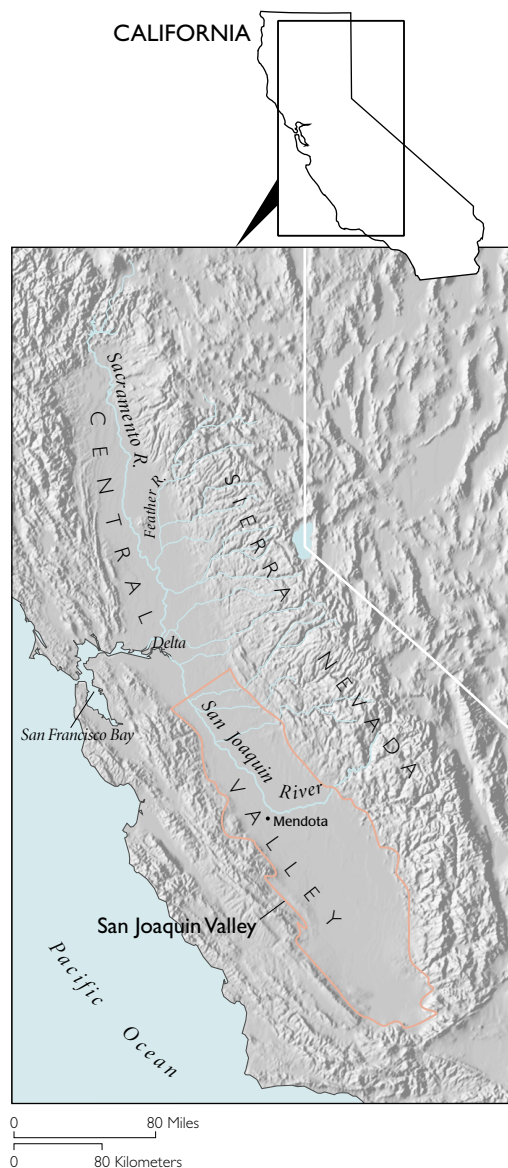


# SAN JOAQUIN VALLEY, CALIFORNIA

Largest human alteration of the Earth's surface

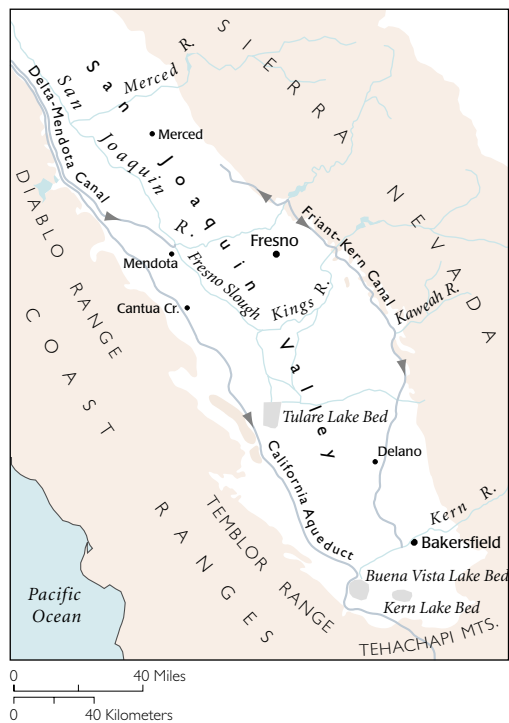


**M**ining ground water for agriculture has enabled the San Joaquin Valley of California to become one of the world's most productive agricultural regions, while simultaneously contributing to one of the single largest alterations of the land surface attributed to humankind. Today the San Joaquin Valley is the backbone of California's modern and highly technological agricultural industry. California ranks as the largest agricultural producing state in the nation, producing 11 percent of the total U.S. agricultural value. The Central Valley of California, which includes the San Joaquin Valley, the Sacramento Valley, and the Sacramento-San Joaquin Delta, produces about 25 percent of the nation's table food on only 1 percent of the country's farmland (Cone, 1997).

