



United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

IN REPLY REFER TO:

MP-440
WTR-4.10

NOV 01 2016

Mr. Thomas Howard, Executive Director
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Subject: Transmittal of Response to Condition 3 of the April 19, 2016 Order

Dear Mr. Howard:

Attached please find Reclamation's analysis of water rights in response to Condition 3 of your Order issued on April 19, 2016 in response to Reclamation's Temporary Urgency Change Petition on Permits 16597, 16600, and 20245. An Excel spreadsheet with the underlying daily accounting will be sent via email. Please contact Lisa Holm, Water Rights Specialist, at (916) 978-5252 if you have any questions.

Sincerely,

Richard J. Woodley
Regional Resources Manager

Attachments (1)

Bureau of Reclamation (Reclamation) response to Condition 3 of the April 19, 2016 State Water Resources Control Board Order Approving in Part and Denying in Part a Petition for Temporary Urgency Changes in Permit Terms and Conditions Requiring Compliance with San Joaquin River Flows in the Matter of New Melones Permits 16597, 16600 and 20245 (Application A014858A, A019304 and 14858B)

November 1, 2016

Introduction

On April 19, 2016 the State Water Resources Control Board (Board) issued an Order which included the following Condition:

3) Reclamation shall submit to the State Water Board's Executive Director by November 1, 2016, a report that provides an accounting of the water rights under which water was stored in New Melones Reservoir as of October 1, 2015, and the water rights under which diversions to storage and releases were made on a daily basis from October 1, 2015 through September 30, 2016. The report shall specify whether water was stored, diverted, or released under (1) Reclamation's New Melones Project permits or (2) Oakdale Irrigation District's and South San Joaquin Irrigation District's water rights. The accounting shall include, but shall not be limited to, reservoir inflow, outflow, evaporation, precipitation, diversion to storage, and direct diversion. The report shall document all assumptions used in the water accounting, including the legal basis for those assumptions, and provide any supporting material or references. Reclamation shall provide any additional information regarding this matter that may be requested by the Executive Director.

The following document and accounting is Reclamation's response to this condition. Reclamation reviewed over 40 binders of historical documents in their possession to develop this document. One complicating factor is that the water rights for the New Melones Project are conditioned upon meeting the terms of the 1988 Agreement and Stipulation with Oakdale Irrigation District and South San Joaquin Irrigation District (the "1988 Agreement"). This agreement supersedes the agreement initially entered into in 1972, and approved by the Board as a condition of Reclamation's New Melones water rights on November 2, 1988. The 1988 Agreement states that the amounts and quantities in the 1988 Agreement are, "derived as an equitable satisfaction of all Districts' consumptive water rights affected by the operation of New Melones Dam and Reservoir, including, but not limited to, the Districts' storage of water in Melones, Tulloch and Woodward Reservoirs, evaporation from Melones, Tulloch, and Goodwin Reservoirs and accretions and losses to the Stanislaus River flows between New Melones and Goodwin Dams." Given that the New Melones Project altered the storage and conveyance systems pre-existing on the Stanislaus, Reclamation was required to satisfy senior water rights

Districts, and also allows for Districts to store water in New Melones to compensate the Districts' for the loss of Melones Reservoir, which was inundated by the construction of New Melones.

Nonetheless, this accounting report attempts to measure water diversions and use attributable to water rights according to the Board's licensing unit principles. This method was used despite some gaps in data required for a more complete accounting. While Reclamation has undertaken this accounting report in satisfaction of the Board's April 19, 2016 Order, we note that this accounting study includes assumptions which have neither been reviewed, nor agreed to by other interested parties, including the Districts. Reclamation has been endeavoring to improve the accuracy of water rights accounting over the past five years, and recognizes this is a continuous process as better information and data is obtained and integrated.

General Background

The accounting process used for this report is the same used by the licensing unit of the Board, in Hidden Unit licensing and for annual reporting of water rights use by Reclamation.

Stored water was given priority for delivery over natural flows. Natural flows are assumed to be the first to bypass systems to meet downstream riparian and instream demands. Reservoirs are analyzed first to distinguish between storage, withdrawal, and regulatory reoperation. Storage withdrawals are first attributed to evaporation, second to any consumptive use diversions (here, applicable at Goodwin Dam), and then flow into the next facility limited only by actual measurements of flow downstream. Storage withdrawals are either restored in or bypass downstream reservoirs (this is specified at each facility depending on relationship of rights to facility). In this analysis, storage withdrawals are separated out from the natural flow.

Water Rights Included in this Analysis

Reclamation Rights in New Melones

Reclamation holds three permits for storage and direct diversion for consumptive use purposes in New Melones, issued through Water Rights Decisions 1422 and 1616. The details of these permits are presented in Table 1. Reclamation's permits are specifically conditioned in the following ways so as to recognize senior rights (in addition to the general condition to respect senior rights):

- Stanislaus River Adjudication Decree of Superior Court of San Joaquin County dated November 14, 1929, Action No. 16873 with Supplemental Decrees
- "Agreement and Stipulation" dated October 24, 1972, and executed by the permittee, Oakdale Irrigation District and South San Joaquin Irrigation District. This agreement has been superseded by an agreement dated December 31, 1988.
- Agreement between the permittee and Tuolumne County Water District No. 2 dated November 29, 1972.

- Agreement dated July 31, 1972 between permittee and Calaveras County Water District.¹

Furthermore, when the United States Army Corps of Engineers planned and constructed the New Melones Reservoir, they committed to provide storage in New Melones equivalent to the storage lost in the Melones Reservoir owned by the Oakdale and South San Joaquin Irrigation Districts. In issuing a license to Oakdale and South San Joaquin Irrigation Districts' (Districts) Tri-Dam Projects, the Federal Energy Regulatory Commission conditioned the license so that the Districts' Tulloch Reservoir would become the afterbay of New Melones Reservoir. An equivalent amount of the storage for consumptive use lost at Tulloch Reservoir was also committed for use by the Districts in New Melones.

Reclamation rights are junior to the Districts, Calaveras County Water District (CCWD) and the Tuolumne Regional Water District (TRWD), either by date of appropriation or through the agreements identified previously. While the exercise of CCWD and TRWD water rights occur upstream and prior to the inflow of New Melones, the Districts' water rights are exercised upstream, downstream, and within New Melones Reservoir. For this reason, this accounting primarily focuses on the water rights of the Districts and Reclamation.

Table 1: Consumptive Use Reclamation Water Rights on Stanislaus River

Application (Date)	14858A (6/16/1952)	14858B (6/16/1952)	19304 (3/11/1960)
Permit (Date)	16597 (7/25/1983)	20245 (7/18/1988)	16600 (7/25/1983)
Purpose	MUN, IRR, DOM, IND, FW, WQ, REC, Other		
Beneficial Use End	12/1/1990	12/31/1997	12/1/1990
Permitted Direct Diversion, cfs		2,250	
Direct Diversion Season		11/1-6/30	
Permitted Storage, AF	980,000		1,420,000
Storage Season	11/1-6/30		11/1-6/30
Points of Diversion	New Melones Dam,	Goodwin Dam	New Melones Dam
Points of Rediversion (stored flows only)	Goodwin Dam, Knights Ferry Dam, Tracy Pumping Plant, Old River Pumping Plant		
Place of Use	Stanislaus Calaveras, Tuolumne, and San Joaquin counties		
bypass requirement for	Stanislaus River dissolved oxygen, San Joaquin River salinity, fish and wildlife flows		
Combined Limit DD, AFA		1,000,000	

The actual operations and operational planning of New Melones Reservoir is guided by the 1988 Agreement between the Districts and Reclamation, rather than through a strict division based on water rights, as stated above. The annual use of water rights are highly variable – dependent on hydrology, beneficial use, weather, cropping patterns, and more – so, the 1988 Agreement establishes a maximum annual volume of demand for uses of stored water which allows Reclamation to better plan annual reservoir operations to meet all of the reservoir's demands. Because Reclamation's storage water rights cover the Districts service area and points of

¹ In recognizing Settlement Agreements, the Water Board also found "the above three agreements shall not be construed as a finding by the State Water Resources Control Board with respect to the rights of any of the parties involved." D1422 at pp. 36.

rediversion, the 1988 Agreement allows for Reclamation storage to augment Districts' water rights under the terms of that Agreement. In order to determine the exercise of Reclamation's rights, the exercise of senior rights must first be determined and accounted.

District Rights in and above Goodwin Reservoir

The Districts currently own and operate four storage reservoirs – Donnells and Beardsley upstream of New Melones, and Tulloch and Woodward downstream of New Melones. All except Woodward are operated primarily for power, but also have rights associated with them for consumptive use in the Districts' service areas. In addition to these post-1914 water rights, the Districts also hold a collection of adjudicated pre-1914 direct diversion rights. See Figure 1 for a schematic and data points.

