

Annual reports are prepared on the results of the monitoring. The results of monitoring have been used to revise the pumping program to mitigate adverse impacts. For example, pumpage from the lower aquifer has been limited, primarily due to drawdowns and land surface subsidence.

Migration of Poor Quality Groundwater

Water-level elevation contours for the upper aquifer (above the Corcoran Clay) were provided by KDSA (1997 and 2007). These maps indicate that groundwater enters the upper aquifer from up-

slope areas along virtually all the west and southwest boundaries of the Exchange Contractors service area. Certain areas west and southwest of the Exchange Contractors boundaries contain poor quality groundwater. The areas include 1) areas recharged by creeks south of Los Banos Creek and north of Panoche Creek, 2) the area southwest of Firebaugh-Mendota, and 3) the area south of Orestimba Creek.

Urban Groundwater Pumpage

Urban groundwater issues facing the Cities within the Exchange Contractors service area were summarized in KDSA (1997). In addition, cooperative groundwater studies have been done during the past two decades by the CCID and the Cities of Mendota, Los Banos, Gustine, and Newman. The Mendota study was completed in February 1999. Studies in Los Banos were completed in 1991 and updated in 1998. Studies in Gustine and Newman were completed in 1992 and updated in 2001. High manganese concentrations in well water have been a problem in Firebaugh and Mendota. High salinity water was also a problem in Mendota, prior to several years ago. As a result of the Mendota study (KDSA, 1999), the City developed a new well field in the mid-2000's, to mitigate water quality degradation coming from the area west of Mendota. The City of Dos Palos developed a surface water supply because of the poor chemical quality of the groundwater. In and near Los Banos, Newman, and Gustine,

groundwater of suitable quality for public supply has been developed through test hole exploration programs. However, a number of potential well sites have been found to be unsuitable. Plans are to update the Los Banos study within the next year.

ELEMENTS OF THE PLAN

The elements of the original plan were divided into two categories. Implementation of each of the elements proceeded concurrently.

Monitoring, Data Acquisition, and Evaluation

This element is subdivided into 1) regional activities, and 2) site specific (being done to address specific groundwater issues).

Regional Activities

Overall or regional activities to be conducted by the Exchange Contractors include the following.

Coordination with Other AB 3030 Groundwater Management Plan and Cooperation. The Central Valley Project agricultural contractors located upslope of the Exchange Contractors service area have developed two regional groundwater management plans through the San Luis and Delta-Mendota Water Authority (Stoddard & Associates, 1996 a and b). As part of these plans, Stoddard & Associates (1999 a and b) prepared associated groundwater monitoring plans. Both of

the management plans are being updated in 2007. In order to monitor the larger connected groundwater basin, future regional monitoring would include a coordinated data gathering effort with the upslope areas. In addition, Madera County is developing an Integrated Water Management Plan for the area downgradient of the Exchange Contractors service area. This plan focuses on overdraft in non-Districted areas. A program will be pursued such that the necessary study is accomplished and water-level measurements and water sampling results will be coordinated and gathered by each respective agency and shared.

Water Levels. Water-level elevation maps will be prepared approximately every five years. Data gaps in the existing monitoring plan were filled in accordance to the recommendations contained in the KDSA 1997 report. As part of the 2007 update by KDSA, a water-level elevation and direction of groundwater flow map was prepared for the upper aquifer for Spring 2006. Significant changes from previous maps were discussed in the text. Sufficient data were not available to prepare an updated map for the lower aquifer for the entire service area for 2006.

Water-level hydrographs were provided for a number of wells in the KDSA 1997 report. These were evaluated for the period 1962-89, which was considered a representative long-term period. As part of this plan update, the CCID updated many of these hydrographs. The

KDSA 2007 hydrogeologic report update contains a detailed discussion by subarea of the water-level trends for 1962-2005.

Aquifer Characteristics. The Exchange Contractors have continued to obtain specific capacity values from pump tests for wells within the Districts. As part of the updated plan, a specific capacity map was prepared by CCID for the mid-2000's, and this was presented in the 2007 hydrogeologic report update. Updated maps for specific capacities will be prepared about every five years.

Pumpage. Annual measurements and estimates of pumpage have been continued. Pumpage has been determined for each subarea, and divided into the upper aquifer, the lower aquifer, and composite (from both aquifers). Table 1 provided a pumpage update through 2006.

Subsidence. Three compaction recorders now being operated in the area. One is at Yearout Ranch, southeast of Mendota, which is operated by CCID, as part of the MPG monitoring program. A second is the Fordel recorder, adjacent to the Mendota Airport, which is operated by the MPG. The third is along the DMC near Russell Avenue, which is operated by the SL&DMWA. Information on the first two recorders is provided in the annual monitoring reports for the MPG program.

In addition, the Scripts Institute has established a con-

tinuous land surface elevation monitoring station (CORS) at a site about one mile southeast of Mendota. This monitoring will provide additional information on subsidence near Mendota.

Groundwater Quality. At least every five years, water samples are obtained from numerous selected wells for analysis of key constituents. Maps will be periodically prepared to show the geographic distribution of selected constituents in the upper and lower aquifers. As part of the 2007 update, an updated map of electrical conductivity was prepared. This map was generally similar to the previous map, and evidence was presented that indicated the northeasterly flow of poor quality groundwater has continued in the Mendota-Firebaugh area. As part of the 2007 update, water quality hydrographs were prepared for electrical conductivity of water from district supply wells and other selected wells. These hydrographs will be updated every several years in the future.

Site Specific Activities

These activities are to be accomplished in response to specific groundwater issues. Many of the activities will be accomplished cooperatively with other entities or made a requirement of pumping program.

Surface Water Transfers. For well water substitution transfer request the following hydrogeologic items will be required:

1. Locations and types of wells in vicinity, including domestic and stock wells.

2. Subsurface geologic conditions, extent of confinement, and possibly impacted aquifers. Existing sections could be used if they are near the proposed project and representative of conditions at the project site.

3. Depth to water, direction of groundwater flow, and any changes that would occur. Existing water-level maps and hydrographs are expected to be suitable in most cases. However in areas where data gaps are present water-level measurements and preparation of local maps are expected to be necessary.

4. Long-term water-level trends and the status of groundwater overdraft.

5. Aquifer characteristics.

6. Potential for land surface subsidence, particularly where groundwater is confined.

7. Overall water budgets (consumptive use versus recharge) for the pre-existing situation for the proposes project.

8. Groundwater quality, identification of problem constituents, and the potential migration of poor quality groundwater.

9. Subsurface drainage problems and the possible beneficial impacts of the proposed project.

10. Drawdown projections due to the proposed project.

11. A technical report by a certified hydrogeologist including supporting tables, illustrations, and appendices. The report will document pre-existing conditions and evaluate possible hydrogeologic impacts of the proposed transfer.

Pool Pumpers. A process is now in place to monitor the effects of MPG pumping in order to monitor potential impacts from future pumping and in cooperation and participation with other entities. As discussed previously, annual reports on the results of monitoring are prepared.

Delta-Mendota Canal Pumpers. In order to monitor potential impacts from future pumping the following monitoring is needed.

1. Annual water-level maps for each zone being pumped.

2. Continuous water-level recorders.

3. Annual pumpage.

4. Annual reports of the compaction recorder located at Russell Avenue.

5. Water quality maps prepared every five years.

6. Water-level and quality hydrographs.

Cities. Focused groundwater quality studies will be periodically performed. In the case of Mendota, Newman, Gustine, and Los Banos, this will require periodic updates of the joint studies previously accomplished. Firebaugh will require a new study. Attachment B contains a copy of the sample MOU to be utilized outlining the scope of work and subdivision of costs.

Migration of Poor Quality Groundwater. As compilation and analyses of regional monitoring activities identify areas or pockets of migration of poor quality groundwater, more focused monitoring in these areas may be needed. Case by case evaluation of risk to the groundwater will be made, and site specific monitoring will be developed as necessary.

Water Banking. There is potential for water banking in the Exchange Contractors service area, exclusive of FCWD and the Camp 13 Drainage District. Water banking could involve direct recharge in basins or stream channels, or in-lieu recharge. In-lieu recharge generally involves delivering water to users who would otherwise have pumped groundwater. When pumping is decreased, water levels tend to recover. Later, groundwater is pumped and delivered to the

banking partner(s). The in-lieu type of recharge has been practiced for years in the Semitropic WSD, and is particularly applicable in areas where subsurface geologic conditions aren't favorable for intentional recharge.

Areas considered to have potential for direct recharge include parts of the Columbia Canal Water Co., where depth to the shallow groundwater is generally more than about 30 feet. There are several areas along the west side of the CCID where direct recharge by basins or stream channels may be possible. Included are the fans of Los Banos Creek and Orestimba Creek, where permeable deposits are present, groundwater salinity is relatively low, and depth to water is adequate to allow recharge.

Hydrogeologic studies are necessary to better delineate the storage space available and to develop well recovery programs in target areas. Other potentially competing activities, such as gravel mining, need to be carefully addressed. In some areas, such as parts of the Columbia Canal Co. service area, depth to the shallowest groundwater is not well known. In such areas, exploratory borings can be used to evaluate potential restricting layers above the water level and the depth to groundwater. Pilot percolation tests are normally done, using relatively small basins, to determine probable long-term percolation rates for larger basins. Mounding calculations can be done, once the transmissivity of the

shallowest saturated deposits is known, to determine the water-level rise expected due to various amounts of recharge.

In-lieu recharge normally involves expanding District surface water delivery facilities to areas previously served by groundwater pumpage. The banking partners normally pay for these facilities and in wet years their excess water is delivered to farmers who then decrease their groundwater pumpage. When the banking partners need water returned, it is pumped from wells and delivered to the banking partners, or exchanges of surface water supplies can also be used.

Development of Drought Contingency Strategies

Drought contingency strategies are necessary during times when multiple critical water years occur, or when the USBR cannot provide delivery capacity flexibility during the seven moth period. An itemized list of drought period procedures will be developed and adopted. Such a list might include:

1. Reducing irrigation demand peaks through water ordering strategies.

2. Purchase of private well water and an associated emergency notification and purchase procedure.

3. Maximum pumping from drainage wells and tailwater return pumps.

4. Borrowing space and or water from other Exchange contractors.

5. Provide economic incentives for growers to pump wells not plumbed into the canal system.

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APPENDIX A

WATER TRANSFER INFORMATION

SAN JOAQUIN RIVER EXCHANGE CONTRACTORS
WATER AUTHORITY
WATER TRANSFER POLICY

Adopted April 7, 2000
Adopted Revised Policy November 1, 2002
Adopted Revised Policy August 5, 2005

1. Background.

1.1 The San Joaquin River Exchange Contractors Water Authority (SJRECWA) is a joint exercise of powers authority formed and existing under California law. Its member agencies are Central California Irrigation District, San Luis Canal Company, Firebaugh Canal Water District, and Columbia Canal Company. These four entities are traditionally referred to collectively as the **Exchange Contractors**.