In 1970, when the last comprehensive surveys of land subsidence were made, subsidence in excess of 1 foot had affected more than 5,200 square miles of irrigable land—one-half the entire San Joaquin Valley (Poland and others, 1975). The maximum subsidence, near Mendota, was more than 28 feet.

Approximate location of maximum subsidence in United States identified by research efforts of Joseph Poland (pictured). Signs on pole show approximate altitude of land surface in 1925, 1955, and 1977. The pole is near benchmark S661 in the San Joaquin Valley southwest of Mendota, California.





Since the early 1970s land subsidence has continued in some locations, but has generally slowed due to reductions in ground-water pumpage and the accompanying recovery of ground-water levels made possible by supplemental use of surface water for irrigation. The surface water is diverted principally from the Sacramento-San Joaquin Delta and the San Joaquin, Kings, Kern and Feather Rivers. Two droughts since 1975 have caused surface-water deliveries in the valley to be sharply curtailed, and demonstrated the valley's vulnerability to continued land subsidence when ground-water pumpage is increased.

The history of land subsidence in the San Joaquin Valley is integrally linked to the development of agriculture and the availability of water for irrigation. Further agricultural development without accompanying subsidence is dependent on the continued availability of surface water, which is subject to uncertainties due to climatic variability and pending regulatory decisions.

Land subsidence in the San Joaquin Valley was first noted in 1935 when I. H. Althouse, a consulting engineer, called attention to the possibility of land subsidence near the Delano (Tulare-Wasco) area. The process was first described in print by Ingerson (1941, p. 40–42), who presented a map and profiles of land subsidence based on comparison of leveling of 1902, 1930, and 1940. Four types of subsidence are known to occur in the San Joaquin Valley. In order of decreasing magnitude they are (1) subsidence caused by aquifer-system compaction due to the lowering of ground-water levels by sustained ground-water overdraft; (2) subsidence caused by the hydrocompaction of moisture-deficient deposits above the water-table; (3) subsidence related to fluid withdrawal from oil and gas fields; and (4) subsidence related to crustal neotectonic movements. Aquifer-system compaction and hydrocompaction have significantly lowered the land surface in the valley since about the 1920s, and our review of the subsidence problems there is limited to these two primary causes.

#### THE SAN JOAQUIN VALLEY IS PART OF A GREAT SEDIMENT-FILLED TROUGH

The San Joaquin Valley comprises the southern two-thirds of the Central Valley of California. Situated between the towering Sierra Nevada on the east, the Diablo and Temblor Ranges to the west, and the Tehachapi Mountains to the south, the valley occupies a trough created by tectonic forces related to the collision of the Pacific and North American Plates. The trough is filled with marine sediments overlain by continental sediments, in some places thousands of feet deep, deposited largely by streams draining the mountains, and partially in lakes that inundated portions of the valley floor from time to time. More than half the thickness of the continental sediments is composed of fine-grained (clay, sandy clay, sandy silt, and silt) stream (fluvial) and lake (lacustrine) deposits susceptible to compaction.

## San Joaquin Valley, California

Meltwater from the Sierra snowpack recharges ground water in the San Joaquin Valley and supplies surface water during the dry summer months.



(California Department of Water Resources)

The valley floor, comprising about 10,000 square miles, is arid to semiarid, receiving an average of 5 to 16 inches of rainfall annually. Most of the streamflow in the valley enters from the east side in streams draining the western Sierra Nevada, where much of the precipitation occurs as snow. The San Joaquin River begins high in the Sierra Nevada and descends onto the valley floor, where it takes a northerly flow path toward the Sacramento-San Joaquin Delta. On its course northward to the Delta it collects streamflow from the central and northern portions of the valley. The southern valley receives streamflow from the Kings, Kaweah, and Kern Rivers, which issue from steeply plunging canyons onto broad, extensive alluvial fans. Over many thousands of years, the natural flow of these rivers distributed networks of streams and washes on the slopes of the alluvial fans and terminated in topographically closed sinks, such as Tulare Lake, Kern Lake, and Buena Vista Lake. Streams draining the drier western slopes and Coast Ranges adjacent to the valley are intermittent or ephemeral, flowing only episodically. Precipitation and streamflow in the valley vary greatly from year to year.