Districts' Direct Diversion Rights

The Districts' oldest water right is a collection of adjudicated direct diversion rights at Goodwin Dam, described in the State of California's Division of Water Rights "Order Determining and Establishing the Several Rights by Appropriation of the Waters of the Stanislaus River and its Tributaries" entered September 21, 1922 (Order). This was prompted by an August 14, 1917 petition by the Districts. First, the Order defines natural flow:

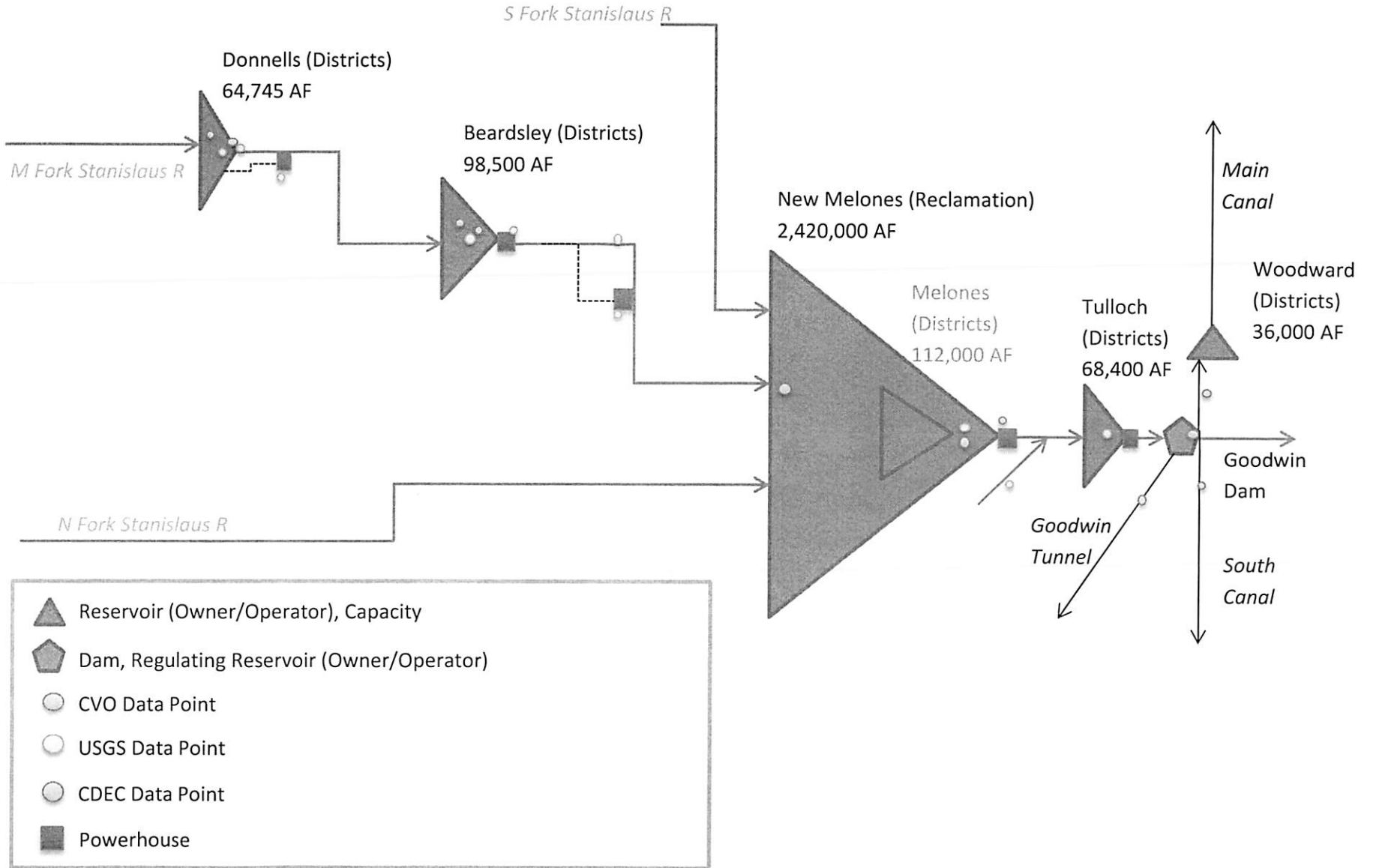
"natural flow" as use of hereinafter, is understood to mean such flow as may take place at any given point in a stream provided that the flow of the stream has not been artificially changed. Wherever the right to appropriate natural flow exists, as found herein, it is understood to mean the right to divert such natural flow for direct application to the use or uses for which the right exists and includes no right of storage unless such right of storage is herein specifically found to exist. (page 1 of Order)

A second important clarification in the Order is that direct diversion includes the right of rotation. "Rotation" is a standard water right term in many direct diversion rights:

The equivalent of the authorized continuous flow allowance for any 30-day* period may be diverted in a shorter time, provided there is no interference with other rights and instream beneficial uses, and provided further that all terms and conditions protecting instream beneficial uses are observed.

*Use: 7-day for domestic use
14-day for power use
30-day for all others

Figure 1: Schematic of Districts' and Reclamation Facilities on Stanislaus River and Various Data Collection Points



The Districts' pre-1914 water rights, reported under Statement S004683, are comprised of the following:

- 5.00 cfs 1853
- 127.00 cfs 1885
- 66.20 cfs 1902
- 847.8 cfs 1909

“from the natural flow of the Stanislaus River, by means of the Goodwin Dam,...being for the OID... and the SSJID, jointly...through the Oakdale South Main Canal and the Joint Supply Canal of the OID and SSJID, during the period between March 1 and November 1 each year, for the irrigation of the 74,246 acres lying within the boundaries of the OID and the 71,081 acres lying within the boundaries of the SSJID, the aforesaid boundaries being a matter of record. Also; OID and SSJID, jointly, will be entitled to divert

- 770.6 cfs additional with a priority of 1909

from the natural flow of the Stanislaus River at the same points of diversion, through the same ditches (enlarged), during the same period, for the same purposes, and in order to completely irrigate the area within said Districts as set forth in the above right; provided that prior to December 31, 1926, said OID and SSJID, jointly, shall have completed above appropriation and actually applied said water to the beneficial use stated; and shall have submitted evidence of such completed appropriation and use to the Division of Water Rights of the Department of Public Works of California on or before December 31, 1926, whereupon the said Division of Water Rights shall, if said evidence is found satisfactory, enter a supplemental finding as to such right and issue a certificate of water right in accordance with such finding.”

The legal decree was modified by supplemental decrees in 1934, 1935, and 1960 [Reclamation 1972] but the supplemental decrees have not been located prior to this writing. This analysis assumes that the conditions for the 770.6 cfs were met and certificate was issued. A 1929 Superior Court decision of the DWR Adjudication No. 16873, Dept No 1 added that water may be applied to domestic use, stockwater year round (within total quantity allowed by right) and confirmed rotation within the rate and 30 days volume limitation, provided rotation does not harm other claimants. It also clarified that the districts' rights do not include November 1 (“through and including October 31”) and changed the date by which proof was required to firm up the right to the additional 770.6 cfs.

In the proceedings that resulted in Water Rights Decision 1616, the 1972 Agreement is described:

“ ‘..., the Bureau would provide OSSJID the following annual quantities of water in recognition of the Districts' rights: 1. 200,000 AF from New Melones storage, 2. 36,000 for storage in Woodward Reservoir, 3. That portion of inflow of the New Melones

Reservoir inflow required to meet the Districts’ direct diversion requirements but not to exceed 1,816.6 cubic feet per second. Subject to the following limitation: The maximum quantity of water delivered each year is limited to 654,000 acre-feet or the total quantity of New Melones Reservoir inflow (October 1 of one year through September 30 of the succeeding year), whichever is smallest.’ (USBR 8.)

The Bureau’s position is that the above conditions of the agreement fully compensate OSSJID for its consumptive use water rights on the Stanislaus River. (T, 29:29-30:7; 5, 32:18-33:1.)” (pp. 13-14)

Collectively, this direct diversion right is for a maximum of 1816.6 cfs a day starting March 1 and ending October 31; with rotation flow rate can vary daily as long as the 30-day average remains at or below 1816.6 cfs. In this analysis, the first water right priority is that natural flow entering New Melones Lake plus any unaccounted for flow/accretions between New Melones Reservoir and Goodwin Reservoir is available for diversion by the Districts’ up to their right’s (assuming rotation) monthly volume (31-day volumes were used for 31-day months). This analysis assumes that the Districts’ actual diversions represent their beneficial use – consumptive use reductions were not researched and any transfers outside of the Joint Main Canal and South Canal are not included, due to a lack of information and data.

Melones Lake

Before the construction of New Melones Dam, the Districts owned and operated the Melones Lake. Melones Lake was built in 1926 with a capacity of 112,600 AF and 10,700 AF of dead storage. It was operated primarily for power and is located ¾ mile upstream from New Melones Dam. The Districts’ water rights for Melones Lake are described in Table 2. These rights are assumed to be exercised as part of the storage in New Melones Reservoir made in exchange for the inundation of Melones by New Melones² and second in priority after the Districts’ pre-1914 direct diversion rights.

Table 2: Districts’ Water Rights at Melones Lake

Application (Date)	1081 (9/20/1918)	3091 (10/19/1922)	10978 (2/10/1945)
Permit/License	2104/2012	2106/2013	6448/3986
Purpose	IRR, Inc Power	IRR, Inc Power	IRR, Inc Power
Permitted Storage, AF	96,195	10,754	25,000
Storage Season	10/1-7/1	10/1-7/1	12/1-5/1
Point of Diversion	Melones	Melones	Melones
Point of Rediversion	Goodwin Reservoir, PH	Goodwin Reservoir, PH	Goodwin Reservoir, PH
Place of Use	143,457 acres	143,457 acres	125,823 acres

² There are several documents describing this proposal beginning in 1960. The October 1972 Appraisal of the Districts’ Water Rights proposes reserving 200,000 acre-feet of New Melones storage as a substitute for Melones and Tulloch consumptive use storage. This amount is also discussed starting on page 110 of the transcripts for the 1972 hearings on Reclamation’s water right applications for New Melones Reservoir.