1.2 The **Exchange Contractors** hold pre-1914 water rights on the San Joaquin River. In order to facilitate the construction of the Central Valley Project, the **Exchange Contractors** and their predecessors entered into two contracts with the United States Bureau of Reclamation in 1939. The Purchase Contract conveyed excess San Joaquin River flows—the so called "high flows"—and reserved the first San Joaquin River flows—sometimes referred to as the "low flows"—to the **Exchange Contractors**. The Exchange Contract established the terms pursuant to which a substitute supply of water was to be delivered by the Bureau of Reclamation to the **Exchange Contractors** in lieu of their "low flow" diversions from the San Joaquin River. These agreements established the underpinnings for the Bureau of Reclamation to construct Friant Dam on the upper San Joaquin River and divert the river's natural flow north to Madera and Chowchilla through the Madera Canal and south into Kern County through the Friant-Kern Canal. The Exchange Contract specifies that so long as the **Exchange Contractors** are provided a quantified substitute supply of water, the **Exchange Contractors** will not exercise their pre-1914 right to divert water from the San Joaquin River. The Exchange Contract at Article 5a contemplates that most, if not all, of this substitute water will be delivered to the **Exchange Contractors** from the Sacramento River watershed, pumped from the South Delta, and conveyed by means of the Delta-Mendota Canal. The current Exchange Contract is the Second Amended Contract for Exchange of Waters, Contract No. Ilr-1144, executed February 14, 1968.

1.3 The **SJRECWA** was formed in 1993 to represent its four member entities in many water matters including issues related to water transfers.

1.4 In California, the concept of water transfers, also referred to as water marketing or water brokering, is considered by some to be a partial solution to the shortage of water. The underlying assumption is that market forces in a free market will reallocate water. In some circumstances, agricultural water users who manage a conjunctive use water resource area can, to some extent, provide flexibility which may, at times, facilitate transfers of water. The **Exchange Contractors** proactively manage their surface water, groundwater, and conserved water conjunctively to maximize its beneficial use.

2. Objective. The objective of this water transfer policy is to manage water transfers to provide a framework by which the **Exchange Contractors** manage water transfers on a sound scientific basis, and to provide a clear set of standards and guidelines that each transfer proposal must comply with. The approach is designed to (i) ensure that the quantity of water proposed for transfer is made available through technically sound methods and projects which are scientifically based and verifiable; (ii) provide sound analysis of potential water transfer impacts; (iii) properly develop and implement necessary mitigations; (iv) monitor on-going water transfers and water development projects to ensure that beneficial and conjunctive use objectives are met; (v) provide flexible and efficient use of available water resources; (vi) ensure that the water supply, operations, and financial condition of the **Exchange Contractors** and their water users are not unreasonably impacted, and third party impacts from the transfer are mitigated; and, (vii) establish, maintain and utilize a data bank that will be used to manage the **SJRECWA AB** 3030 Groundwater Management Plan.

3. Authority

3.1 A transfer of water is considered a beneficial use under state and federal law. (Water Code Section 1011; CVPIA Section 3405.)

3.2 The **Exchange Contractors** hold pre-1914 rights to appropriate water from the San Joaquin River. The California Legislature has declared that it is established policy of the State to facilitate the voluntary transfer of water and water rights. (Water Code Section 109.) The Costa-Isenberg Water Transfer Act adopted by the legislature in 1986 as Water Code Sections 470 and 475-484 provides that voluntary water transfers between water users can result in a more efficient use of water, alleviate water shortages and finds and declares that it is in the public interest to conserve all available water resources. Water transfers do not undermine the rights that are the basis of the transfer. Water Code Sections 1010, 1011, 1011.5, 1244, 1440, 1731, 1737 and 1745.07 were specifically added to provide protection to water right holders who transfer water.

3.3 The Bureau of Reclamation utilizes the water transfer authority provided for in CVPIA to facilitate Exchange Contract water transfers. Water transfers implemented in accordance with CVPIA Section 3405(a) are deemed by federal law to be a beneficial use of water.

4. Applicability. Proposals to transfer any water from the **Exchange Contractors'** service area are subject to the requirements of this policy.

5. Definitions. For purposes of this policy, "water district" shall mean any water district, irrigation district, municipality, federal water agency, state water agency, or similar entity that exists pursuant to federal or state law.

6. Criteria for Water Transfers

6.1 Basis for all water transfers.

6.1.1 The state water rights, that are the underpinning of the Exchange Contract, are owned by the individual **Exchange Contractors'** members. The federal contract rights pursuant to the Exchange Contract are similarly owned by the individual **Exchange Contractors'** members. Consequently, any transfer of water from the **Exchange Contractors'** service area must first be approved by the **Exchange Contractors'** member entity from which the water will be transferred and then by the **SJRECWA.**

6.1.2 The **Exchange Contractors'** member entities share a water right in common, have a single water master who schedules water deliveries to the member entities, and have adopted a single groundwater management plan. The **Exchange Contractors** actively manage their surface water, groundwater and conserved water resources conjunctively, and manage water application within their service area to minimize drainage discharges from their service area and to cope with regulatory requirements imposed by law. Thus, all proposals to transfer water must be submitted by an **Exchange Contractors'** member entity and by the **SJRECWA** on behalf of its member entities, and water transfer proposals shall not be accepted from individual landowners. An individual landowner who proposes a water transfer must submit the proposal to the landowner's member entity, and, if approved by the member entity, shall be submitted by the member entity on behalf of the individual landowner.

6.1.3 It is imperative to protect the member entity's water rights and to assure that no water right is assigned; therefore, only annually severable water

transfers will be considered.

6.2 Water transfer types.

6.2.1 All water transfers shall be proposed by an **Exchange Contractors'** member entity. Additionally, the individual entities may propose a transfer jointly with any or all of the member entities. A transfer of water proposed jointly by all of the member entities shall be handled as a **SJRECWA** water transfer.

6.2.2 Therefore, transfer proposals are limited to three types:

6.2.2.1 A transfer of water by the **SJRECWA** on behalf of its four member entities.

6.2.2.2 A transfer of water by an **Exchange Contractors'** member entity to another water district.

6.2.2.3 A transfer of water by an **Exchange Contractors'** member entity to a water district that is made on behalf of an **Exchange Contractors'** landowner who is entitled to receive Exchange Contract water.

6.3 Water to be transferred. Water that is subject to transfer may be from an **Exchange Contractors'** member entity's water entitlement allocated pursuant to the Exchange Contract Division of Water Agreement, or from a member entity's non-allocated water supplies.

6.4 Generation of transferable water. Transferable water can be generated by using standard methods of conservation, groundwater substitution, or fallowing depending on the special hydrologic conditions that exist within the service area where the water is being generated as determined in paragraph 6.6.

6.5 Transferees. Water shall only be transferred to a water district.

6.6 Technical standards. All water transfers are subject to the technical standards and criteria adopted by the individual entity that proposes the transfer, and the **SJRECWA**. The technical standards are attached hereto as Appendices.

6.7 Priority of Transfers. All transfers are subject to the following priorities:

6.7.1 First priority shall be given to transfers initiated by the SJRECWA on behalf of its four member entities, and/or a transfer by an Exchange Contractors' member entity that enables an individual landowner within the member entity's service area to transfer water to a CVP ag service contracting water district for their own use in that water district.

6.7.2 Second priority shall be given to transfers initiated by an Exchange Contractors' member entity.

6.7.3 Third priority shall be given to transfers proposed by an Exchange Contractors' member entity on behalf of one of its landowners.

6.7.4 For illustrative purposes, the attached Appendix "A" provides an example of how the priority system would be implemented under the following three scenarios: 1) the transfer demands are less than the transfer supply during a normal water year; 2) the transfer demands are greater than the transfer supply during a normal water year; and, 3) a critical water year.

6.8 Limitation on Quantity of Water Transferred. Each year, a maximum shall be imposed on the quantity of water that can be transferred out of the Exchange Contractors' service area. The maximum shall be based upon a water budget developed in the Exchange Contractors' service area on a sub-basin by sub-basin basis. Each year, as soon as practicable, and not later than the Exchange Contractors' November board meeting, the maximum transfer quantity for the upcoming water year shall be announced. The announced maximum shall not be changed upward or downward from the announced maximum unless clear and convincing scientific evidence supports the change. Transfers initiated by SJRECWA will not be permitted in a critical water year designated under the Exchange Contract.

6.8.1 Internal Allocation of Transferable Water: On an annual basis, any Exchange Contractors' member entity may assign any portion of their maximum percent allocation to one or more of the Exchange Contractors' member entities and this assignment will increase the recipient Member Entity's share of transfers in the classifications stated below. The baseline for determining the Exchange Contractors' member's maximum percent allocation is the 1978 Division of Water Agreement subject to modifications pursuant to Sections 6.8.2.1 and 6.8.2.2.

6.8.2 Transfers will be classified as: (i) conservation or groundwater

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6.7.3 Third priority shall be given to transfers proposed by an **Exchange Contractors'** member entity on behalf of one of its landowners.

6.7.4 For illustrative purposes, the attached Appendix "A" provides an example of how the priority system would be implemented under the following three scenarios: 1) the transfer demands are less than the transfer supply during a normal water year; 2) the transfer demands are greater than the transfer supply during a normal water year; and, 3) a critical water year.

6.8 Limitation on Quantity of Water Transferred. Each year, a maximum shall be imposed on the quantity of water that can be transferred out of the **Exchange Contractors'** service area. The maximum shall be based upon a water budget developed in the **Exchange Contractors'** service area on a sub-basin by sub-basin basis. Each year, as soon as practicable, and not later than the **Exchange Contractors'** November board meeting, the maximum transfer quantity for the upcoming water year shall be announced. The announced maximum shall not be changed upward or downward from the announced maximum unless clear and convincing scientific evidence supports the change. Transfers initiated by **SJRECWA** will not be permitted in a critical water year designated under the Exchange Contract.

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6.8.2 Transfers will be classified as: (i) conservation or groundwater

transfers (80,000 AF maximum) or (ii) fallowing transfers (50,000 AF maximum). The income from each classification of transfer will be blended and distributed to the member entities in proportion to the amount of water contributed by each entity.

6.8.2.1 In regard to transfers based upon conservation or groundwater pumping, if a member entity elects not to utilize its share of the allocation or elects not to assign to another member entity a portion of its allocation, the unutilized portion of the allocation shall be made available to the other member entities in proportion to the Exchange Contractors' 1978 Division of Water Agreement.

6.8.2.2 In regard to fallowing transfers, if a member entity elects not to utilize their full allocation and elects not to assign their unused allocation to another member entity, that portion of the allocation of fallowing-based transfers shall not be allocated to other member entities for transfer.

6.9 Annual Establishment of Transferees and Maximum Quantities of Water to be Transferred to Each Transferee. Each year by no later than October 31st, the SJRECWA shall establish the transferees and maximum quantities of water to be transferred to each transferee. The water needed to meet these obligations will be in accordance with the transfer priorities established by Section 6.7.

6.10 Water Transfer Committee.

6.10.1 A SJRECWA Water Transfer Committee is established to review all transfer proposals that are submitted consistent with this policy. It will review and analyze the technical data upon which each transfer is based, and make a recommendation on each water transfer proposed. The membership of the committee will include the manager of each of the Exchange Contractors' member entities, and two members of the SJRECWA governing board, or a member's alternate, appointed by the President of the board. The committee may retain technical consultants.

6.10.2 The committee shall review each transfer proposal, and each approved transfer annually, to ensure that it meets the stated objectives, technical standards, and criteria of this policy.

6.10.3 Due to the fact that the **Exchange Contractors** and their landowners conjunctively use surface and groundwater resources, where a water transfer is proposed from lands that the committee believes will not participate fully in the conjunctive use program, the committee may limit a water transfer to the amount of groundwater used by the lands initiating the transfer so that those lands do not exceed annually their fair share of the safe yield.

6.10.4 The committee shall review each transfer proposal, and each approved transfer annually, to consider whether it is likely to cause unreasonable impacts to the overall water supply, water management operations, or financial condition of the transferor entity or its water users, and whether member entity impacts that result from the transfer will likely be mitigated.