#### Pumping for irrigation altered the ground-water budget

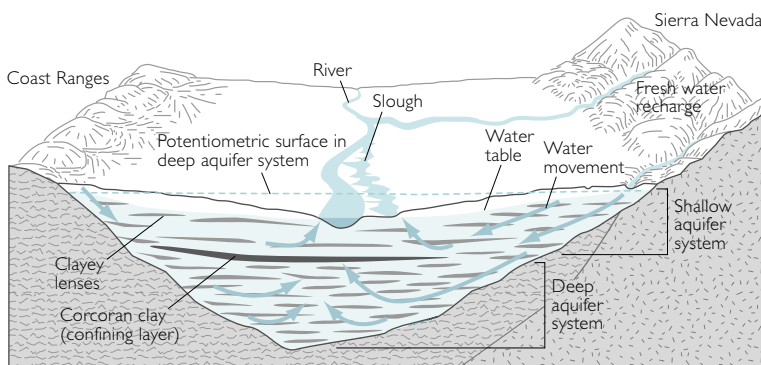
Ground water occurs in shallow, unconfined (water table) or partially-confined aquifers throughout the valley. Such aquifers are particularly important near the margins of the valley and near the toes of younger alluvial fans. A laterally extensive lacustrine clay known as the Corcoran Clay is distributed throughout the central and western valley. The Corcoran Clay, which varies in thickness from a feather edge to about 160 feet beneath the present bed of Tulare Lake, confines a deeper aquifer system that comprises fine-grained aquitards interbedded with coarser aquifers. Most of the subsidence measured in the valley has been correlated with the distribution of ground-water pumpage and the reduction of water levels in the deep confined aquifer system.

Under natural conditions before development, ground water in the alluvial sediments was replenished primarily by infiltration through stream channels near the valley margins. The eastern-valley streams carrying runoff from the Sierra Nevada provided most of the recharge for valley aquifers. Some recharge also occurred from precipitation falling directly on the valley floor and from stream and lake seepage occurring there. Over the long term, natural replenishment was dynamically balanced by natural depletion through ground-water discharge, which occurred primarily through evapotranspiration and contributions to streams flowing into the Delta. The areas of natural discharge in the valley generally corresponded with the areas of flowing, artesian wells mapped in an early USGS investigation (Mendenhall and others, 1916). Direct ground-water outflow to the Delta is thought to have been negligible.

Today, nearly 150 years since water was first diverted at Peoples Weir on the Kings River and more than 120 years after the first irrigation colonies were established in the valley, intensive development of ground-water resources for agricultural uses has drastically altered the valley's water budget. The natural replenishment of the aquifer systems has remained about the same, but more water has discharged than recharged the aquifer system; the deficit may have amounted to as much as 800,000 acre-feet per year during the late 1960s (Williamson et al., 1989). Most of the surface water now being imported is transpired by crops or evaporated from the soil. The amount of surface-water outflow from the valley has actually been

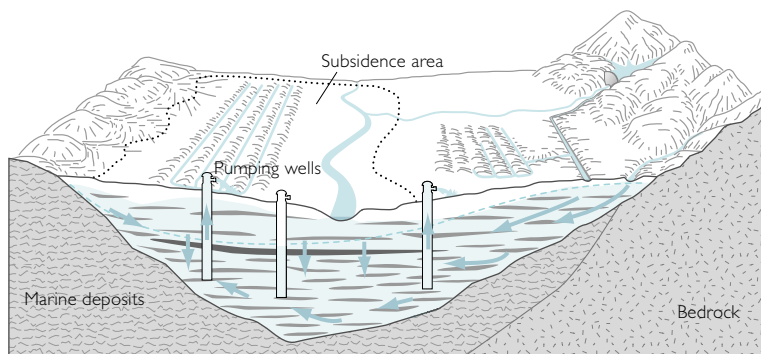
**PREDEVELOPMENT**

Ground water flowed from the mountains toward the center of the valley where it discharged into streams or through evapotranspiration.