Tulloch Reservoir

The Districts hold two storage water rights where Tulloch Reservoir is the point of diversion; their details are listed in Table 3. Since the construction and operation of New Melones Reservoir, Tulloch now operates primarily for power and as an afterbay to New Melones Reservoir. In the 1960s and 1970s, the Districts and Reclamation agreed that 200,000 acre-feet per annum would represent the collective annual storage of Melones and Tulloch Reservoirs (see footnote 2). Inflow is now stored in New Melones in accordance with Reclamation's season of diversion, which is shorter than the seasons in the Melones and Tulloch Reservoirs, as that is how New Melones Reservoir is operated. Tulloch does have some small amount of storage and restorage under current operations, which is tracked and accounted for within this 200,000 AF ceiling, to the degree that storage is later used to meet consumptive use demands rather than for power generation. The first 200,000 acre-feet of seasonal inflow (minus the minor storage in Tulloch) is attributed to the Districts' Melones and Tulloch rights.³

Table 3: Districts' Consumptive Use Right at Tulloch

Application (Date)	10872(8/30/1944)
Permit/License	9360/7856
Purpose	IRR
Permitted Storage, AF	80,000
Storage Season	1/1-12/31
Max Withdrawal, AF	63,000
Point of Diversion	Tulloch Reservoir
Point of Rediversion	Goodwin Reservoir
Place of Use	122,419 acres

Tulloch Reservoir is listed as a point of rediversion for Donnell and Beardsley Lakes (for power), so rediversion of these withdrawals was also tracked through the accounting. While this analysis tracks Districts' use of water under their senior rights, it does not break this use down by individual District right.

Woodward Reservoir

South San Joaquin Irrigation District holds a 1921 appropriative right to divert water to Woodward Reservoir. Diversions are made at Goodwin Diversion Dam through the Main Canal to the offstream reservoir. Data for Woodward Reservoir was not available, so this right was made the lowest priority in the OSSJID list, to cover diversions not made under the pre-1914 direct diversion or from withdrawals from storage in New Melones and Tulloch Reservoir.

Table 4 presents the details of the Woodward Reservoir right.

³ This has not been the case in recent Reclamation annual reports of permittees, but it will be accounted this way for 2016 and into the future (barring other information that changes this volume or approach).

Table 4: SSJID Water Right at Woodward Reservoir

Application (Date)	2524 (8/9/1921)
Permit/License	1147/604
Purpose	Agricultural Use, Incidental Power
Permitted Storage, AF	36,000
Storage Season	9/1-5/1
Point of Diversion	Goodwin Dam
Point of Rediversion	Woodward Reservoir
Place of Use	71,112 acres
Max rate of diversion to storage, cfs	950

Donnells and Beardsley Lakes

On the Middle Fork of the Stanislaus River upstream of New Melones, the Districts hold rights for power and consumptive use at Donnells and Beardsley lakes as part of the Tri-Dam Project. License and Permit details for Donnells Lake are presented in Table 5 and license and permit details for Beardsley Lake are presented in Table 6. Storage withdrawals from these two upstream reservoirs can also be restored in Tulloch Lake. In reviewing the record, it appears that Donnells and Beardsley were primarily operated for power, with water recaptured in Tulloch for irrigation purposes. The 1988 Agreement conflates all consumptive uses by the Districts and does not specifically cull out consumptive use releases from Donnells or Beardsley, by focusing on the total volume of irrigation water produced by operation of Tulloch. For this accounting, Reclamation tracked storage withdrawals from Donnells and Beardsley separately. When this water was restored in New Melones or Tulloch for later consumptive use, these flows are attributed to the 200,000 acre-feet per annum.

Table 5: Districts Consumptive Use Rights at Donnells Lake

Application (Date)	5648A (7/30/1927)	12490 (4/28/1948)
Permit/License	13692/12385	9362/10166
Purpose	IRR, Dom, Inc Power	IRR
Permitted Storage, AF	60,000	64,500
Storage Season	10/1-7/1	10/1-7/1
Max Withdrawal, AF	60,000	59,000
Point of Diversion	Donnell & Beardsley Lakes	Donnell Lake
Point of Rediversion	Goodwin Reservoir	
Place of Use	123,400 acres	123,400 acres
Combined Limit Storage, AFA	Not additional to other storage permits	70,000

Table 6: Districts Consumptive Use Rights at Beardsley Lake

Application (Date)	5648A (7/30/1927)	11105 (7/13/1945)
Permit/License	13692/12385	9361/7857
Purpose	IRR, Dom, Inc Power	IRR, Inc Power
Permitted Storage, AF	60,000	98,000
Storage Season	10/1-7/1	10/1-7/1
Max Withdrawal, AF	60,000	76,900
Point of Diversion	Donnell & Beardsley Lakes	Beardsley Lake
Point of Rediversion	Goodwin Reservoir	Goodwin Reservoir
Place of Use	123,400 acres	122,419 acres
Combined Limit Storage, AFA	Not additional to other storage permits	110,000

Calaveras County Water District

On the North Fork of the Stanislaus River upstream of New Melones Reservoir, Calaveras County Water District (CCWD) holds a number of water rights for power and consumptive uses. License and Permit details for New Spicer Meadow Reservoir, the largest storage facility, are presented in Table 7. This analysis only looked at storage in New Spicer Meadow Reservoir for possible interference with the Districts pre-1914 direct diversion right, when it would trigger releases under Reclamation rights. CCWD also holds a water right for direct diversion from Tulloch and would have to withdraw water from upstream storage and convey it through New Melones Reservoir to service this area outside of the direct diversion season, but as of this date, Reclamation has no data on CCWD diversions from Lake Tulloch.

Table 7: CCWD Consumptive Use Rights at New Spicer Meadows Lake

Application (Date)	11792B (3/24/1947)	13091 (5/13/1949)	19419 (12/23/1959)
Permit/License	15013	15018	15024
Purpose	DOM, IRR, IND, MUN, REC, Stock		DOM, IRR, Stock
Permitted Storage, AF	76,300	63,000	49,700
Storage Season	11/1-7/1	11/1-7/1	11/1-6/30
Point of Diversion	Spicer	Spicer	Spicer

Data

Data was obtained from a variety of public sources. Public data points and sources are listed in Table 8. CVP deliveries through the Farmington Canal was obtained through Reclamation's Central Valley Operations office, which obtained the data from the Districts, who own and operated Goodwin Diversion Dam.

Table 8: Data Sources for Stanislaus River Water Rights Accounting

Facility/Location	Data Source	Location Symbol/Number	Sensor Number
New Spicer Meadow	<u>CDEC</u>	SPM	15: Reservoir Storage, AF
Donnells	<u>CDEC</u>	DON	15: Reservoir Storage, AF 23: Reservoir Outflow, cfs
MF Stanislaus R A Hells Half Acre Bridge CA	<u>USGS</u>	11292700	00060 Discharge (Mean)
Beardsley	<u>CDEC</u>	BRD	15: Reservoir Storage, AF 23: Reservoir Outflow, cfs
MF Stanislaus R BL Beardsley Dam CA	<u>USGS</u>	11292900	00060 Discharge (Mean)
New Melones	<u>USACE (California Plots)</u>		STOR-RES EOP
	<u>USBR CVO Reports</u>	New Melones	EVAP, c.f.s.
			Precip, Inches
			Computed Inflow, cfs
			Release – Power, cfs
			Release – Outlet, cfs Release – Spill, cfs
	<u>USBR CVO Reports</u>	New Melones Full Natural	Natural River, cfs
Tulloch	<u>USBR CVO Reports</u>	Tulloch	Storage, AF
			Computed Inflow, cfs
			EVAP, c.f.s.
Goodwin	<u>USBR CVO Reports</u>	Goodwin	Joint Main Canal, cfs
	<u>USBR CVO Reports</u>	Goodwin	South Main Canal, cfs

Methodology

This accounting begins at the uppermost diversions and tracks water down through the system, resolving water right priorities along the way or at the end. It primarily considers the Districts and Reclamation water rights, but also looks at storage patterns in New Spicer Meadow.

First, reservoir data was evaluated for Donnells, Beardsley, New Spicer Meadow, New Melones, and Tulloch. Daily reservoir volume was searched for the highest and lowest values in the permitted storage season. Storage season was started at the lowest value and ended at the highest value. During the storage period, daily initial storage, withdrawals, refill storage and regulatory operations were identified. During the withdrawal period, daily withdrawals, regulatory operations, and refill storage were identified.