6.10.5 The committee shall make a recommendation to the **SJRECWA** Board of Directors on each proposed transfer, and an annual recommendation for the continuation or termination of each approved transfer, based upon analysis of technical criteria developed pursuant to paragraph 6.6.

6.11 Water Transfer Fees, Mitigation Costs, and Water Transfer Proceeds.

6.11.1 Where a transfer is made by a **SJRECWA** member entity, the entity will allocate a portion of the income from the water transfer to conservation projects and/or water distribution and drainage facilities, or other similar projects and actions that benefit its water users.

6.11.2 Any Bureau of Reclamation, or state agency water transfer application and environmental assessment fee shall be the responsibility of the transferring entity.

6.11.3 The processing by **SJRECWA** of a water transfer will require the payment by the transferring entity of all costs associated with the transfer. Such cost shall include but not be limited to management and study costs associated with administration of the Transfer Policy. For example, where a transfer involves groundwater, the transferring entity will be responsible for the cost (i) to determine safe annual yield of groundwater, (ii) for monitoring required to analyze groundwater conditions both in terms of quantity and quality, (iii) the amount of applied water that recharges the groundwater or enters drainage systems, and (iv) to study and monitor for subsidence impacts.

6.11.4 The SJRECWA shall be the fiscal agent for all water transfers.

6.12 Environmental Requirements. The environmental review requirements of NEPA and CEQA must be complied with before the Exchange Contractors will process a transfer application and all such costs shall be born by the transferring member entity.

6.13 Public Hearing. The Exchange Contractors may conduct a public hearing to determine the impact of the proposed transfer. The transferor and transferee must attend the hearing if requested to do so by the Exchange Contractors or by the entity from which the transferor is entitled to receive water.

6.14 Action by SJRECWA Board of Directors. All water transfers must be approved by unanimous vote of the SJRECWA Board of Directors. A water transfer proposal along with the recommendation by the Water Transfer Committee will be considered by the SJRECWA Board of Directors, and the transfer approved, disapproved, or returned to the Water Transfer Committee for further action as directed by the Board.

APPENDIX "A"

Illustration of Transfer Policy Priority System

Annually the SJRECWA shall establish:

1. Annual Maximum – The maximum annual amount of water to be transferred from the SJRECWA developed on a sub-basin by sub-basin level.(section 6.8).

2. Demand – The maximum quantities of water to be transferred to each transferee shall be established by no later than October 31st of each year. (section 6.9).

3. SJRECWA Supply – The amount of water available under a SJRECWA transfer and/or a transfer by an **Exchange Contractors'** member entity that enables an individual landowner within the member entity's service area to transfer water to a CVP ag service contracting water district for their own use in that water district. First priority. (section 6.7.1).

4. Individual Entity Supply – The amount of water available under an individual entity transfer. Second priority. (section 6.7.2) .

5. Individual Entity on behalf of landowner supply – The amount of water available for an entity on behalf of a landowner, limited by the maximum demand. Third priority. (6.7.3)

The application of the priority system described in section 6.7 is limited to determining quantities of transfer demand to be met by each of water transfer types. It will be calculated as follows (section 6.9):

	TOTAL DEMAND
Less	***Amount available through SJRECWA initiated and/or Exchange Contractors' member entity that enables an individual within the member entity's service area to transfer water to a CVP ag service contracting water district for their own use in that water district (priority 1)***
Equals	***Amount available for priority 2 and priority 3***
Then	***Amount available through priority 2 and priority 3***
Less	***The amount of water available under an individual entity transfer (priority 2)***
Equals	***Amount available through priority 3***

Individual landowners will be notified of the amount of transfer demand available to be met by the third priority. They will be required to determine their level of participation (through fallowing as an example) as soon as possible.

To further illustrate the priorities, below are three types of water year scenarios:

NORMAL YEAR

100 % allocation to EC; demand is 95,000 af which exceeds Supply

Priority		Supply	Demand	Amount Transferred
1	SJRECWA/ dist. to dist. initiated	75,000	85,000	75,000
2	Exchange Contractor Entity Initiated	5,000	5,000	5,000
3	Exchange Contractor Entity Initiated on behalf of Individual	5,000	5,000	5,000
		85,000	95,000	85,000

Total amount transferred 85,000

NORMAL YEAR

100 % allocation to EC; demand is 65,000 af and is less than Supply

Priority		Supply	Demand	Amount Transferred
1	SJRECWA/ dist. to dist. initiated	75,000	65,000	65,000
2	Exchange Contractor Entity Initiated	5,000	0	0
3	Exchange Contractor Entity Initiated on behalf of Individual	5,000	0	0
		85,000	65,000	65,000

Total amount transferred 65,000 af

CRITICAL YEAR

75 % allocation to EC; demand is 25,000 af and is greater than Supply

Priority		Supply	Demand	Amount Transferred
1	SJRECWA/ dist. to dist. initiated	0	0	0
2	Exchange Contractor Entity Initiated	0	0	0
3	Exchange Contractor Entity Initiated on behalf of Individual	5,000	25,000	5,000
		5,000	25,000	5,000

Total amount transferred 5,000 af

CENTRAL CALIFORNIA IRRIGATION DISTRICT

WATER TRANSFER POLICY

Adopted: October 27, 1993
Revised: October 26, 2007

I. Transfers by Landowners within CCID:

The Central California Irrigation District ("District") under its Exchange Contract, with permission of the Bureau of Reclamation, will permit water transfers. Water to be transferred may be from individual allotment or non-allocated District supply.

a. The District will permit transfer of water from a Landowner within the District only to his or her owned land in another Recipient District.

b. "Landowner" shall mean the owner of the right through deeds or contracts of sale to possession of the property for farming purposes which contract must provide the right to control and utilize on the land the surface water provided by CCID upon that land. A lessee, regardless of the term of the lease, is not a Landowner for purposes of this policy, nor is a lessee who holds an option to purchase considered a Landowner for the purposes of this policy. The holder of a life estate entitling the person to possession and use of the land and the surface water provided by CCID upon that land shall be deemed a Landowner. If the land is owned by a corporation, trust, partnership, or other form of business entity, provided all other owners of that business entity consent in writing, a person holding an undivided interest may to the extent of that proportional interest be considered a Landowner of that percentage of the acreage, provided that the proposed land to receive the transfer is the same person or an entity holding title in which that individual holds a similar percentage interest. The parents or natural or adopted children or grandchildren of a Landowner will be treated as identical with the Landowner for the purposes of transfers because these ownership differences often arise from estate planning, governmental entitlement or similar requirements. A person who does not own that interest in land within CCID, and in addition, the interest in the land to which the water is to be transferred for at least one (1) calendar year prior to January 1 of the year in which the transfer is proposed to occur shall not be permitted to transfer water under the District programs until that ownership period has been complied with. If a Landowner owns the In-District land on January 1 of the year in which the transfer is proposed and the Landowner was the tenant upon the property in the previous full year and held a written option to purchase, the Landowner shall be treated as complying with this requirement. The District will not approve a transfer between entities of the Landowner's proportion of the surface water otherwise transferable unless all of the other holders of proportional interests of both the transferring land and the recipient land agree to be parties to the contract indemnifying, defending and holding the District harmless from any claims.

c. A "Recipient District" is (i) a district or mutual water company within the geographical area described in the Ten-Year Transfer Approval CEQA/NEPA process conducted by the San Joaquin River Exchange Contractors Water Authority (SJRECWA) and Bureau of Reclamation, (ii) a District or mutual water company overlying the same groundwater basin which is adjacent to CCID and which through direct connection well water can be delivered, and (iii) which district or mutual water company agrees in writing to comply with the terms and conditions of the transfer.

II. Types of Transfers:

CCID transfers conserved water for the benefit of all CCID Landowners. In addition, there are two (2) types of transfers possible involving individual Landowners:

a. CCID District Conservation Transfers: Conservation of irrigation water is a duty of all Landowners. Water conserved is transferred through District programs and the benefits of the transfer are shared by all District Landowners and water users. To the extent that CCID believes that through conservation and other means available the District will have water available that may be transferred from non-allocated supplies, the District may provide for that water to be transferred. The proceeds of those transfers will be utilized by the District in accordance with its policies regarding conservation loans and grants, payments of project costs, and disbursement of portions of the District water charges to growers and Landowners.

b. Transfer of Water Generated from Well Pumping: A Landowner who has a well upon his or her owned land may transfer by a credit well water pumped into a District owned or controlled facility, up to 3.0 acre-feet per acre for lands owned by that same Landowner in a Recipient District for use on land overlying the same groundwater basin. See "Rules Governing Pumping of Private Wells for Water Credits in Other Districts" for more details and requirements, including means of assuring water pumped will not harm other groundwater or surface water users. The water may be transferred to the Recipient District for use only on the Landowner's owned lands.

c. Transfer of Water Generated from Land Fallowing: A Landowner who wishes to fallow a specified portion of his or her land within CCID may apply to CCID to provide for the transfer of the amount of water that would be consumptively used upon those fallowed lands to lands owned by the same Landowner located in a Recipient District; provided the Landowner meets the requirements of the District's policy and its program, the water may be transferred to the Recipient District for use only on the Landowner's owned lands. The Landowner must comply with the District requirements of the program. See "Rules Governing Fallowing of CCID Land for Water Credit in Other Districts."

III. Conditions of Transfers:

The District shall strive to manage water transfers so that the water supply, operations, and financial condition of the District, the Exchange Contractors, and water users within the Exchange Contract service area are not unreasonably impacted. Before the District will consider a Landowner's written water transfer proposal to be complete, the Landowner will need to demonstrate:

(1) that the transfer does not unreasonably impact:

a. the quantity and quality of the water supply available to the District and its water users;
b. the quantity and quality of groundwater in the District and the Exchange Contract service area, or interrelated surface streams, or other groundwater supplies within the District and Exchange Contract service area;
c. the District's operations, including, but not limited to the ability of the District to meet its delivery obligations, obtain additional water supplies, and undertake conservation measures, exchanges, transfers, groundwater storage, or conjunctive use programs;
d. the District's financial condition and its cost of providing water service to its water users;
e. the appropriate maintenance practices regarding the fallowed land, if the proposal is to fallow lands;
f. the ability of the District or its water users to provide drainage to land including the ability to meet regulatory requirements relating to discharge of agricultural drainage; and
g. other relevant factors that may create an adverse financial, operations, or water supply impact on the District or its water users.

(2) that the Landowner has paid or made acceptable arrangements to pay, all costs associated with developing a complete written water transfer proposal, including District staff and attorney review necessary to process the transfer proposal.

(3) that the Landowner has paid, or made acceptable arrangements to pay, all necessary mitigation costs associated with the transfer including without limitation:

a. Studies to determine safe annual yield of groundwater, if the proposal is to pump groundwater and deliver that groundwater to the District for credit.
b. Monitoring and quantifying groundwater conditions both in terms of quantity and quality.
c. Funds to study and determine the amount of applied water which recharges the groundwater or enters drainage systems.
d. Funds to study and monitor for subsidence impacts.
e. Funds to study and monitor for fallowing impacts and guarantee that fallowing will not impact other growers and Landowners within the District and will not result in permanent abandonment of irrigation upon the fallowed lands.
f. Landowners requesting transfers based on groundwater pumping will be required to pay all costs of monitoring and quantifying groundwater conditions both in terms of quantity and quality. If it is discovered that detrimental quantity or quality conditions require a reduction in pumping amounts, the Landowner will be required to reduce, or curtail, pumpage of groundwater to protect both quality and quantity.

g. A Landowner proposing to fallow shall provide the monies to study and determine the amount of applied water which enters drainage systems which can be used by District or other Exchange Contractors.