**POSTDEVELOPMENT**

Ground water flows generally downward and toward pumping centers.



By pumping the vast reserves of ground water, farmers have developed the San Joaquin Valley into a major agricultural region.



(California Department of Water Resources)

reduced compared to predevelopment conditions. Ground water in the San Joaquin Valley has generally been depleted and redistributed from the deeper aquifer system to the shallow aquifer system. This has created problems of ground-water quality and drainage in the shallow aquifer system, which is infiltrated by excess irrigation water that has been exposed to agricultural chemicals and natural salts concentrated by evapotranspiration.

#### A STABLE WATER SUPPLY IS DEVELOPED FOR IRRIGATION

In the San Joaquin Valley, irrigated agriculture surged after the 1849 Gold Rush and again in 1857, when the California Legislature passed an act that promoted the drainage and reclamation of river-bottom lands (Manning, 1967). By 1900, much of the flow of the Kern River and the entire flow of the Kings River had been diverted through canals and ditches to irrigate lands throughout the southern part of the valley (Nady and Laragueta, 1983). Because no significant storage facilities accompanied these earliest diversions, the agricultural water supply, and hence crop demand, was largely limited by the summer low-flows. The restrictions imposed by the need for constant surface-water flows, coupled with a drought occurring around 1880 and the fact that, by 1910, nearly all the available surface-water supply in the San Joaquin Valley had been diverted, prompted the development of ground-water resources.

The first development of the ground-water resource occurred in regions where shallow ground water was plentiful, and particularly where flowing wells were commonplace, near the central part of the valley around the old lake basins. Eventually, the yields of flowing wells diminished as water levels were reduced, and it became necessary to install pumps in wells to sustain flow rates. Around 1930, the development of an improved deep-well turbine pump and rural electrification enabled additional ground-water development for irrigation. The ground-water resource had been established as a reliable, stable water-supply for irrigation. Similar histories were repeated in many other basins in California and throughout the Southwest, where surface water was limited and ground water was readily available.



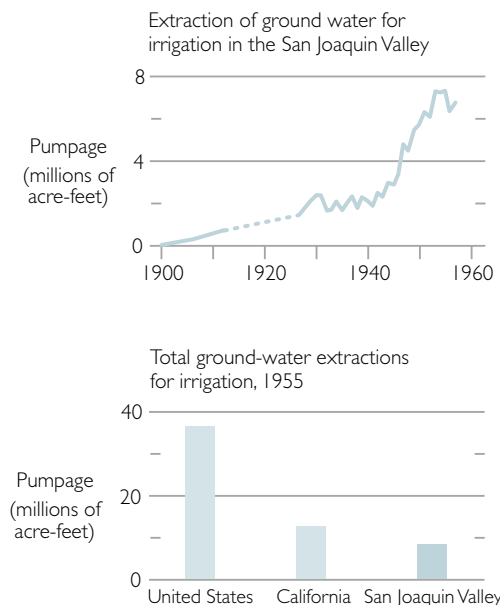
Overhead and flood irrigation supply water to a wide range of crops.

(California Department of Water Resources)

WATER WITHDRAWAL CAUSED LAND SUBSIDENCE

Shortly after the completion of the Delta-Mendota Canal by the U.S. Bureau of Reclamation in 1951, subsidence caused by withdrawal of ground water in the northern San Joaquin Valley had begun to raise concerns, largely because of the impending threat to the canal and the specter of remedial repairs. Because of this threat to the canal, and in order to help plan other major canals and engineering proposed for construction in the subsiding areas, the USGS, in cooperation with the California Department of Water Resources, began an intensive investigation into land subsidence in the San Joaquin Valley. The objectives were to determine the causes, rates, and extent of land subsidence and to develop scientific criteria for the estimation and control of subsidence. The USGS concurrently began a federally funded research project to determine the physical principles and mechanisms governing the expansion and compaction of aquifer systems resulting from changes in aquifer hydraulic heads. Much of the material presented here is drawn from these studies.