Figure 2: New Spicer 2016 Volume and Storage, AF

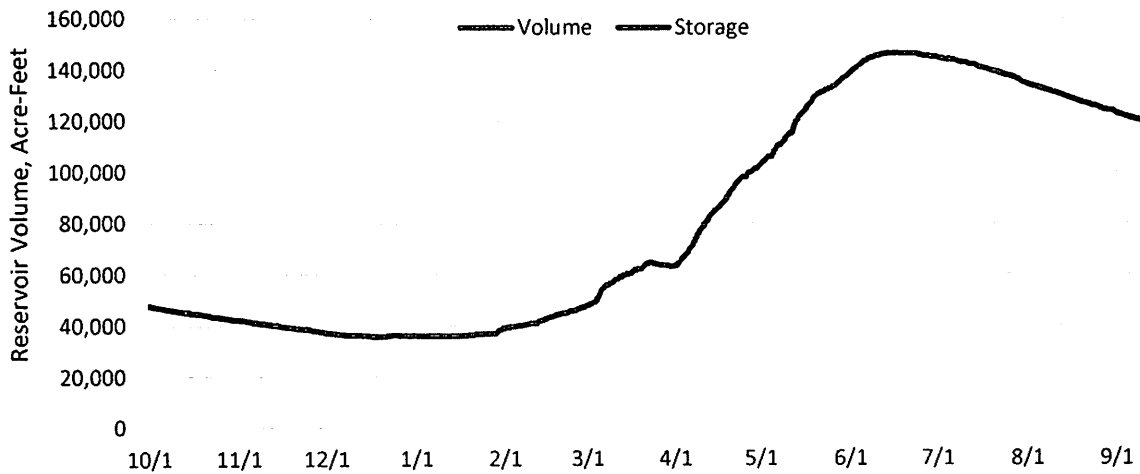


Figure 3: Donnells 2016 Volume and Storage, AF

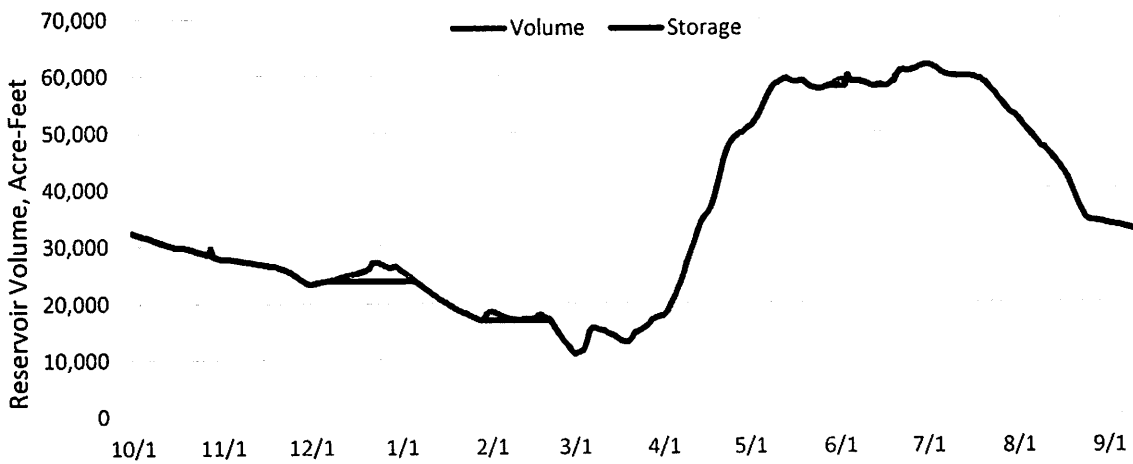


Figure 4: Beardsley 2016 Volume and Storage, AF

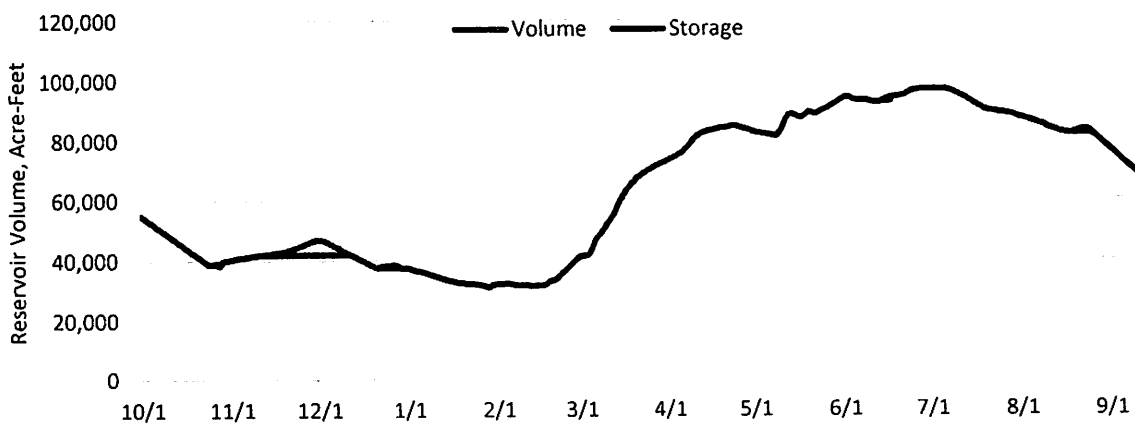


Figure 5: New Melones 2016 Volume and Storage, AF

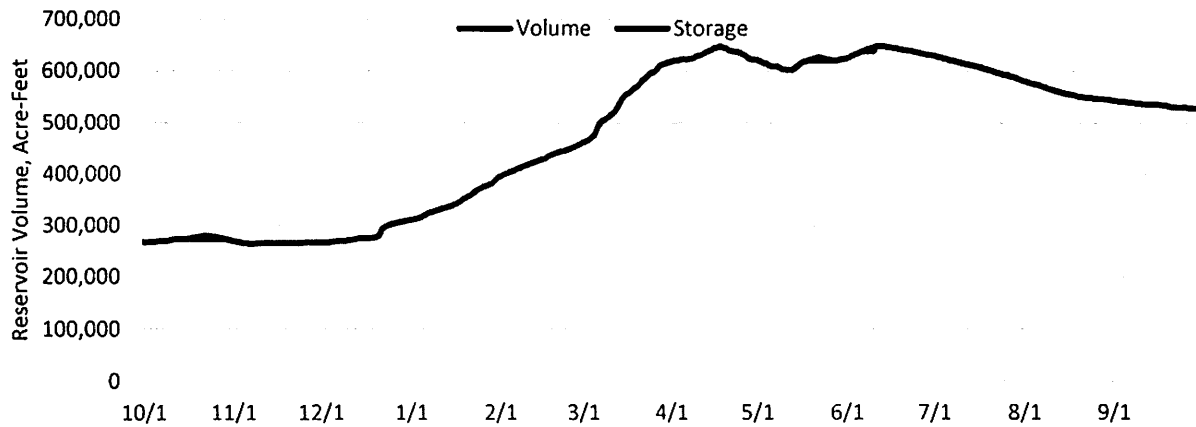
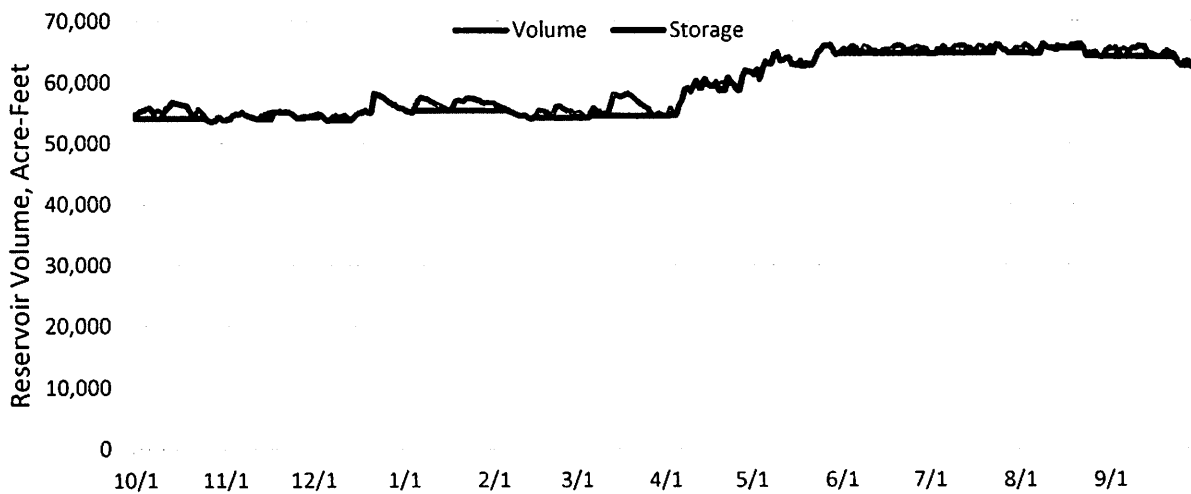


Figure 6: Tulloch 2016 Volume and Storage, AF



Second, storage withdrawals were tracked through the system. No lag time is assumed in this analysis. Withdrawals are normally constrained by actual downstream flow measurements, but US Geological Survey data is not yet available for the 2016 water year. Donnells withdrawals would be constrained by actual downstream flow at Hell’s Half Acre bridge. Outflow can be used to identify the portion of bypass water in downstream flow (storage releases are assumed to be preserved in this analysis). Beardsley can recapture and store Donnells withdrawals or allow those to bypass the reservoir. Beardsley and bypassed Donnells withdrawals would be constrained by actual downstream flow at a USGS flow monitoring location below the dam. It is assumed that withdrawals pass this point are carried into New Melones (unless natural inflow is lower than total withdrawals) and that the remaining flow is natural flow⁴. Evaporation and precipitation data was not available for Donnells or Beardsley Reservoirs.

⁴ As discussed previously, deliveries of CCWD water through Tulloch are not included in this analysis.

New Spicer Meadows was also analyzed for its storage pattern, and combined with Donnell and Beardsley these upstream reservoirs operations were examined for potential interference with the Districts' pre-1914 direct diversion rights during the March through October diversion season.