(4) that the Landowner has paid, or made acceptable arrangements to pay, District water transfer conservation fees.

IV. Documentation and Quantities of Transfers.

1. All transfers which an individual Landowner wishes to make must be presented to the District for processing and processed only through the District utilizing the device of a written contract between the District and the Landowner (including the signature of all holders of interest in the land and the signature of any deed of trust holders or other secured parties upon the land or improvements, if necessary, which determination will be the Landowner's responsibility). The District will enter into a corresponding agreement with the Recipient District if the conditions of CCID are met regarding the transfer.

2. For fallowed land transfers the total water to be transferred by a Landowner shall not exceed the lesser of: (i) the water generated from fallowing 20% of the Landowner's total ownership within the District, or (ii) that quantity of water which is a Landowner's allocated share of the maximum amount of water which may be transferred through Landowner to the same Landowner fallowing program in a calendar year pursuant to restrictions enacted by the Exchange Contractors, CEQA and NEPA documents, or regulatory requirements such as the Bureau of Reclamation requirements, or (iii) that quantity of water which the District determines can be safely transferred without adversely impacting the quantity and quality of the water supply available to the District and its water users, including the quantity and quality of groundwater, whichever amount is less. The total water to be transferred shall be computed after subtracting from the total delivered water all transportation, evaporation, seepage, metering or measurement error and any amounts necessary to provide for agreements with other Exchange Contractors to relax monthly delivery limitations or similar agreements with other parties such as Grassland Water District, Department of Fish and Game, United States Fish and Wildlife Service, and the Bureau of Reclamation, and the total amount of water applied which is calculated to have historically entered the underground basins directly or indirectly through relaxation of well use.

   a. The District may elect not to apply the 20% limitation or may apply different limitations to a Landowner if the District determines that the land seeking to transfer water creates severe drainage quality conditions. Land with those conditions, proposed to be fallowed, may be provided a priority in participation in transfers.

   b. If District transfers together with Landowner-requested transfers exceed 20% of the water to be applied in the District, or such lesser amount that the District determines can be safely transferred without adverse impacts on the quantity and quality of the water supply available to the District and its water users including

the quantity and quality of groundwater or because of the limitations set forth in Paragraph 2 above, District may proportionately reduce, or curtail, the Landowner-requested transfers with consideration of whether drainage impacted lands should be entitled to any priority, to a level at which no more than 20% of the District consumed surface water as described in Paragraph 2 will be transferred.

3. Because the District Landowners conjunctively use groundwater replacing surface water for groundwater and storing groundwater for drought periods, and because the lands from which a fallowing or groundwater transfer is proposed will not participate fully in that conjunctive use program, the amounts of groundwater used by the lands initiating a transfer cannot exceed annually their fair share of the safe yield, assuming all other Landowners used their fair share of the safe yield. This will allow storage for drought periods by all lands overlying the basin or area. If the studies for such determination of safe annual yield do not exist, Landowners initiating transfers will be required to fund those studies by the District upon an equitable basis before a transfer may be processed. The equitable terms may include reimbursement of a portion of the costs of studies by other transferring Landowners who enjoy the use of the studies.

4. The District has adopted a policy entitled "Central California Irrigation District Rules Governing Pumping of Private Wells for Water Credits in Other Districts." A Landowner proposing to pump groundwater for credit in other Districts is directed to that policy for more specific conditions and requirements and that policy is incorporated herein as if set forth in full. The District has adopted a policy entitled "Central California Irrigation District Rules Governing Fallowing of CCID Land for Water Credit in Other Districts." Landowners are directed to that policy for more specific conditions and requirements, and that policy is incorporated herein as if set forth in full.

V. Recipient District Conditions and Requirements.

In order to avoid unreasonable impacts on the water supply, operations, and financial condition of the District and its water users, the District will not approve a water transfer proposal unless:

1. The Recipient District conducts a water conservation program that includes efficient water management practices, or is in compliance with an urban water management plan under Water Code Section 10610 et seq., or an agricultural water management plan adopted pursuant to Water Code Section 10800 et seq.; and

2. The Recipient District conducts a drainage program which assures that the water transfer will not cause a deleterious effect on lands downslope from any lands irrigated as a result of the transfer; and

3. The Landowner receiving the transferred water and the Recipient District demonstrate that the Landowner will not be dependent upon the transferred water supply at the end of the one (1) year term of the proposed transfer.

4. Transfers shall be submitted and approved only on a one-year basis by the District. The District has adopted a technical standard entitled "Maximum Quantity of Water Transferable from CCID Due to Fallowing," a copy of which is attached hereto and incorporated herein as if set forth in full. Fallowing transfers involve complex requirements and interrelationships between the San Joaquin River Exchange Contractors Water Authority, Bureau of Reclamation and CCID policies. Frequent changes in the policy should be anticipated by Landowners. CCID cannot guarantee that requirements will not change during a calendar year, but new requirements will not apply retroactively to fallowing transfers already approved by the Board of Directors of the District for that year.

V. District Hearings and Process.

1. The District staff will review each transfer in order to determine the impact of the proposed transfer on the water supply, groundwater, operations, and financial conditions of the District and its water users. A Landowner requesting a transfer will be required to deposit from time to time the amounts estimated to be expended in that review.

2. The District may conduct a public hearing to determine the impact of the proposed transfer. The Landowner and Recipient District shall attend the hearing if requested to do so by the District in order to respond to questions and comments regarding the impact of proposed water transfers.

3. If land use ordinances, general plan or other zoning conditions require the acquisition of use permits from the County, the necessary permits must be acquired prior to a Landowner's participation in such a transfer. All CEQA/NEPA requirements imposed by law in connection with that process shall be the responsibility of the Landowner, except that the District shall be the lead agency for CEQA purposes. The District must be consulted as an interested agency in any process in which the District is not the Lead Agency.

4. All NEPA requirements of the Bureau of Reclamation or any other federal agency shall also be complied with before the District processes the Landowner's application. To provide for the most rapid compliance with CEQA/NEPA requirements, the Landowner shall fund a cooperative joint EIR/EIS process with the County (if there are applicable land use permits required) together with the United States lead agency. If the County does not have land use jurisdiction, the District will be the lead agency for CEQA purposes and the Landowner will pay the cost of compliance by the District.

5. District transfers, including Landowner requests, shall be monitored at least annually and will be subject to modification, including restrictions or termination, in response to:

    a. Changes in applicable laws, regulations, contracts and court decisions.

    b. Changed or adverse environmental impacts or other circumstances that cause a transfer to result in impacts on the water supply, groundwater, operations, or

financial conditions of the District or its water users, or adjacent areas dependent directly or indirectly on District supply.

c. Restrictions or prohibitions by the USBR or other agencies exercising jurisdiction over any phase of the transfer.

6. The District will adopt a use fee schedule for processing these transfers. If it does so, the District will use fees from water transfers for conservation projects and rehabilitating District facilities for the benefit of its water users. The District will develop a use fee, or schedule of fees, as it determines appropriate, that will be levied by the District on all water transferred. Fees will be in the nature of a water conservation use fee and the District will use its share of the income from such fees for conservation projects within the District and for the rehabilitation of District facilities to reduce conveyance losses. It is the goal of the District, in implementing this policy, to ensure that revenues of the District generated by transfers are used for the improvement of its system and the improved management of its water supplies in order to ensure that the transfer can be sustained without adverse impact on District surface water and/or groundwater supplies. The use fee will be established by evaluating short and long term conservation and water management programs within the District that should be implemented and the cost of such programs. Fees shall be paid prior to the time the transfer is initiated or at such periodic times as is determined appropriate by the District in the case of long-term transfers.

7. The contract between the District and the Landowner shall provide for payment of all costs, expenses, water tolls, assessments, and all additional costs and expenses incurred by the District for consultants, staff, Board operations, and dislocations or reductions in economies of scale arising from the transfer. The Landowner shall be required to continue to pay all PMA and community ditch charges and similar operation, maintenance, repair and reconstruction costs necessary to avoid increased burdens upon neighboring Landowners not participating in transfers. These charges and expenses, including the costs of monitoring and enforcing these conditions of transfers, shall be adjusted and calculated from time to time by the District and if not paid, the Landowner-requested transfer shall not be permitted to continue.

8. The contract will provide, among other terms, for a requirement that any fallowed land be maintained at the cost of the Landowner in a condition that noxious weeds and pests are not permitted to be maintained upon the fallowed land, all air pollution requirements for suppression of dust and blowing objects are complied with, and the land is maintained in a condition in which the land may be returned to irrigated farming in the following water year, including maintenance of any facilities required for that use.

9. Included within the reimbursable costs to be paid by Landowner will be calculated value of power generation lost at the power plants located on the District's system by virtue of any water transferred which is not available for hydroelectric generation. Power costs will be estimated based on reasonable models of scheduled generation applied to then existing published power values.

10. The rules and regulations of the District will include a term that a Landowner-requested transfer which is not processed through the District in accordance with these policies and which is accomplished shall nevertheless be subject to each and every term and condition of these policies. Until the terms and conditions of these policies are substantially complied with, the Landowner shall be in violation of the District rules and regulations and will not be delivered water upon the lands from which the transfer is made or any other lands which the Landowner had an interest in upon the date of the transfer. The Landowner shall be provided a hearing prior to the imposition of the bar upon water service and if the District can set fees and charges which will compensate for the impacts upon the District system and water use within the District system, those fees and charges will be levied annually as a condition of water service rather than the prohibition upon water service.

11. Certain lands within the District are not eligible for fallowing or well water transfer programs. Those include lands which have converted from Second Class to Primary Use status and ten (10) years has not elapsed since that conversion.

CENTRAL CALIFORNIA IRRIGATION DISTRICT
RULES GOVERNING FALLOWING OF CCID LAND
FOR WATER CREDIT IN OTHER DISTRICTS

Adopted October 26, 2007

These Rules are a part of the Central California Irrigation District Water Transfer Policy. Reference to that Policy will be made in interpreting and applying these Rules related to proposals for transfer of water through fallowing of lands.

I. Eligibility for Fallowing Transfers.

1.0 Central California Irrigation District receives its surface water supplies from the Bureau of Reclamation pursuant to the Exchange Contract. The terms of the Exchange Contract limit the quantity of surface water delivered in accordance with a five-month/seven-month schedule, and further limit the monthly quantity of water so delivered. In addition, capacity limitations are provided upon delivery from the Bureau of Reclamation of the water rights water of the District.

1.1 Proposals to fallow land within CCID for credits of an amount of water in other Districts is contemplated within the Central Valley Project Improvement Act and may be arranged but requires the adoption of policies and practices. When fallowing is proposed for credits in certain water irrigation or Mutual Water Companies ("Recipient District") in which the Landowner proposing the fallowing owns the land upon which the water is proposed to be utilized as a result of the transfer, the Landowner shall comply with these Rules and policy.

1.2 Fallowing transfers may occur only from the Landowner who owns the fallowed land within CCID to land owned by that same Landowner within a Recipient District. As used herein, the word "Landowner" shall mean the owner of the right through deeds or contracts of sale to possession of property for farming purposes, which contract or deed must provide the right to control and utilize on the land the surface water provided by CCID upon that land. A lessee, regardless of the term of the lease, is not a Landowner for purposes of this policy, nor is a lessee who holds an option to purchase considered a Landowner for the purposes of this policy. The holder of a life estate entitling the person to possession and use of the land and the surface water provided by CCID upon that land shall be deemed a Landowner. For land either proposed to be fallowed or the land to which the water is to be transferred, the Landowner must obtain the written approval by the Lessee of those lands.