In 1955, about one-fourth (almost 8 million acre-feet) of the total ground water extracted for irrigation in the United States was pumped in the San Joaquin Valley. The maximum changes in water levels occurred in the western and southern portions of the valley, in the deep confined aquifer system. More than 400 feet of water-

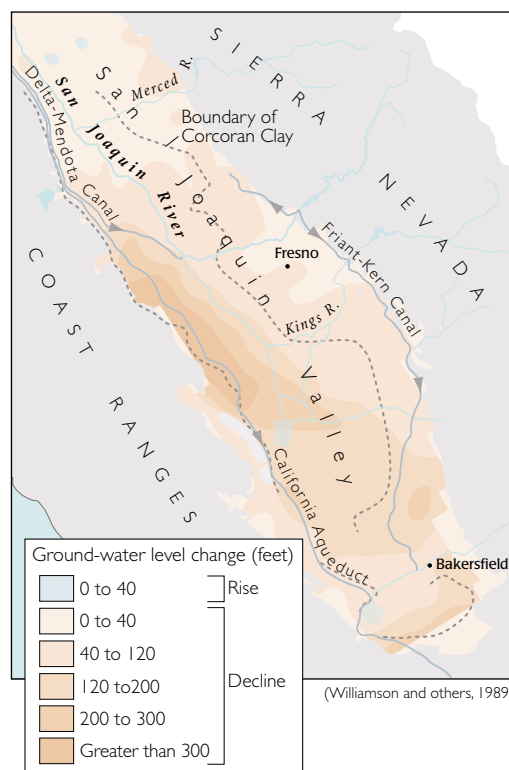


(Joseph F. Poland, U.S. Geological Survey, written communication, ca 1957)

Change in water-table altitude from 1860 to spring 1961

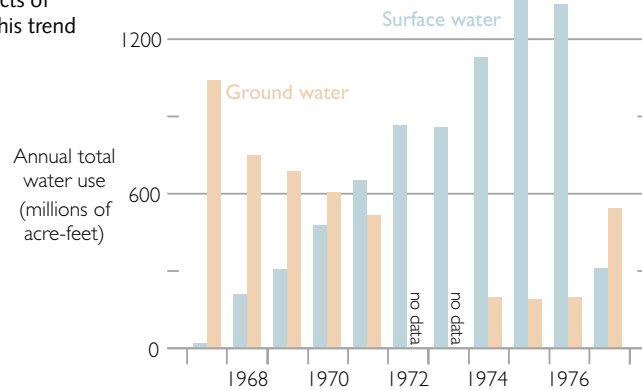


Change in water level in the deep confined aquifer system from 1860 to spring 1961



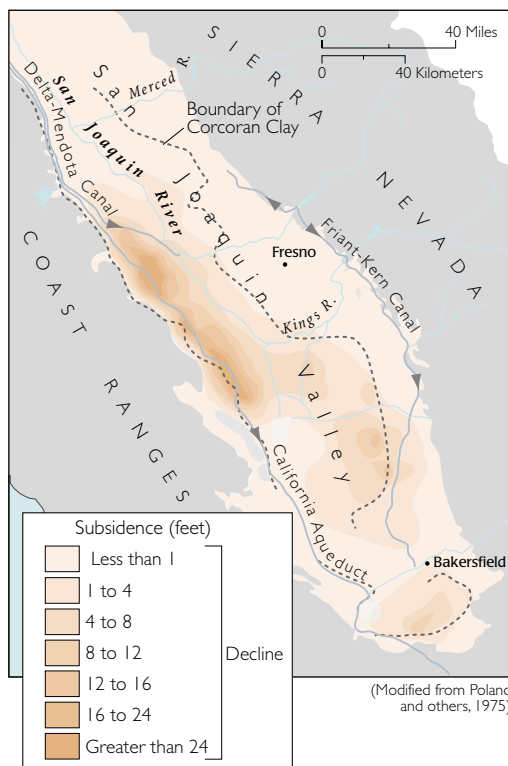
(Williamson and others, 1989)