For New Melones Reservoir, the first use of storage withdrawals is evaporation. Water passing through New Melones is tracked as bypassed natural flow, bypassed upstream withdrawals, or withdrawals from New Melones. Reregulation of upstream withdrawals was allowed to maximize their availability to the Districts. Lake Tulloch is effectively an afterbay to New Melones but does experience some storage and withdrawals due to seasonal operations for irrigation supply. Water through Tulloch are tracked in the same categories as New Melones, along with withdrawals from Tulloch. After the data was summed into monthly volumes, up to the first 200,000 AF of storage (dependent on any carryover from the previous year) in Tulloch and New Melones was attributed to Districts' rights.

Daily consumptive use deliveries through the Joint and South Main Canals by the Districts were then evaluated to determine under which water rights the diversions are made, in order to determine if diversions were made under Reclamation rights. First, direct diversions were credited to the pre-1914 rights from March 1 through October 31, limited by actual natural flows (bypassed through New Melones and accreted after New Melones) up to the daily flow rate and/or monthly volume (right of rotation). Second, since Goodwin Dam is a point of rediversion under the Donnell and Beardsley rights, available withdrawals from these facilities were next utilized to meet District deliveries. Third, available withdrawals from Tulloch were utilized to meet District deliveries. Fourth, New Melones available withdrawals were utilized to meet District deliveries. After the data was summed into monthly volumes, New Melones withdrawals were divided into storage withdrawals under District and Reclamation rights. Any remaining deliveries were attributed to Woodward Reservoir storage, although no actual data on this reservoir was available to Reclamation, so this attribution could be lower than actual exercise of this particular right.

In 2015, the Districts notified Reclamation that they would voluntarily reduce their allocation to make water available to Reclamation to meet environmental flow requirements in October 2015 and in April/May 2016. This water was stored and released under Reclamation rights and is accounted for accordingly.

Deliveries to Central Valley Project (CVP) contractors from New Melones are accounted for under Reclamation water rights either as storage withdrawals or direct diversions, dependent on the day's storage activity. CVP contractors received a zero allocation for 2016. In its March 26, 2016 Board meeting notes, the South San Joaquin Irrigation District describes a transfer of 10,000 AF made available through consumptive use savings to Stockton East Water District. This water was tracked as pre-1914 water, since no petition was brought before the State Water Resources Control Board.

Results

The results of this analysis are presented in Table 9. The Table does not include data for rights that were not exercised in 2016. A copy of the excel file is provided along with this report. Table 9 shows that District deliveries, all within the amount described in the 1988 Agreement, were met primarily through direct diversions under their pre-1914 rights. To a much smaller degree, District withdrawals from upstream reservoirs bypassed New Melones to meet District deliveries in 2016. If upstream withdrawals were considered abandoned, they could all be considered diverted under pre-1914 rights, with the exception of 6,963 acre-feet in August. In 2015, due to the extreme drought, the District utilized storage in New Melones and Tulloch to meet deliveries, resulting in storage of 200,000 acre-feet in 2016 and withdrawal of 9,838 acre-feet to meet deliveries.

After District rights were exercised, Reclamation diverted 238,831 acre-feet to storage, using 167,901 acre-feet of that storage to meet other water right terms and conditions, leaving a potential carryover volume of 70,9030 acre-feet (assuming no additional net decrease before the 2017 storage season begins).

Reclamation also looked into the potential that upstream operations may be interfering with the Districts' pre-1914 rights or with their senior post-1914 downstream storage rights. There did not appear to be any interference with pre-1914 direct diversions in the 2016 water year. There did appear to be diversions to storage in New Spicer Meadows from December through January during the time that water was being stored in New Melones to satisfy the Districts' Melones right. There was also a small diversion to storage in Donnell's Lake in December during the same time period. These findings are preliminary, not based on a complete analysis of CCWD rights, including rights it may have under agreements, and therefore, not conclusive.

Table 9: Water Rights Accounting for New Melones Reservoir and Diversions by Districts, 2016

	New Melones Reservoir				District Deliveries (Consumptive Use)				
	14858A Storage, AF	14858A Withdrawals, AF	Evap, AF	Precip, inches	Pre-1914 rights	Tulloch Storage, AF	Tulloch Withdrawal, AF	Upstream withdrawals, AF	Melones/Tulloch storage in New Melones, AF
starting	267,089					41			547
Oct-15	0	2,013	1,228	1.25	1,272	738	779	3,066	5,821
Nov-15	0	8,034	500	3.91	0	1,109	0	256	3,615
Dec-15	0	226	298	7.16	0	4,225	0	0	43,449
Jan-16	0	0	504	2.12	0	343	0	0	82,672
Feb-16	11,768	0	758	2.76	0	179	0	0	54,016
Mar-16	158,640	0	1,152	7.01	12,587	639	0	2,319	0
Apr-16	31,311	26,512	1,940	2.99	39,320	2,564	2,266	0	0
May-16	21,831	19,741	3,005	0.14	42,490	0	5,090	1,402	0
Jun-16	15,281	8,886	4,270	0	66,758	0	0	687	0
Jul-16	0	47,883	4,669	0	69,891	0	0	8,658	0
Aug-16	0	38,317	3,913	0	52,748	0	156	18,518	0
Sep-16	0	16,289	2,920	0.01	44,503	0	1,547	4,585	0
Total	238,831	167,901	25,157	27.35	329,353	9,798	9,838	39,491	189,573

References (in Chronological Order)

The following documents were reviewed and contained relevant information on Stanislaus River water rights.

- 9/21/1922 Order Determining and Establishing the Several Rights by Appropriation of the Waters of the Stanislaus River and its Tributaries order Entered September 21, 1922
- 5/9/1927 Water Right License 604 (South San Joaquin Irrigation District)
- 11/4/1983 SWRCB Order Allowing Change in Purpose of Use and Place of Use of License 604
- 11/14/1929 In the Matter of the Determination of the Rights, Based upon Prior Appropriation, of the Various Claimants of the Waters of the Stanislaus River and its Tributaries in California. No. 16873. Department No. 1
- 2/24/1930 In the Matter of the Determination of the Rights, Based upon Prior Appropriation, of the Various Claimants of the Waters of the Stanislaus River and its Tributaries in California. No. 16873. Department No. 1 (Order Denying Motion for a new trial, and Modifying Findings of Fact and Conclusions of Law and Judgment Herein)
- 3/19/1931 Application 2450 (power right at Old Melones)
- 3/8/1934 In the Matter of the Determination of the Rights, Based upon Prior Appropriation, of the Various Claimants of the Waters of the Stanislaus River and its Tributaries in California. No. 16873. Department No. 1 (Grant)
- 4/24/1940 Water Right License 2012 (Oakdale Irrigation District and South San Joaquin Irrigation District)
- 12/5/1945 SWRCB Order Allowing Correction of Description of Place of Use of License 2012
- 11/18/1983 SWRCB Order Allowing Change in Purpose of Use and Place of Use of License 2012
- 2/24/1944 WR License 2634 (Oakdale Irrigation District)
- 3/5/1947, 3/8/1935 Memorandum re Stanislaus River Adjudication by Harrison Smitherum, In the Matter of the Determination of the Rights, Based upon Prior Appropriation, of the Various Claimants of the Waters of the Stanislaus River and its Tributaries in California. No. 16873. Department No. 1 (Rose)
- 3/24/1947 Amended Water Right Permit 15013/Application 11792B (Calaveras County Water District)
- 6/27/1951 Agreement between Oakdale Irrigation District, South San Joaquin Irrigation District, and Tuolumne County Water District No. 2
- 6/18/1951 – 7/5/1951 Transcript: In the Matter of Applications (10872, 11105, 12490, 12614, 12873, 13309, and 13310) of OID and SSJID and of Applications (12257, 12493, 12497, 12498, 12856, 12860, 13827 and 13875) of Tuolumne County Water District No. 2
- 4/7/1953 Water Rights Decision 777: In the matter of applications 10872, 11105, 12490, 12614, 12873, 13309, 13310 of Oakdale Irrigation District and South San Joaquin Irrigation District to appropriate water from Middle Fork Stanislaus and Stanislaus River in Calaveras and Tuolumne Counties; and applications 12257, 12493, 12497, 12498, 12856, 12860, 13827, 13875 of Tuolumne County Water District to appropriate water from tributaries of Stanislaus River and Tuolumne River in Tuolumne County.
- 11/2/1953 U.S. Federal Power Commission, Order Extending Time for Commencing and Completing Construction of Project
- 8/5/1954 Water Right License 3986 (Oakdale Irrigation District and South San Joaquin Irrigation District)

6/9/2000 SWRCB Order Approving Changes due to Long-Term Transfer and Amending the License 3986 of the Oakdale Irrigation District and South San Joaquin Irrigation District

11/18/1983 SWRCB Order Allowing Change in Purpose of Use and Place of Use of License 3986

8/31/2001 SWRCB Order Approving Changes due to Long-Term Transfer and Amending the License 3986 of the Oakdale Irrigation District and South San Joaquin Irrigation District

4/1/1959 Memo to Regional Project Development Engineer, Subject: Upstream Depletion Study for New Melones Reservoir – Stanislaus River- East Side Division – Central Valley Project

3/11/1960 Water Right Application 19305 (Reclamation)

9/9/1960 Summary of Information on Stanislaus River Water Rights – New Melones Unit

10/17/1960 Public Hearing by United States Army, Corps of Engineers, Sacramento District and United States Bureau of Reclamation, Region Two in the Matter of Plans for New Melones Dam and Reservoir on the Stanislaus River, California

11/29/1960 Stanislaus Adjudication Supplement

6/25/1962 Letter from the Secretary of the Army transmitting a Letter from the Chief of Engineers, Department of the Army, dated March 22, 1962, submitting a report, together with accompanying papers and an illustration on a review of the reports on the New Melones Project, Stanislaus River, California, requested by a Resolution of the Committee on Public Works, House of Representatives, adopted April 12, 1961

3/14/1963 Water Right Decision 1114: In the matter of Applications 11792, 12537, 12910, 12911, 12912, 13091, 13092, 13093, 18727, 18728, 19148, 19149 of Calaveras County Water District; Applications 12860, 13011A, 14372, 14373, 19664, 19665, 19666, of Tuolumne County Water District #2; Applications 13211, 13212, 14374, 14375, 17408 of Oakdale and South San Joaquin Irrigation Districts to appropriate water from Stanislaus River and tributaries in Calaveras, Tuolumne and Alpine Counties.