1.3 If the land is owned by a corporation, trust, partnership, or other form of business entity, provided all other owners of that business entity or beneficiaries consent in writing, a person holding an undivided interest may to the extent of that proportional interest be considered a Landowner of that percentage of the acreage, provided that the proposed land to receive the transfer is the same person or an entity holding title in which that individual holds a similar percentage interest. The District will not approve a transfer between entities of the Landowner's proportion of the surface water otherwise transferable unless all of the other holders of proportional interest of both the transferring land and the recipient land agree to be parties to the contract indemnifying, defending and holding the District harmless from any claim.

1.4 The parents or natural or adopted children or grandchildren of a Landowner will be treated as identical with the Landowner for the purposes of transfers because these ownership differences often arise from estate planning, governmental entitlement or similar requirements.

1.5 A person who does not own that interest in land within CCID, and in addition, the interest in land to which the water is to be transferred, for at least one (1) calendar year prior to January 1 of the year in which the transfer is proposed to occur, shall not be permitted to transfer water under the District programs until that ownership qualification period has been complied with.

II. Technical requirements relating to amounts of water which may be transferred under land fallowing proposal:

2.0 The technical requirements for a fallowing proposal and the limitations upon the amounts of water which may be transferred are as follows:

Land Fallowing
Technical Standards and Guidelines

2.1. Maximum Quantity of Transferable Water

2.1.1. The maximum quantity of water (Max Transferable) that can be transferred by a Landowner fallowing land is the *lesser of the monthly Consumptive Use of the crop being fallowed or the CCID Deliverable Monthly Entitlement.* (Subject to Adjustments within paragraph 2.4.)

2.2. Consumptive Use

2.2.1. The consumptive use will be calculated using the average of the crops grown on the land for the past three normal water years.

2.2.2. Consumptive Use (CU) = Evapotranspiration Crop (ETc) + Required Leaching Fraction (LF) – Effective Precipitation (EP).

2.2.2.1. CU = ETc + LF – EP

2.2.3. Etc is calculated on a monthly time step for the calendar year. Data on the baseline three year average ETo and rainfall is collected from the nearest CIMIS station(s). The crop coefficients (Kc) are taken from the SWRCB report # 84-1.

2.2.4. LF is calculated based on the methodology outlined in the Western Fertilizer Handbook.

2.2.5. EP is 50% of the three year average rainfall measured at the nearest CIMIS station(s).

2.2.6. No crops may be grown on the fallowed lands at any time during the calendar year during which the fallowing transfer will take place. Lands on which sugar beets were planted prior to December 31, 2007 for harvest in 2008 shall be eligible for a transfer in 2008 provided that no irrigation water from any source is applied after January 1, 2008. Crops which are normally harvested in the preceding calendar year which are delayed in harvesting by weather or other factors beyond the control of the Landowner until after January 1, shall not be excluded from eligibility for a potential transfer but the circumstances shall be brought to the Board of Directors for approval or disapproval on an individual basis prior to eligibility being determined for the fallowing program.

2.3. CCID Deliverable Monthly Entitlement

2.3.1. The deliverable monthly entitlement is that quantity of Exchange Contract Water, on average, (not other water such as well water) that can be delivered to farmed fields within the entity.

2.3.2. The deliverable monthly entitlement is calculated on a per acre basis.

2.3.2.1. The deliverable monthly quantities are the Division of Waters Agreement quantities less system losses and other commitments divided by total entity acreage.

2.4. **Adjustments**

2.4.1. The deliverable monthly entitlement may be accumulated (bath tubbed) for the 7 month period so long as the bath tub is being provided by Reclamation in accordance with the Refuge Water Transportation Agreement.

2.5. **Determination of Acreage of Fallowed Land**

2.5.1. Acreage of Fallowed land will be based on farmed acres not assessed acreage. Each field that is fallowed must be contiguous unto itself.

2.5.2. The following are acceptable methods for determining farmed acreage:

2.5.2.1. CCID Field Map acreage;
2.5.2.2. Measurements based on aerial photography;
2.5.2.3. Field measurements; and
2.5.2.4. Equivalent methods approved by the transfer committee.

2.5.3. To the extent possible, whole fields will be fallowed.

2.5.4. If only a portion of a field is to be fallowed then the fallowed portion must be physically separated from the farmed field by levee or drain. (It is important that no water of any kind be applied to the fallowed land.)

III. Fallowing Transfers – Quantity Limitations.

3.0 Fallowing transfers, in addition to the amounts and limits provided in the Technical Standards above, will be further limited to no more than the water generated from fallowing 20% of the Landowner's total ownership within the District. If a Landowner owns only a percentage interest in a parcel or parcels of land, not more than 20% of that Landowner's percentage of those parcels may be subscribed in the fallowing program.

3.1 The above amount shall be limited by CEQA/NEPA documents, regulatory approval by the Bureau of Reclamation, and restrictions enacted by the Exchange Contractors. A Landowner should not presume that the full 20% of that Landowner's owned land or share of owned land proposed to be transferred will be transferable in any year.

4.0 The Landowner will be required to pay the cost of the studies, tests and monitoring to determine the amounts of water which can be safely transferred pursuant to a fallowing proposal and which will not impact, directly or indirectly, other users within the District through reduction of groundwater recharge, operational changes, or drainage quality conditions. Landowners seeking to transfer water pursuant to a fallowing proposal in which severe drainage quality conditions exist may be provided priority in regard to fallowing transfers and may be subject to further conditions and limitations, including installation of improvements upon the land to provide increased water conservation upon the fallowed land.

5.0 Land proposed to be fallowed shall further be subject to restrictions in regard to the care of the land during each year it is fallowed to restrict noxious weeds, to comply with air pollution requirements, and to avoid dust or similar detrimental conditions to neighboring land.

6.0 The Landowner proposing a fallowing transfer will be required to demonstrate that at the end of the term of the proposed transfer (one year), the land upon which the water is to be utilized in the Recipient District will be not be dependent upon further transfers.

IV. Documentation.

7.0 The Recipient District must conduct a Water Conservation Program that includes water efficient management practices pursuant to Water Code Section 10800, and must conduct a drainage program which, in the sole determination of CCID, assures that the water transfer will not cause a deleterious effect downslope from any lands irrigated as a result of the transfer.

8.0 The Landowner in the form of an Agreement must hold the District free and harmless against claims for damages arising either because of the fallowing of the land within CCID or the receipt of water upon the lands within the Recipient District pursuant to the transfer and any conditions or problems of any nature or kind that may arise or be related to the transfer. The Recipient District must execute an agreement providing for the transfer and agreeing to limit the use of the water transferred to the lands owned by the Landowner and not to permit, directly or indirectly, the transfer of the Recipient District allocation from those lands or the water transferred from CCID to other lands within the Recipient District or other Districts. The object of the Fallowing Program is to provide for interim relief and not to permit speculation with the water value or direct monetary gain through water marketing.

9.0 Lands which are annexed to CCID are subject to a rule that for ten (10) subsequent years, no water may be transferred. That rule will continue to apply and takes precedence over this policy as to such annexed lands.

10.0 The District fee schedule for investigating, determining the conditions of, and monitoring fallowing transfers shall be established from time to time. The Landowner shall deposit the amounts and supplement those deposits when notified by the District that the original deposit has been exhausted.

11.0 The District (or its designee) will be the lead agency for all CEQA, NEPA and Bureau of Reclamation processes.

12.0 The Landowner shall pay all costs of those processes. If any use permit or similar permits are required from the County in which the CCID land is located or from the County in which the land to receive the transfer of water is located, the Landowner is required to comply with those requirements and obtain the necessary permits before the Landowner will be permitted to participate in a fallowing transfer. The District will be the lead agency for CEQA purposes in those County processes. Landowners should not anticipate or depend upon fallowing transfers being approved prior to the final action and approval by the Bureau of Reclamation, the Recipient District, the Counties if they have jurisdiction or ordinance requirements, and finally, the CCID Board of Directors. Landowners are warned that the process of review and approval of transfers of this nature can take an extensive period of time. The District will have no liability if a Landowner has no other options or means of providing sufficient water to the lands proposed to receive the transfer. The transfer will be credited to the Recipient District in accordance with CCID's estimate of the periods within which water would have been used upon the CCID fallowed land. It is up to the Landowner proposing the transfer to work out, if possible with the Recipient District, the utilization of those credits within the Recipient District. In some cases, the transfer from CCID will not permit the early irrigation of the lands within the Recipient District in accordance with the schedule of actual irrigation. It is up to the Landowner to work with the Recipient District to try to accommodate that difficulty.

CENTRAL CALIFORNIA IRRIGATION DISTRICT

RULES GOVERNING PUMPING OF PRIVATE WELLS

FOR WATER CREDITS IN OTHER DISTRICTS

Adopted: February 24, 1993
Revised: October 26, 2007

These Rules are a part of the Central California Irrigation District Water Transfer Policy. Reference to that Policy will be made in interpreting and applying these Rules related to proposals for pumping of private wells for credit in other Districts.

CCID receives its surface water supplies from the Bureau of Reclamation pursuant to the Exchange Contract. The terms of the Exchange Contract limit the quantity of surface water delivered in accordance with a 5-month and 7-month schedule, and, further, limit the monthly quantity of water so delivered. As a result of these constraints, CCID has historically relied on groundwater to supplement surface water especially during peak summer water demand months. CCID is a signatory to the broadly accepted AB 3616 Best Management Practices Memorandum of Understanding. The District adopted an AB 3030 Groundwater Management Plan and actively manages its surface and ground water through tiered water price incentives or disincentives. This conjunctive management protocol gives CCID maximum flexibility to meet the water demands of its growers.

1. Except as noted, these rules shall apply to all well water pumped for credit in other districts, either from in-District or outside District wells. Each new request must be reviewed and approved by the Board of Directors.

2. All water pumped must meet water quality standards as established by the Board of Directors. Currently, the maximums allowed are:

    a. 1,500 TDS, 2.0 ppm boron
    b. Blended quality downstream of well shall not exceed 700 TDS, 0.5 ppm boron, and no additional selenium detected.

3. Water credits may be used in the Recipient District only by the Landowner who owns the ground where the well is located in CCID. Permission to pump a well for credit will be granted to only one owner during the year; permission cannot be transferred to another owner. Landowner as defined in the District Water Transfer Policy requires that the Landowner own both the land to which the well water is credited as used in CCID and the land in the Recipient District and that both interests in land be held for one year prior to January 1st of the year that the transfer is proposed to occur. If a Landowner owns the In-District land on January 1 of the year in which the transfer is proposed and the Landowner was the tenant upon the property in the previous full year and held a written option to purchase, the Landowner shall be treated as complying with this requirement. The parents or natural or adopted children and grandchildren of a Landowner, will be treated as identical with the Landowner for the purposes of transfers

because these ownership differences often arise from estate planning, governmental entitlement or similar requirements. If ownership is in an entity such as a corporation or partnership, the Landowner's percentage of ownership will limit the amount of water transferable.