By 1971 the growing use of imported surface-water supplies surpasses the use of local ground-water supplies, but the effects of drought reverse this trend in 1977.



level decline occurred in some west-side areas in the deep aquifer system. Until 1968, irrigation water in these areas was supplied almost entirely by ground water. As of 1960, water levels in the deep aquifer system were declining at a rate of about 10 feet per year. Western and southern portions of the valley generally experienced more than 100 feet of water-level decline in the deep aquifer system. Water levels in the southeastern and eastern portions of the valley were generally less affected because some surface water was also available for irrigation. In the water-table aquifer, few areas exceeded 100 feet of water-level decline, but a large portion of the southern valley did experience declines of more than 40 feet. In some areas on the northwest side, the water-table aquifer rose up to 40 feet due to infiltration of excess irrigation water.

Land subsidence from 1926 to 1970



Accelerated ground-water pumpage and water-level declines, principally in the deep aquifer system during the 1950s and 1960s, caused about 75 percent of the total volume of land subsidence in the San Joaquin Valley. By the late 1960s, surface water was being diverted to agricultural interests from the Sacramento-San Joaquin Delta and the San Joaquin River through federal reclamation projects and from the Delta through the newly completed, massive State (California) Water Project. Less-expensive water from the Delta-Mendota Canal, the Friant-Kern Canal, and the California Aqueduct largely supplanted ground water for crop irrigation. Ground-water levels began a dramatic period of recovery, and subsidence slowed or was arrested over a large part of the affected area. Water levels in the deep aquifer system recovered as much as 200 feet in the 6 years from 1967 to 1974 (Ireland and others, 1984).

When water levels began to recover in the deep aquifer system, aquifer-system compaction and land subsidence began to abate, although many areas continued to subside, albeit at a lesser rate. During the period from 1968 to 1974, water levels measured in an observation well near Cantua Creek recovered more than 200 feet while another 2 feet of subsidence continued to accrue. This apparent contradiction is the result of the time delay in the compaction

To supplement local ground-water supplies, the California Aqueduct (left) conveys water from the Delta to the dry southern valleys.