4/23/1963 Letter to Leland Hill, Executive Officer, State Water Rights Board from Acting Regional Director, Reclamation, Subject: Application 19304, Stanislaus River, petition for change in character of use

8/29/1963 Tentative Agenda Meeting of August 29, 1963 between the Federal Agencies and the New Melones Water Quality Committee

4/27/1964 New Melones Reservoir Operation Study Hydrologic Period 1922 through 1946

6/1965 Stanislaus River Service Area Investigation Downstream from Goodwin Dam

1965 Data In Support Stanislaus River Factual Report -1965. Vol III of V. Appropriative Rights Data. Adjudicated Rights through Application 11741

1965 Data In Support Stanislaus River Factual Report -1965. Vol IV of V. Appropriative Rights Data. Application 11742 through Application 21404

1966 Stanislaus River Summary Data

2/17/1966 Draft Memo to Chief, Water Rights Engineering Branch from Marvin Winitz, Hydraulic Engineer, Subject: Stanislaus River inflows available to Oakdale and South San Joaquin Irrigation Districts

2/23/1966 Draft Memo to chief, Water Rights Engineering Branch, from Marvin Winitz, Hydraulic Engineer, Subject: Comments on “Suggested Alternative Methods for Determining Annual Diversions from the Stanislaus River to Oakdale and South San Joaquin Irrigation Districts after beginning of Operation of New Melones Reservoir: and proposal of a new approach which would incorporate water rights

5/1966 Water Rights Appendix Sonora-Keystone Unit Stanislaus Division (Reclamation)

6/1966 Revised Report on the Feasibility of Water Supply Development, East Side Division, Initial Phase, Central Valley Project, CA (USDOI, Bureau of Reclamation Region 2)

8/3/1966 WR License 7858 (Oakdale Irrigation District and South San Joaquin Irrigation District)

1/26/1984 Order Allowing Change In Point of Rediversion Place of Use and Amending the License 7859

1/26/1984 Order Allowing Change In Point of Rediversion Place of Use and Amending the License 7858

7/23/1973 WR License 10167 (Oakdale Irrigation District and South San Joaquin Irrigation District)

8/3/1966 WR License 7857 (Oakdale Irrigation District and South San Joaquin Irrigation District)

11/18/1983 SWRCB Order Allowing Change in Purpose of Use and Place of Use of License 7857

8/3/1966 WR License 7859 (Oakdale Irrigation District and South San Joaquin Irrigation District)

8/3/1966 WR License 7860 (Oakdale Irrigation District and South San Joaquin Irrigation District)

8/3/1966 Water Right License 7856 (Oakdale Irrigation District and South San Joaquin Irrigation District)

11/18/1983 SWRCB Order Allowing Change in Purpose of Use and Place of Use of License 7856

4/9/1999 Order Authoring Temporary Changes in Place of Use and Purpose of Use; Merced Irrigation District, Oakdale and South San Joaquin Irrigation Districts, Turlock and Modesto Irrigation Districts, Central California Irrigation District, San Luis Canal Company, Firebaugh Canal Water District, and Columbia Canal Company, Water Right Holders

6/9/2000 SWRCB Order Approving Changes due to Long-Term Transfer and Amending the License 7856 of the Oakdale Irrigation District and South San Joaquin Irrigation District

8/31/2001 SWRCB Order Approving Changes due to Long-Term Transfer and Amending the License 7856 of the Oakdale Irrigation District and South San Joaquin Irrigation District

6/30/1967 Status Report New Melones Reservoir, California

2/28/1968 Stockton Record, "Tuolumne Acts to Guard Water Rights"

5/8/1968 Report of Meeting with County of Calaveras re protests against water right Applications 14858 and 14859

5/10/1968 Stockton Record "Calaveras Water Rights Assured"

9/23/1968 Letter to George Huberty, Calaveras County from EF Sullivan, Assistant Regional Director, Subject: Applications 14858, 14859, 19303 and 19304 to appropriate water from the Stanislaus River – new Melones Unit – Central Valley Project

9/1968 Reevaluation Statement East Side Division, Initial Phase, Central Valley Project, CA (Reclamation)

9/30/1968 Memorandum to Secretary of Interior from Commissioner of Reclamation for Reevaluation Statement East Side Division, Initial Phase, Central Valley Project, CA (Reclamation)

10/18/1968 Excerpt from GAO Report to Congress "Negotiation of Contracts for Water from the Central Valley Project"

1/1969 Stanislaus River Investigation New Melones Releases for Water Requirements and Water rights (Office Report)

7/9/1969 Letter From EF Sullivan, Assistant Regional Director, Reclamation to KL Woodward, Chief, Division of Water Rights, SWRCB, Subject: Application 19304 to Appropriate Water from the Stanislaus River – New Melones Unit – Central Valley Project

3/13/1972 Internal Memorandum re Oakdale and South San Joaquin Irrigation Districts' Stanislaus River Water Rights Yield

5/1972 Environmental Impact Statement New Melones Lake Stanislaus River, CA (US ACE)

7/14/1972 Letter to George Huberty from J Robert Hammond, Assistant Regional Director, Subject: Applications 14858, 14859, 19303 and 19304 to Appropriate from Stanislaus River – New Melones Project, CA

7/14/1972 Letter to John Morgan, Reclamation, from T. Stanley Edwards, Calaveras County Water District

7/21/1972 Meeting report by James Robertson re New Melones Operation Study for the Water Rights Hearing October 1972

7/31/1972 Contract No. 14-06-200-7001A Agreement between Reclamation and Calaveras County Water District on Diversion of Water from the Stanislaus River

10/1972 An Appraisal of Oakdale and South San Joaquin Irrigation Districts Stanislaus River Water Rights (Reclamation)

10/1972 USBR Exhibits In the Matter of Applications 14858, 14859, 19303 & 19304 to Appropriate from Stanislaus River. New Melones Unit. Central Valley Project

11/14/1972 Notice of Hearing in the Matter of Applications 14858 etc.

11/28/1972 Letter from J. Robert Hammond, Assistant Regional Director to Daniel F. Gallery, Attorney, Tuolumne County Water District No. 2, Subject: Applications 14858, 14859, 19303, and 19304 to Appropriate from Stanislaus River – New Melones Unit – Central Valley Project

11/29/1972 Contract No. 14-06-200-7116A Agreement between Reclamation and Tuolumne County Water District No. 2 on Diversion of Water from the Stanislaus River

10/26/1972- Transcript SWRCB Hearing on Applications 14585, 14589, 19303, and 19304, Stanislaus
12/14/1972 River in Calaveras and Tuolumne Counties

11/28/1972 Letter from J. Robert Hammond, Assistant Regional Director, Reclamation, to Daniel F Gallery, Tuolumne County Water District No. 2, Subject: Applications 14858, 14859, 19303, and 19304 to Appropriate from Stanislaus River – New Melones Unit – Central Valley Project

12/1/1972 Letter to W.W. Adams, Chairman, SWRCB from Charles Renda and John Rice, Regional Solicitor, Subject: Applications 14858, 14859, 19303, and 19304 to Appropriate from the Stanislaus River – New Melones Unit – Central Valley Project

1/31/1973 Opening Brief of the United States on the New Melones applications

1/25/1973 Opening Brief of Oakdale Irrigation District and South San Joaquin Irrigation District

1/1973 USBR Exhibit 52A (Estimated TDS – San Joaquin River near Vernalis with New Melones Reservoir in operation and 98,300 AF annual fish releases and up to 70,000 AFA for water quality control purposes.

2/14/1973 Letter to Oakdale and South San Joaquin Irrigation Districts from J Robert Hammond, Assistant Regional Director, Subject: Effects of New Melones Operation on Tulloch Reservoir and Powerhouse (Your letters dated August 25, September 1 and 13, and December 14, 1972)

2/15/1973 Reply Brief of the United States

2/29/1973 Stanislaus River Water Supply and Water Rights Yield Study – Goodwin Dam to San Joaquin River (Mouth)

10/24/1972 Agreement and Stipulation between USBR and Oakdale Irrigation District, South San Joaquin Irrigation District

4/4/1973 Water Rights Decision 1422: In the matter of applications 14858, 14859, 19303, 19304 of USBR (New Melones project) to appropriate water from Stanislaus River in Calaveras, Tuolumne Counties.