3.1. There may be special circumstances in which lands lying adjacent to the District may request that the District allow wells on lands owned by the same Landowner but which wells are also located outside the District boundaries to be pumped into the District system for delivery of the well water from the District system to lands located outside the District owned by the same Landowner; provided, however, that the transfers of well water historically accomplished by the Mall/Craven properties and by the Mosko property, shall be permitted to continue for up to (i) five (5) years subject to the transfer restriction of well water for two (2) out of each three (3) years, or (ii) until the land is sold, whichever date is earlier. In general, the District will apply the same limitations, conditions and policy goals in considering whether to grant or deny those requests.

4. A well pumper will be allowed to pump no more than an amount of the groundwater which can be pumped without damaging other landowners or depleting groundwater storage. This amount is currently estimated at 3.0 acre-feet per acre. Acreage for this calculation will include land owned contiguous to the parcel where the well is located, or within five miles of the well. In no case shall the total water allocation per acre to property in other districts exceed the per-acre allocation for CCID's consumers. Water credits may be used on any land that is within a ten-mile radius of the well or in the same groundwater basin, unless a groundwater consultant's report, which consultant and report are approved by the District, shows that the pumping plan will not result in overdrafting and that adverse effects such as subsidence or unreasonable cones of depression affecting other wells within the area will not occur in the vicinity of the well site. This amount of groundwater pumped for transfer purposes may be reduced or curtailed based upon observed impacts or new information regarding groundwater conditions.

5. Pumping for credit must be terminated if the pumping has a detrimental impact on neighboring wells or on the groundwater table. In case of a dispute over claims of detrimental impacts, a determination will be made by an independent groundwater consultant chosen by the District, whose decision will be final. All costs for the consultant shall be paid by the well pumper. Curtailment of groundwater pumping may occur during the water year and transfer of well water will be curtailed or terminated in those circumstances.

6. Pumping into CCID canals will be allowed only when the pumped water is needed for District water demands.

   a. CCID's surface water supply delivered by the Bureau is generally restricted in monthly quantity. Consequently, unless the water year is such that CCID is accorded water supply delivery flexibility, all well pumping credits on land must be transferred to the Recipient District in the same month in which the water is pumped.
   b. A 10% loss factor will be applied to all well water pumped for credit under this policy.
   c. Every well pumping for credit must have a meter acceptable to CCID.

7. There will be an administrative fee of $2.00 per acre-foot pumped. Other charges to transport well water for credit will be as follows:

   a. A District fee based on actual cost of providing this service will be billed at the end of the water season.
   b. A transfer fee of $4.00/AF for water users not farming in CCID.
   c. Additional fees will be charged based on water quality as follows:

      0 – 500 ppm TDS: No charge
      500 – 1,000 ppm TDS: $ 5.00/AF
      1,000 – 1,500 ppm TDS: $10.00/AF

      Water above 1,500 ppm TDS or 2.0 ppm boron will not be transported.
   d. Any other fees or charges assessed by the Bureau of Reclamation or the receiving districts will be the responsibility of the applicant.
   e. These fees shall be reviewed annually by the Board of Directors and may be revised at that time.

8. In order to avoid unreasonable impacts on the water supply, operations, and financial condition of the District and its water users, the District will not approve a proposal to pump well water for credit unless:

   a. The Recipient District conducts a water conservation program that includes efficient water management practices, or is in compliance with an urban water management plan under Water Code Section 10610 et seq., an urban water shortage contingency plan under Water Code Sections 10621, 10631 and 10656, or an agricultural water management plan adopted pursuant to Water Code Section 10800 et seq.; and
   b. The Recipient District conducts a drainage program which in the sole determination of CCID assures that the water transfer will not cause a deleterious effect on lands downslope from any lands irrigated as a result of the transfer; and
   c. The transferee demonstrates that it will not be dependent upon the transferred water supply at the end of the term of the proposed transfer.
   d. A proposal to pump wells for credit will be approved no more than 2 out of 3 consecutive years. Alteration in the Landowner identity, the well ownership, or the ownership of the land to receive the credit will not avoid this rule. The well may not be subscribed in the program for any purpose for three (3) consecutive years.

9. The applicant must in the form of an agreement hold the District harmless against:

   a. Claims for damage to the groundwater table from adjacent Landowners;
   b. Claims for damages incurred by the applicant in the event the permission to pump for credit is cancelled; and
   c. Any problems that may arise under this program.

10. Permission to pump for credit may be revoked if any of the above terms and conditions are violated.

SAN LUIS CANAL COMPANY

RULES AND REGULATIONS GOVERNING TRANSFERS OF WATER UNDER THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT OF 1992 (PL 102-575)

In order to implement Section 3405 of the Central Valley Improvement Act of 1992 (PL 102-575), San Luis Canal Company ("Company") adopts the following rules and regulations governing transfers of Central Valley Project water.

1. Exclusive Right to Transfer: Inasmuch as the San Luis Canal Company, as a corporate body, possesses the right to receive water pursuant to the exchange contract with the USBR, and inasmuch as the Corporation shareholders possess the right to receive water from the Corporation, it is this Company's position that only the San Luis Canal Company can transfer Corporation water pursuant to Public Law 102-575, Section 3405.

2. Compliance with Laws and Regulations: The Company will comply with the provisions of the Central Valley Project Improvement Act, all applicable regulations and guidelines of the Secretary of the Interior and be consistent with state law. In addition, transfers must be approved by the Contracting Entities and not jeopardize the "Second Amended Contract for Exchange of Waters." (Revised 12/6/67)

3. Limitation: The amount of Company water that can be transferred without unreasonable impacts on the water supply, water quality, operations and financial conditions of the Company and its water users is limited. The Company will not make any transfers that would adversely impact the water supply for its stockholders' land.

4. Groundwater Limitations: There shall be no transfer of groundwater beyond safe yield outside the Company service area.

5. Transferee Limitations: In order to promote the purposes of the Central Valley Project Improvement Act of 1992, and to avoid unreasonable adverse impacts on the water supply, water quality, operations, and financial condition of the Company and its water users, the Company will not enter into a water transfer unless:

a. The transferee initiates a reasonable water conservation program that includes efficient water management practices, or is in compliance with an urban water management plan under Water Code Section 10610 et seq., an urban water shortage contingency plan under Water Code Section 10621, Section 10631, and Section 10656, or an agricultural water management plan adopted pursuant to Water Code Section 10800 et seq. or any revised codes thereafter;

b. The transferee conducts a drainage study to assure that the water transfer will not cause a deleterious effect on lands in proximity to lands irrigated as a result of the transfer; and

c. The transferee demonstrates that it will not be dependent upon the transferred water supply at the end of the term of the proposed transfer, and will be able to relinquish the transferred water supply at that time.

6. Submission of Proposals: The Company will make a formal water transfer application to the USBR. The Company shall submit one (1) complete copy to the transferee. An application shall be deemed complete for the purposes of Company review only when it has been deemed complete by USBR and contains sufficient information for the

Board to determine the impact of the proposed transfer on the water supply, water quality, operations and financial conditions of the Company and its water users, and compliance with CEQA.

7. Future Modifications: Company transfers shall be subject to modification from time to time in response to:

a. Changes in applicable laws, regulations, contracts and court decisions;

b. Changed circumstances that cause a transfer to result in unreasonable impacts on the water supply, water quality, operations, or financial conditions of the Company or its water users;

8. Indemnification: The transferee shall defend, indemnify, and hold harmless the Company against any claims of third parties that the transfer:

a. Is not a beneficial or reasonable use of water;

b. Violates any law or regulation including, but not limited to the National Environmental Policy Act (NEPA), CEQA, Endangered Species acts, Water Quality statutes, and Area of Origin laws; or

c. Has caused or will cause injury or damage to any person or property, including violations of any contracts, leases, trust deeds or water rights.

The foregoing regulations were adopted by the San Luis Canal Company at a regular meeting of its Board of Directors on January 27, _____, 1994.

FIREBAUGH CANAL WATER DISTRICT
WATER TRANSFER POLICY

Firebaugh Canal Water District has the right to appropriate water from the San Joaquin River. Under the terms of the Exchange Contract with the Bureau of Reclamation, the District receives substitute water generally delivered through the Delta-Mendota Canal to Mendota Pool. The District will permit the transfer of substitute water pursuant to this policy.

1. Eligible Transferors. Only District landowners may transfer their water allocation. If a water transfer is proposed by a person who is not the landowner, the written authorization of the landowner must accompany the proposal.

2. District Approval. The District strives to manage water transfers so that the water supply, operations, and financial condition of the District and the Exchange Contractors, and water users within the Exchange Contract service area are not unreasonably impacted. In order to obtain District approval of a water transfer proposal, the transferor must demonstrate that the transfer does not unreasonably impact:

   a. The quantity and quality of the water supply available to the District and its water users;

   b. The ability of the District to blend irrigation return flow and drainage water in its canals to meet water quality standards imposed by the Regional Water Quality Control Board;

   c. The District=s operations including, but not limited to the ability of the District to meet its delivery obligations, obtain additional water supplies, and undertake conservation measures, exchanges, and transfers;

   d. The District=s financial condition and its cost of providing water service to its water users;

   e. The ability of the District or its water users to provide drainage to lands, including the ability to meet regulatory requirements relating to the discharge of agricultural drainage; and

   f. Other relevant factors that may create an adverse financial, operations, or water supply impact on the District or its water users.

   g. The ability of neighboring lands to continue to farm and cultivate crops without the fallowed land creating noxious weeds, dust, insect or disease conditions which may impact those neighboring lands.

3. Water Transfer Proposal. All transfers which an individual landowner wishes to make must be presented to the District for processing.
In any water year, the total water to be transferred shall not exceed that quantity of water that the District determines can be safely transferred without adversely impacting the quantity and quality of the water supply available to the District and its water users. The District will also determine the quantity of water for the water year that the District needs in order to provide for blending of irrigation return flow and drainage water in its canal

systems to meet regulatory requirements. The total water allowed to be transferred shall be computed first after considering these factors and, then, after subtracting the quantity of water needed to offset transportation, evaporation, seepage, metering or measurement error, and any amounts necessary to satisfy agreements with the other Exchange Contractors.

4. Consumptive Use Limitation. Only water that would have been consumptively used or irretrievably lost to beneficial use during the term of the transfer may be transferred, and the transfer quantity may not exceed the transferor=s allocation of water. The District reserves the right to limit transfers during specific months to the quantity of water that would have been consumptively used or irretrievably lost to beneficial use by the transferor during those months.

5. Correlative Share Limitation. The amount of District water that can be transferred without unreasonable impacts on the District and its water users is limited. The District considers the rights of individual landowners to transfer their water supplies to be limited to a correlative share of the total transferable supply. The District will not approve any transfer proposal that would prevent other landowners from transferring their correlative share of the transferable supply of District water.

6. Groundwater Limitations:

   a. General Limitation. The District will not approve any water transfer involving a substitution of groundwater that the District believes (i) is likely to result in significant long-term adverse impacts on groundwater conditions within the District=s service area, (ii) unreasonably interferes with pumping rates or capacities of wells within the District=s service area, or, (iii) interferes with the District=s ability to meet water quality objectives imposed by the Central Valley Regional Water Quality Control Board or other agency having jurisdiction and regulatory authority of the quality of waters used within or discharged from the District=s service area. This limitation shall also apply to water transfer proposals whereby groundwater extracted from lands within the District service area is wheeled in District facilities for use within the District=s service area.

   b. Critical Year Limitation. The District has determined that groundwater pumping within its boundaries during critical water years as defined by the Exchange Contract results in significant long-term adverse impacts on groundwater conditions within the District=s service area that in turn causes unreasonable impacts on the water supply of the District and its water users; therefore, the District will not approve any water transfer proposal that involves pumping of groundwater in critical water years.

7. Transfer Limitations. A transfer will not be approved if the District determines that the water transfer is likely to increase drainage requirements or otherwise cause a deleterious effect on District lands downslope of the lands irrigated as a result of the transfer. The transfer will not be approved unless the Transferor's plan for the lands from which the water will be removed includes a full, detailed and feasible plan to maintain any fallowed lands in a condition in which the lands will not create a risk of insect infestation, disease, dust, noxious weeds or other detrimental condition that may affect neighboring lands and assurances that the plan will be implemented.

8. Compliance with Law and Regulations. Transfer proposals must comply with all

provisions of law including but not limited to the provisions of the California Environmental Quality Act (CEQA).

9. Submission of Proposals:

a. Preliminary Proposals. A transferor may submit a preliminary water transfer proposal to the District prior to the submission of a formal water transfer proposal. The purpose of a preliminary water transfer proposal is to provide the opportunity for informal review by District staff in order to advise the transferor of possible requirements, conditions or objections if a formal proposal is made. The response of the District to a preliminary proposal shall be deemed tentative and subject to change if a formal transfer proposal is made.

b. Formal Proposals. No later than the date the formal water transfer proposal is submitted to the USBR, the transferor shall submit two (2) complete copies to the District. A proposal shall be deemed complete for purposes of District review only when it has been deemed complete by the USBR and contains sufficient information for the District to determine the impact of the proposed transfer on operations of the District, and that it has been analyzed for compliance with CEQA. The transferor must supply any additional information requested by the District in order to enable the District to effectively review the proposal.

10. Hearings. The District may conduct one or more public hearings in order to determine whether the proposed transfer is likely to have an impact on the water supply, operations and financial condition of the District and its water users, and to ensure compliance with CEQA. The transferor and the transferee, or their representative, shall attend any such hearing if requested to do so by the District in order to respond to questions and comments regarding the impact of the proposed water transfer.

11. Future Modifications. District-approved transfers shall be subject to modification from time to time in order to respond to:

a. Changes in applicable laws, regulations, contracts and court decisions;

b. Changed circumstances that cause a transfer to result in unreasonable impacts on the water supply, operations or financial condition of the District or its water users;

c. Proposals by the water users within the District to transfer their correlative share of the District=s transferable water supply.

12. Costs.

a. The transferor must demonstrate that the transferor has paid or has made acceptable arrangements to pay all costs associated with developing a complete water transfer proposal, including the costs associated with necessary environmental review and District staff and attorney review necessary to process the transfer proposal.

b. The transferor shall be responsible to pay all costs incurred by the District in

processing the water transfer proposal and administering the water transfer itself. Such costs shall be charged to the transferor on a time-and-materials/acre-foot basis in accordance with generally accepted accounting practices. A deposit, in an amount to be fixed by the Board of Directors, shall accompany the proposal. If it appears to the District that the deposit will be inadequate to cover the District=s costs, the District may issue a written cost estimate, or estimates, to the transferor. The transferor shall deposit with the District the funds necessary to meet such supplemental cost estimates. The District shall charge its costs against the transferor=s deposits and shall render an accounting to the transferor upon request, but not more often than monthly. Any unexpended portion of the transferor=s deposits shall be refunded upon completion of the transfer. If the transferor fails to deposit sufficient funds to cover the District=s costs, the deficiency shall be due upon submission of an invoice from the District to the transferor. If the transferor fails to pay the invoice, the amount due may, at the District=s election, be added to the transferor=s property taxes or secured by recordation of a lien certificate pursuant to Water Code '37212.

13. Charges. Before any water is transferred in a given water year, the transferor shall pay to the District in full:

a. All additional water rates and charges due to the Bureau of Reclamation or other agency that the District is obligated to collect on account of the approved water transfer.

b. The District=s water charges for that year=s water supply to the land from which the water is being transferred

c. Any standby charges or assessments attributable to the subject land for the year of the transfer, and any delinquencies on account of past water charges, standby charges or assessments.

14. Indemnification. The transferor and transferee are required to defend, indemnify, and hold harmless the District against any claims of third parties that the transfer:

a. Violates the terms of the Second Amended Contract for Exchange of Waters, Contract No. Ilr-1144, dated February 14, 1968;

b. Is not a beneficial or reasonable use of water;

c. Violates any law or regulation including, but not limited to the National Environmental Policy Act (NEPA), CEQA, State and Federal Endangered Species acts, water quality statutes, and Area of Origin laws; or

d. Has caused or will cause injury or damage to any person or property, including violations of any contracts, leases, trust deeds or water rights.

The transferor and transferee are also required to defend, indemnify and hold harmless the District from any claims that the transferor or transferees have breached any contractual or statutory duties pertaining to the transfer.

In addition, the transferor shall relinquish for the duration of the approved transfer all entitlement to receive the water supply that is the subject of the approved transfer. The transferor and transferee shall abide by the termination date of the transfer unless extended in the manner provided by law and shall not contest the return of the transferred water supply to the District=s service area upon such termination.

The transferor shall provide the necessary assurances to the District that the transferee has agreed to abide by the termination date as set forth above and that the transferee has agreed to waive any claim of dependency, detrimental reliance, or intervening public use as a basis for extending the water transfer beyond its approved term.

Prior to approval of the proposed transfer, the transferor shall deliver to the District an agreement, in a form acceptable to the District, signed by the transferor and the transferee, by which they agree to conform to this policy, and in particular to the requirements of this Section.

The agreement shall provide among other terms for the compliance with the plan for maintenance of the land and facilities upon the land from which the water is transferred in such a condition that the land will not create a risk of detrimental impacts to surrounding lands. The District shall be granted the right to perform those measures at the cost of the transferor if the measures are not fully and timely complied with.

15. Water Transfers. Water Transfers for use of water outside of the District boundaries may only be accomplished with the written agreement and compliance with the agreement terms established by the Board of Directors and only in compliance with Federal and State law. Transfers to lands outside of the District boundaries are not a matter of right. If any terms of a written agreement specifying the means and conditions of a transfer shall be violated or fail to be performed, the landowner shall be subject to the penalties provided under the terms of the agreement but shall further be barred from receiving water upon any lands within the boundaries of the District until such time as the District Board of Directors shall determine that the transfer agreement terms have been fully complied with. A breach of the terms of a water transfer agreement which cannot be remedied by physical performance may result in a suspension of the right to receive water for up to one calendar year after a hearing is conducted by the Board of Directors, in addition to the remedies, fines or penalties established under the written agreement and under these rules and regulations.

The foregoing policy was adopted by the Firebaugh Canal Water District at a regular meeting of its Board of Directors on March 11, 1993 and revised in the same manner on October 16, 2001 and July 20, 2004.

Columbia Canal Company

Water Transfers

Rules and Regulations

July 8, 1993

Firebaugh, California

BOARD RESOLUTION

RESOLUTION OF THE BOARD OF DIRECTORS OF COLUMBIA CANAL COMPANY ADOPTING RULES AND REGULATIONS GOVERNING TRANSFERS OF WATER UNDER THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT OF 1992 (P.L. 102-575)

WHEREAS, the United States Congress has enacted the Central Valley Project Improvement Act of 1992 (P.L. 102-575) ("the Act") which provides, among other things, for transfers of project water by water users within the Columbia Canal Company's service area; and

WHEREAS, the United States Bureau of Reclamation has promulgated "Interim Guidelines for Implementation of the Water Transfer Provisions of the Central Valley Project Improvement Act (Title XXXIV of Public Law 102-575)" ("the Guidelines") establishing procedures and criteria for processing such water transfers until formal regulations can be adopted; and

WHEREAS, the Act and the Guidelines impose certain duties upon the Columbia Canal Company including but not limited to the duty to determine whether a proposed transfer of project water will have an unreasonable impact on the water supply, operations or financial conditions of the Columbia Canal Company or its water users; and

WHEREAS, the Columbia Canal Company is authorized to make reasonable rules and regulations providing for the equitable, efficient and economic distribution of its water supply; and

WHEREAS, the Columbia Canal Company desires to establish uniform procedures under which such proposed transfers of water will be evaluated, processed and administered,

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Columbia Canal Company as follows:

10. The said Board hereby adopts the "Rules and Regulations Governing Transfers of Water Under the Central Valley Project Improvement Act of 1992 (P.L. 102-575)" a true coy of which is attached to this Resolution.

11. Pursuant to Article 13 of said Rules and Regulations, the Board hereby adopts the form of "Indemnification and Fallowing Agreement" attached as Exhibit "B" to this Resolution; and

12. The Board authorizes and directs the manager to take such actions and measures as may be reasonably necessary and incidental to implement the Act, the Guidelines and the said Rules and Regulations.

Passed and adopted at a regular/special meeting of the Board of Directors of Columbia Canal Company on July 8, 1993 by the following votes:

AYES:	4
NOES:	0
ABSENT:	1
ABSTAINING:	0

President
Darrell Vincent, Columbia Canal Company

ATTEST:

Secretary
Keith Watkins, Columbia Canal Company

RULES AND REGULATIONS

COLUMBIA CANAL COMPANY

RULES AND REGULATIONS GOVERNING TRANSFERS OF WATER UNDER THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT OF 1992
(PL 102-575)

In order to implement §3405 of the Central Valley Improvement Act of 1992 (PL 102-575), Columbia Canal Company ("Company") adopts the following rules and regulations governing transfers of Central Valley Project water by water users.

1. Company Approval: Insofar as these rules and regulations provide for Company approval of water transfer proposals, they shall mean:

a. First 20%. As to transfer proposals that do not involve more than twenty percent (20%) of the Company's water supply subject to contract with the USBR, the term "Company Approval" shall mean the Company's written findings and conclusions reported to the USBR as to whether the transfer proposal should be approved, or conditionally approved.

b. More than 20%. As to transfer proposals that involve more than 20% of the Company's water supply subject to contract with the USBR, the term "Company Approval" shall mean the Company's approval, or conditional approval, of such proposals.

2. Eligible Transferors: Only landowners may transfer Company water allocations. If a transfer is proposed by a person who is not the landowner, the written concurrence of the landowner must accompany the proposal.

3. Compliance with Laws and Regulations: Transfer proposals must comply with the provisions of the Central Valley Project Improvement Act and all applicable regulations and guidelines of the Secretary of the Interior. All transfer

proposals must also be consistent with State law, including but not limited to the provisions of the California Environmental Quality Act (CEQA).

4. Consumptive Use Limitation: Only water that would have been consumptively used (or irretrievably lost to beneficial use) during the term of the transfer may be transferred - not to exceed the transferor's allocation of project water. The Company reserves the right to limit transfers during specific months to the quantity of water that would have been consumptively used (or irretrievably lost to beneficial use) by the transferor during those months. If the transfer of consumptive use water during such months would have an unreasonable impact on the water supply, operations or financial condition of the Company or its water users, the Company may further limit the transfer.

5. Correlative Share Limitation: The amount of Company water that can be transferred without unreasonable impacts on the water supply, operations and financial conditions of the Company and its water users is limited. The Company considers the rights of individual landowners to transfer their water supplies to be limited to a correlative share of the total transferable supply. The Company will not approve any transfer proposal that would prevent other landowners from transferring their correlative shares of the transferable supply of Company water.

6. Groundwater Limitations:

a. General Limitation. It has been judicially determined that the groundwater supply underlying the lands within the Company is overdrafted. As the supply is overdrafted, any substitution of the use of groundwater for transferred surface water will result in significant long-term adverse impact on groundwater conditions within the Company's service area, and would result in an unreasonable interference with pumping rates or capacities of wells within the Company service area. That, in turn, causes unreasonable impacts on the water supply, operations, and financial condition of the Company and its water users.