4/16/1973 Storage Needed to Satisfy Estimated Demand Buildup plus D-1422

12/5/1973 Letter to John Morgan, USBR from Calaveras County Water District

1/7/1974 Memorandum to Regional Planning Officer from chief, Water Resources Branch,
Subject: Data Required by the SWRCB Relative to New Melones

3/15/1974 Letter to Richard Rosenberger, Acting Chief, Water Rights, SWRCB from J Robert
Hammond, Assistant Regional Director, Subject: Permits 15013 through 15024,
Calaveras County Water District, Stanislaus River and tributaries

4/29/1974 Letter to WW Adams, Chairman, SWRCB from BE Martin, Regional Director, Subject:
Applications 11792, 12537, 12910, 12911, 12912, 13091, 13092, 13093, 18727, 18728,
19148, and 19149, Calaveras County Water District

2/14/1975 Summary of Calaveras County Water Rights

10/17/1975 Letter from J. W. Southern, Tri-Dam Project to David G. Coleman, Chief, Central Valley
Operations, Reclamation, Subject: Tulloch Project information

10/17/1975 Call Summary, Meeting with Tri-Dam Project: Operating Criteria for the Reservoirs of
the Tri-Dam Project above New Melones

10/24/1975 Letter From LB Christiansen, Acting Regional Planning Officer To JW Southern, Tri-Dam
Project , Subject: Telephone Conversation Relating to Tri-Dam Reservoirs Upstream of
New Melones on 10/15/75 with Mr. Creasey of my Staff

1/26/1976 Existing New Melones Reservoir 1926-1976

7/15/1976 WR Order 76-11: In the Matter of Permits 11565 and 15013 through 15024 issued on
Applications 11792 et al., Calaveras County Water District, Permittee. Order Granting
Extensions of Time and Revoking Permits

7/26/1976 Memorandum from Acting Chief, Water Resources Branch to Chief, Resources &
Development Branch, Water Rights Explanation of 236,000 AF of New Melones Storage
used for Oakdale-South San Joaquin Irrigation Districts—As Requested by PG&E

7/29/1976 Letter From Steve Felte, Calaveras County Water District, to BE Martin, Regional
Director, Reclamation (Use of New Melones to serve Copperopolis area CCWD power
water once developed)

9/13/1976 License 12385 (OIDSSJID, Middle Fork Stanislaus River)

10/20/1976 Memorandum from TB Kukkola, Supervisory Hydraulic Engineer to Chief, Water
Resources Branch, Subject: Stanislaus River – Water Rights Adjustment Agreements

5/31/1977 Memorandum of Understanding between Calaveras County Water District and
Northern California Power Agency

6/3/1977 Letter From JW Southern, Tri-Dam Project to HE Horton, Assistant Regional Director
(Information Request)

6/14/1977 Letter From MA Catino, Assistant Regional Direct to Colonel Donald M O'Shei, District
Engineer, Corps of Engineers (assistance needed to respond to 6/3/77 Tri-Dam
Request)

7/6/1977 Meeting Summary: July 5, 1977 meeting with Calaveras County Water District Subject:
CCWD's NF Stanislaus River Power Project and the Bureau's Appraisal Study for the
County

7/20/1977 Memorandum to Chief, San Joaquin Branch from Chief, Water Resources Branch,
Subject: Comments in Response to Tri-Dam Letter of 6/3/1977, Items 2, 3, and 5 –New
Melones

9/1977 North Fork Stanislaus River Hydroelectric Project Feasibility Report prepared for
Calaveras County Water District by Tudor Engineering Company

8/10/1978 Memorandum to Commissioner from Daniel Beard, Acting Assistant Secretary – Land and Water Resources, Subject: Proposed Water Service Contract – South Delta Water Agency

8/23/1978 Proposed Method to Compute the Stanislaus River Water Supply – Goodwin Dam to San Joaquin River

8/25/1978 Memorandum from Director, O&M policy Staff, LBR, to Regional Director, LBR, Subject: Proposed Water Service Contract, South Delta Water Agency

9/12/1978 Memorandum from Acting Regional Director to Commissioner, Subject: Letter from California State Water Resources Control Board dated August 31, 1978, New Melones Project

3/1/1979 Notice of Hearing in the Matter of Permitted Applications 11792, 12911, 13093, 18728, 19148, and 19149 Calaveras County Water District, Permittee, Department of Fish and Game, Protestants

3/6/1979 Clarification of Scope of Hearing in the Matter of Permitted Applications 11792, 12911, 13093, 18728, 19148, and 19149 Calaveras County Water District, Permittee, Department of Fish and Game, Protestants

3/23/1979 SWRCB Special Board Meeting and Information Sheet U.S. Bureau of Reclamation Study for the Operation of New Melones Reservoir

3/27/1979 SWRCB Workshop Agenda for 4/4/1979 and 4/5/1979

3/26/1979 New Melones Studies Operation Studies for evaluation of Alternatives

4/6/1979 Draft memorandum from Regional Director to Commissioner’s Office, Subject: New Melones Unit, Central Valley Project

6/1979 The Stanislaus River Drainage Basin and the New Melones Dam, Historical Evolution of Water Use Priorities by W Turrentine Jackson, Stephen D Mikesell, California Water Resources Center

8/31/1979 SWRCB Internal Memo from William R Attwater, Chief Counsel, to Mike Campos, Division Chief, Division of Water Rights, Subject: Prior Rights Storage, Fish Flow Release Schedules, and Operation of New Melones Reservoir

10/19/1979 Transcript: SWRCB Hearing on New Melones Reservoir Operation Submittals of the US Bureau of Reclamation, Decision 1422

9/12/1980 Supplement to the Final Environmental Impact Statement, Basin Alternatives, Water Allocations & Reservoir Operations

2/23/1981 Agreement among the United States of America and the Oakdale Irrigation District and the South San Joaquin Irrigation District for the Operation of New Melones Dam and Reservoir and Tulloch Dam and Reservoir

11/19/1981 WR Order 81-14 Order Granting an Extension of Time to Complete Protest Negotiations and an Environmental Document

5/20/1982 WR Order 82-3: Order Denying Petition by US Bureau of Reclamation for Approval of Storage under Conditions 1-a and 1-b of Decision 1422

8/19/1982 WR Order 82-9 Order Denying Petition of United States Bureau of Reclamation for Reconsideration of Order WR 82-3

8/24/1982 Cooperative Agreement Between the United States and the Tri-Dam Project of the South San Joaquin and Oakdale Irrigation Districts

2/14/1983 Letter from Sandra Dunn, Attorney, Reclamation to Carole Onorato, Chair, SWRCB (transmitting testimony and exhibits)

2/23/1983 – Transcript of Hearing in the Matter of Decision 1422 (Permits 16597, 16598, 16599,
3/8/1983 and 16600; Applications 14858, 14859, 19303, and 19304) of U.S. Bureau of Reclamation

3/8/1983 WR 83-3 In the Matter of Permits 16597, 16598, 16599, and 16600, Issued on Applications 14858, 14859, 19303, and 19304, U.S. Bureau of Reclamation : Order Amending Water Right Decision 1422 Authorizing Storage in New Melones Reservoir for Generation of Hydroelectric Power and for Consumptive Use

6/1/1983 WR 83-7 In the Matter of Permits 16597, 16598, 16599, and 16600, Issued on Applications 14858, 14859, 19303, and 19304, U.S. Bureau of Reclamation : Order Denying Petition of South Delta Water Agency and Delta Water Users Association for Reconsideration of Order WR 83-3

1/9/1984 Notice of Applications to Appropriate Water and Petition for Assignment Applications 14858, 27318, 27320 & 27321

1/17/1984 Protest of Application 14858, 27319, 27320 and 27321 by Calaveras County Water District

3/5/1984 Protest of Application 14858, 27319, 27320 and 27321 by Tuolumne Regional Water District

3/12/1984 Letter from Protest Unit, SWRCB to Steve Felte, General Manager, Calaveras County Water District, Subject: Applications 27319, 27320 and 27321 and Petition for Assignment of Application 14858, of the Bureau of Reclamation, Stanislaus River in Calaveras and Tuolumne County

3/12/1984 Letter from Protest Unit, SWRCB to Oakdale Irrigation District and South San Joaquin Irrigation District, Subject: Applications 27319, 27320 and 27321 and Petition for Assignment of Application 14858, of the Bureau of Reclamation, Stanislaus River in Calaveras and Tuolumne County (time extension to file protest)

3/6/1984 Protest of Application 14858, 27319, 27320 and 27321 by Oakdale Irrigation District and South San Joaquin Irrigation District with proposed stipulation to dismiss

3/16/1984 Letter From Neil Schild, Acting Regional Director, Reclamation, to Oakdale Irrigation District and South San Joaquin Irrigation District, Subject: Joint Main Canal as Point of Direct Diversion

3/16/1984 Memorandum to Regional Director, Subject: Report of Meeting (Telephone Call) with Other Agencies and Units of the Bureau of Reclamation (USBR Applications for Direct Diversion Rights for the New Melones Unit and Protests to Those Applications)

3/21/1984 Memorandum From Sandra K. Dunn, Attorney, Office of the Solicitor, to Regional Director, Reclamation, Subject: New Melones – Petition for Points of Rediversion of Stored Water

3/23/1984 Letter From Mark S. Bray, to Neil Schild, Acting Regional Director, Reclamation, Subject: South San Joaquin Irrigation District

3/30/1984 Letter From Neil Schild, Acting Regional Director, Reclamation, to Steve Felte, General Manager, Calaveras County Water District (Subject: Protest)