For this reason no transfer of groundwater to areas outside the Company service area will be approved and no transfer of surface water without fallowing the land to which such surface supply would have been delivered will be approved.

7. Transferee Limitations: In order to promote the purposes of the Central Valley Project Improvement Act of 1992, and to avoid unreasonable impacts on the water supply, operations, and financial condition of the Company and its water users, the Company will not approve a water transfer proposal unless:

a. The transferee conducts a water conservation program that includes efficient water management practices, or is in compliance with an urban water management plan under Water Code §10610 *et seq.*, an urban water shortage contingency plan under Water Code §10621, §10631, and §10656, or an agricultural water management plan adopted pursuant to Water Code §10800 *et seq.*;

b. The transferee conducts a drainage program to assure that the water transfer will not cause a deleterious effect on lands downslope from any lands irrigated as a result of the transfer; and

c. The transferee demonstrates that it will not be dependent upon the transferred water supply at the end of the term of the proposed transfer, and will be able to relinquish the transferred water supply at that time.

8. Submission of Proposals:

a. Preliminary Proposals. A transferor may submit a preliminary water transfer proposal to the Company prior to the submission of a formal water transfer proposal. The purpose of a preliminary water transfer proposal is to provide an informal review by Company staff in order to advise the transferor of possible requirements, conditions or objections if a formal proposal is made. The response of the Company to a preliminary proposal shall be deemed tentative and subject to change if a formal transfer proposal is made.

b. Formal Proposals. No later than the date the formal water transfer proposal is submitted to the USBR, the transferor shall submit two (2) complete copies to the Company. A proposal shall be deemed complete for the purposes of Company review only when it has been deemed complete by USBR and contains sufficient information for the Company to determine the impact of the proposed transfer on the water supply, operations and financial conditions of the Company and its water users, and compliance with CEQA. The transferor must supply any additional information requested by the Company in order to enable the Company to meet its responsibilities to review the proposal.

(c) Agreement to Fallow Land. No formal proposal shall be complete without an agreement by the transferor to fallow the land to which the transferred water would have been delivered for each crop year in which a transfer is made.

9. Hearings: The Company may conduct one or more public hearings in order to determine the impact of the proposed transfer on the water supply, operations and financial conditions of the Company and its water users, and to ensure compliance with CEQA. The transferor, and the transferee, or their respective representatives, shall attend any such hearing if requested to do so by the Company in order to respond to questions and comments regarding the impact of the proposed water transfer.

10. Future Modifications: Company-approved transfers shall be subject to modification from time to time in response to:

a. Changes in applicable laws, regulations, contracts and court decisions;

b. Changed circumstances that cause a transfer to result in unreasonable impacts on the water supply, operations, or financial conditions of the Company or its water users;

c. Proposals by other water users within the Company to transfer their correlative share of the Company's transferable water supply that, if approved,

would result in more than twenty percent (20%) of the Company's long-term water supply under contract with USBR being committed for transfer.

11. Costs: The transferor shall be responsible for all costs incurred by the Company in processing the water transfer proposal and administering the water transfer itself. Such costs shall be charged to the transferor on a time-and-materials basis in accordance with generally accepted accounting practices. A deposit of $_____ shall accompany the proposal. If it appears to the Company that the deposit will be inadequate to cover the Company's costs, the Company may issue a written cost estimate, or estimates, to the transferor. The transferor shall deposit with the Company the funds necessary to meet such supplemental cost estimates. The Company shall charge its costs against the transferor's deposits and shall render an accounting to the transferor upon request, but not more often than monthly. Any unexpended portion of the transferor's deposits shall be refunded upon completion of the transfer. If the transferor fails to deposit sufficient funds to cover the Company's costs, the deficiency shall be due upon submission of an invoice from the Company to the transferor. If the transferor fails to pay the invoice, the amount due may, at the Company's election, result in forfeiture of the right to receive water, and of the transferor's stock, pursuant to Article X of the Company's Bylaws.

12. Charges: Before any water is transferred in a given water year, the transferor shall pay to the Company in full:

(a) All additional water rates and charges due to the Bureau of Reclamation which the Company is obligated to collect on account of the approved water transfer.

(b) The Company's water charges and assessments for that year's water supply to the land from which the water is being transferred.

(c) The transferor shall also pay, in advance of the transfer, any standby charges attributable to the subject land for the year of the transfer, and any delinquencies on account of past water charges, standby charges or assessments.

13. Indemnification: The transferor and transferee shall defend, indemnify, and hold harmless the Company against any claims of third parties that the transfer:

a. Violates the terms of that certain contract dated February 14, 1968 between CENTRAL CALIFORNIA IRRIGATION DISTRICT, COLUMBIA CANAL COMPANY, SAN LUIS CANAL COMPANY, and FIREBAUGH CANAL COMPANY entitled "Second Amended Contract For Exchange of Waters";

b. Is not a beneficial or reasonable use of water;

c. Violates any law or regulation including, but not limited to the National Environmental Policy Act (NEPA), CEQA, Endangered Species acts, Water Quality statutes, and Area of Origin laws; or

d. Has caused or will cause injury or damage to any person or property, including violations of any contracts, leases, trust deeds or water rights.

e. The transferor and transferee shall also defend, indemnify and hold harmless the Company from any claims that the transferor or transferee have breached any contractual or statutory duties pertaining to the transfer.

f. In addition, the transferor shall relinquish for the duration of the approved transfer the right to receive from the Company the water supply that is the subject of the approved transfer. The transferor and transferee shall abide by the termination date of the transfer unless extended in the manner provided by law and not contest the return of the transferred water supply to the Company's service area upon such termination. In particular, the transferee shall waive any

claim of dependency, detrimental reliance, or intervening public use as a basis for extending the water transfer beyond its approved term.

g. Prior to approval of the proposed transfer, the Transferor shall deliver to the Company an agreement, in a form acceptable to the Company, signed by the Transferor and Transferee by which they agree to conform to these Rules and Regulations, and in particular this Article 13 and transferor agrees to fallow the land to which the transferred water would have been delivered. .

The foregoing regulations were adopted by the Columbia Canal Company at a regular meeting of its Board of Directors on July 8, , 1993.

INDEMNIFICATION AND FALLOWING AGREEMENT

INDEMNIFICATION AND FALLOWING AGREEMENT

This Agreement is made by and between COLUMBIA CANAL COMPANY (hereinafter "Company") and the hereinafter named Transferor and Transferee on the date hereinafter set forth in the County of Madera, State of California.

TRANSFEROR:

TRANSFEREE:

PROPOSED TRANSFER:

In consideration of Company's approval of their proposed water transfer, and in order to prevent unreasonable impacts on Company's water supply, operations, and financial condition, the above-named Transferor and Transferee agree and covenant as follows:

1. TRANSFER SUBJECT TO RULES AND REGULATIONS.

1.01 The said transfer shall be subject to the Company's "Rules and Regulations Governing Transfers of Water Under the Central Valley Project Improvement Act of 1992 (PL 102-575)".

2. JOINT INDEMNIFICATION.

2.02 The Transferor and Transferee jointly and severally agree to defend, indemnify and hold harmless the Company against any claims of third parties that the transfer:

a. Violates the terms of that certain contract dated February 14, 1968 between CENTRAL CALIFORNIA IRRIGATION DISTRICT, COLUMBIA CANAL COMPANY, SAN LUIS CANAL COMPANY, and FIREBAUGH CANAL COMPANY entitled "Second Amended

Contract For Exchange of Waters ";

b. Is not a beneficial or reasonable use of water;

c. Violates any law or regulation including, but not limited to the National Environmental Policy Act (NEPA), CEQA, Endangered Species acts, Water Quality statutes, and Area of Origin laws; or

d. Has caused or will cause injury or damage to any person or property, including violations of any contracts, leases, trust deeds or water rights.

3. RELINQUISHMENT OF RIGHT TO RECEIVE WATER.

3.01 The Transferor relinquishes for the duration of the approved transfer the right to receive from the Company the water supply that is the subject of the approved transfer for use on the land within Company's service area.

4. TRANSFEROR TO FALLOW LAND.

4.01 Transferor agrees for the _____ crop year(s) and any subsequent crop years for which this transfer may be extended to fallow the property described in Exhibit A attached hereto which lies within the service area of Company which would have been entitled to receive all or portions of the water transferred.

4.02 The word "fallow" as used herein shall mean that the land will not be used to grow irrigated crops. Any non-irrigated crop may be grown thereon.

4.03 Transferor further agrees that while the land is fallowed that it will be kept clear of weeds or noxious plant life so that the same will not be allowed to go to seed.

4.04 Transferor agrees that if he fails to comply with the provisions of this Article 4 that Company, together with any other remedies available under the laws of the State of California, may terminate delivery of the transferred water to Transferee and terminate delivery of Company water to Transferor for the

land herein described until compliance with the terms hereof is made by Transferor.

5. TRANSFEROR TO INDEMNIFY COMPANY.

5.01 The Transferor agrees to defend, indemnify and hold harmless the Company from any claims that the transfer violates the rights of any tenants or other persons having any interest in the Transferor's land or water supply.

5.02 The Transferor further agrees to defend, indemnify and hold harmless the Company from claims that the Transferor has breached the terms of any agreements relating to the transfer of the water supply, or has failed to comply with any applicable laws or regulations, or has negligently or intentionally caused any injury or damage in the implementation of the water transfer.

6. TRANSFEREE TO INDEMNIFY COMPANY.

6.01 The Transferee agrees to defend. indemnify and hold harmless the Company from any claims that the Transferee has breached the terms of any agreement relating to the transfer of the water supply, or has failed to comply with any applicable laws or regulations, or has negligently or intentionally caused any injury or damage in the implementation of the water transfer.

6.02 The Transferee covenants to abide by the termination date of the transfer unless extended in the manner provided by law and not to contest the return of the transferred water supply to the Company's service area upon such termination.

6.03 In particular, the Transferee waives any claim of dependency, detrimental reliance, or intervening public use as a basis for extending the water transfer beyond its approved term or any approved extension thereof.

6.04 Transferee recognizes that this transfer may be terminated as to future deliveries if Transferor violates the provisons of Article 4 hereof.

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7. GENERAL PROVISONS.

7.01 The foregoing indemnification provisions expressly include indemnification of the Company for any fees of attorneys, consultants or expert witnesses reasonably incurred by the Company in protecting itself against the subject claim or claims.

7.02 This Indemnification Agreement shall be binding upon the heirs, successors and assigns of the Transferor and Transferee. A re-transfer of the water supply by the Transferee to a third party shall not relieve the: Transferee of any obligations under this agreement and any Re-transferee shall be subject to all of the terms and provisions hereof.

7.03 In the event suit is brought to enforce or interpret any part of this agreement, the prevailing party shall be entitled to recover as an element of their costs of suit, and not as damages, a reasonable attorneys fee to be fixed by the court. The "prevailing party" shall be the party who is entitled to recover their costs of suit, whether or not the suit proceeds to final judgment. A party not entitled to recover his costs shall not recover attorneys fees. No sum for attorneys fees shall be counted in calculating the amount of a judgment for purposes of determining whether a party is entitled to recover his costs or attorneys fees.

Dated :

_____
"Transferor"

Dated:

_____
"Transferee"

Dated:

Columbia Canal Company

By:_____
President
"Company"