4/9/1984 Letter from Sandra K. Dunn, Office of the Solicitor to Carole A. Onorato, Chairwoman, SWRCB (Subject: Revised petition for additional points of rediversion for the New Melones unit)

4/9/1984 Memorandum to DFG from SWRCB Subject: Applications 14858, 27319, 27320 and 27321 of U.S. Bureau of Reclamation, Stanislaus River in Calaveras and Tuolumne Counties

5/25/1984 Letter from Protest Unit, SWRCB to Tuolumne Regional Water District, Subject: Applications 14858, 27319, 27320 and 27321 of the U.S. Bureau of Reclamation, Stanislaus River, Calaveras and Tuolumne Counties

5/25/1984 Letter from Protest Unit, SWRCB to South San Joaquin Irrigation District, Subject: Applications 14858, 27319, 27320 and 27321 of the U.S. Bureau of Reclamation, Stanislaus River, Calaveras and Tuolumne Counties

6/28/1984 Letter from David G. Houston, Regional Director, Reclamation, to Oakdale Irrigation District and South San Joaquin Irrigation District

10/2/1984 Letter from Protest Unit, SWRCB to All Protestants, Subject: Applications 27319, 27320 and 27321 and Petition for Assignment of Application 14858 of the U.S. Bureau of Reclamation, Stanislaus River, Calaveras and Tuolumne Counties (New Melones Direct Diversion Applications)

10/17/1984 Letter from Steve Felte, General Manager, Calaveras County Water District, to Protest Unit, SWRCB, Subject: Applications 27319, 27320 and 27321 and Petition for Assignment of Application 14858 of the U.S. Bureau of Reclamation, Stanislaus River, Calaveras and Tuolumne Counties (New Melones Direct Diversion Applications)

10/1984 North Main Canal Alternative Conveyance Facility Study, Oakdale Irrigation District

10/26/1984 Letter from Protest Unit, SWRCB to David G. Houston, Regional Director, Reclamation, Subject: Permits 16597 and 16600 (Applications 14858A and 19304) of the U.S. Bureau of Reclamation, New Melones Project

11/5/1984 Letter from Protest Unit, SWRCB to Regional Director, Reclamation, Subject: Applications 27319, 27320 and 27321 and Petition for Assignment of Application 14858 of the U.S. Bureau of Reclamation, Stanislaus River, Calaveras and Tuolumne Counties (New Melones Direct Diversion Applications)

1/21/1985 Letter from Acting Regional Director, Reclamation to Raymond Walsh, Chief, Division of Water Rights, SWRCB

1/25/1985 Water Right Application 28380

1/28/1985 Water Right Application 28381

7/3/1986 Letter from Raymond Walsh, Chief, Division of Water Rights, SWRCB to Harold Meyer, Reclamation, Subject: Applications 27320 and 27321, U. S. Bureau of Reclamation, New Melones Project, Stanislaus River

10/3/1986 Letter from David G. Houston, Regional Director, Reclamation, to Raymond Walsh, Chief, Division of Water Rights, SWRCB

April 1987 Draft Supplement to Previous Environmental Documents for the Stanislaus River Direct Diversion Applications

6/19/1987 Letter from Paul F. Minasian to William VanDyck, SWRCB, Subject: Bureau of Reclamation Hearing Application Numbers 14858, 27319, 27320, 27321 (specific examples to accompany testimony)

6/8/1987 Calaveras County Notice of Intent to Appear and Exhibits

6/8/1987 Oakdale Irrigation District/South San Joaquin Irrigation District Notice of Intent to Appear and Exhibits

6/8/1987 Letter from William M. Wirtz, Assistant Regional Solicitor, Office of Solicitor, DOI, to Raymond Walsh, Chief, Division of Water Rights, SWRCB (Eight copies of USBR exhibits, index, and Notice of Intent to Appear)

6/23/1987 Transcript of SWRCB Hearing in the Matter of Petition for Assignment of Application 14858 and Applications 27319, 27320, and 27321 of U.S. Bureau of Reclamation, Stanislaus River, Tuolumne, Calaveras, Stanislaus Counties

1/21/1988 Water Rights Decision 1616: In the matter of applications 14858, 27319, 27320, 27321 of USBR to appropriate water from Stanislaus River in Tuolumne, Calaveras, Stanislaus and San Joaquin Counties.

6/27/1988 Transcript of SWRCB Public Hearing Re: Protests by Delta Water Users Association South Delta Water Agency against Petitions and Applications to Appropriate Water from the Watersheds of the Sacramento River and the San Joaquin River

8/30/1988 Agreement Among the United States of America and the Oakdale Irrigation District and the South San Joaquin Irrigation District for the Operation of New Melones Dam and Reservoir and Tulloch Dam and Reservoir

8/30/1988 Letter from David G Houston, Regional Director, Reclamation to Boards of Directors, Oakdale Irrigation District, South San Joaquin Irrigation District, Subject: Implementation of the Agreement and Stipulation dated August 30, 1988, among Oakdale and South San Joaquin Irrigation Districts (Districts) and the United States – Central Valley Project, California (Nonproject Water Rights)

4/21/1989 Letter from Paul R. Minasian to Harold Meyer and Merv De Haas, Reclamation, Oakdale Irrigation District, South San Joaquin Irrigation District, and Mark S. Bray, Esq., Subject: Calaveras County Water District

4/6/1988 WR Order 88-6 Order Denying Petition for Reconsideration and Amending Decision 1616

11/2/1988 WR Order 88-24 Order Amending and Validating Issuance of Conditional Temporary Urgency Change in Point of Diversion, Point of Rediversion, Place of Use and Purpose of Use

12/1991 Draft EIR Water-Related Projects, Stanislaus River Water Rights (prepared for Calaveras County Water District)

1/3/1992 Letter from Katherine Mrowka, Hearings Unit, SWRCB to Steve Felte, Calaveras County Water District, Subject: Draft Environmental Impact Report for Stanislaus River Water Rights – Permitted Applications 11792B, 12910, 12912, 13091, 18728 and 19149 – North Fork Stanislaus River and Other sources in Tuolumne and Calaveras Counties

1/16/1992 Letter from Tim O’Laughlin to Eugene O. Bergeron, Oakdale Irrigation District, Barrett Kehl, South San Joaquin Irrigation District, Donald B. Thompson, Tri-Dam Project, and John Rudquist, Esquire, Subject: CCWD Draft-EIR

1/21/1992 Letter from Donald W. Fisher, Division of Planning (?) to K. S. Dunbar & Associates (subject CCWD Draft-EIR)

1/22/1992 Letter from David Whitridge to Steve Felte, Calaveras County Water District, Subject: December 1991 Draft EIR, Water-Related Projects, Stanislaus River Water Rights

1/29/1992 Letter from David Whitridge to Al Candlish, Reclamation, Subject: Calaveras County Water District Draft EIR

2/10/1992 Memorandum from Chief, Environmental Compliance Branch, to Chiefs, MP-710, MP-725, MP-440, MP-2810, Subject: Draft EIR Water Related Projects, Stanislaus River Water Rights (Environmental Report)

5/12/1992 Letter from Susan E. Hoffman, Reclamation to Keith Dunbar, P.E., K.S. Dunbar and Associates, Subject: Draft EIR Water Related Projects, Stanislaus River Water Rights, Calaveras County Water District

6/19/1992 Letter from Jeffrey A. Meith to Tony Colon, Reclamation (sale to Water Bank)

8/27/1992 Letter from Roger K Patterson, Regional Director, Reclamation to D.B. Thompson, Manager, Tri-Dam Project, Subject: Agreement with Oakdale and South San Joaquin

Irrigation Districts for Transfer of Water to the State Water Bank – Central Valley Project

10/13/1992 Letter from Roger K Patterson, Regional Director, Reclamation to D.B. Thompson, Manager, Tri-Dam Project, Subject: Agreement with Oakdale and South San Joaquin Irrigation Districts for Transfer of Water to the State Water Bank – Contract No. 2-07-20-W1031 - Central Valley Project

6/20/1996 Letter from Jack Lavern, President, Stockton East Water District to Board of Supervisors, Tuolumne County, T.R. Tim McCullough, General Manager, Tuolumne Utilities District, Subject: Stanislaus River Water Rights Application

9/1997 Water Rights Order 97-05 North Fork Stanislaus River and Other Sources

2/24/1999 Order Approving a New Development Schedule, Adding Endangered or Threatened Species Term, and Amending the Permit 19046

5/1999 Draft Environmental Assessment, The Temporary Acquisition of Water for Fish and Wildlife Purposes on the Yuba and Stanislaus Rivers

11/15/1999 Letter from Robert Stackhouse, Reclamation, to Harry M Schueller, SWRCB, Subject: Letter of August 9, 1999, Regarding South San Joaquin Irrigation District’s and Oakdale Irrigation District’s Proposal to Sell Water to the Cities of Escalon, Ripon, Manteca, Lathrop and Tracy

6/12/2001 Email from Beth Briley to John Davis et al, Subject: Re: SSJID Settlement Proposal

6/25/2001 Memorandum for Record, Subject: Impact of South San Joaquin Irrigation District (SSJID) Delivery to Lathrop and Tracy

7/13/2005 Email from Jo Ann Struebling to John Davis, Subject: Additional Info – FWD: 1988 Agreement & Stipulation w/OID & SSJID

11/17/2006 Letter from Jason Reed, Tri-Dam Project, to Michael Finnegan, Reclamation, Re: Tulloch/New Melones Operation