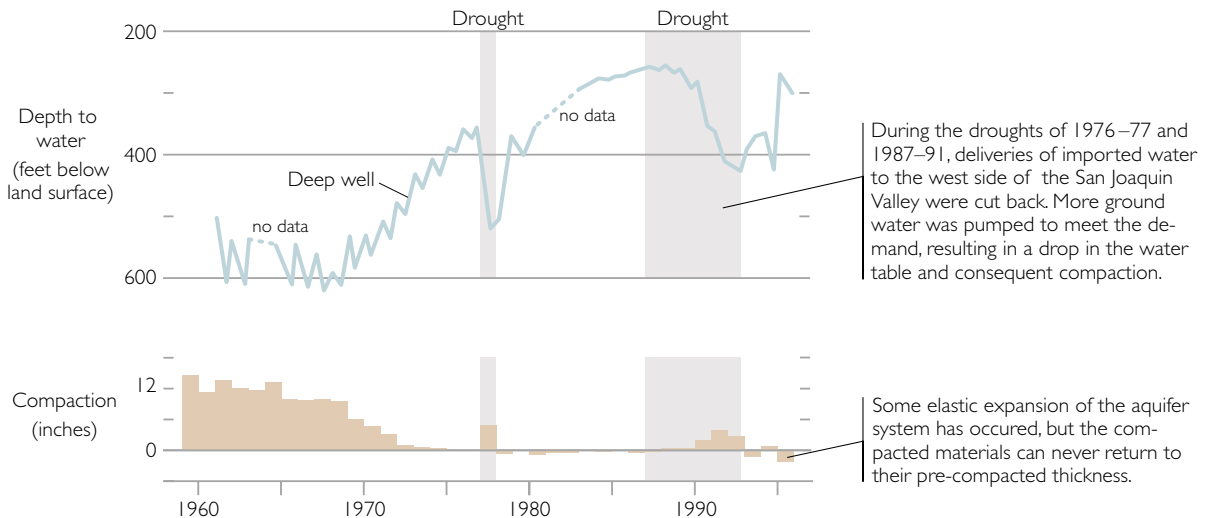


(California Department of Water Resources)

of the aquitards in the aquifer system. The delay is caused by the time that it takes for pore-fluid pressures in the aquitards to equilibrate with the pressure changes occurring in the aquifers, which are much more responsive to the current volume of ground-water being pumped (or not pumped) from the aquifer system. The time needed for pressure equilibration depends largely on the thickness and permeability of the aquitards. Typically, as in the San Joaquin Valley, centuries will be required for most of the pressure equilibration to occur, and therefore for the ultimate compaction to be realized. Swanson (1998) states that “Subsidence is continuing in all historical subsidence areas. . . , but at lower rates than before. . .”

Since 1974, land subsidence has been greatly slowed or largely arrested but remains poised to resume. In fact, during the severe

When water levels recover, compaction and land subsidence can abate.

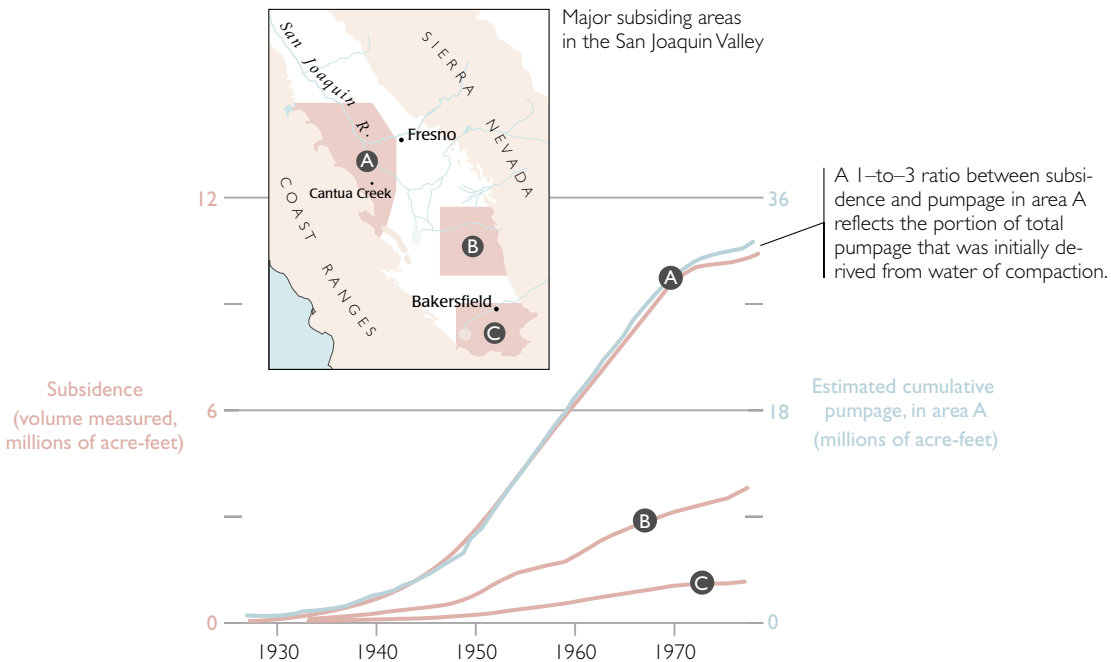


(Modified from Swanson, 1998)



## San Joaquin Valley, California

In the major subsiding areas, subsidence has continued except for a slight leveling off in the mid 1970s.



(Modified from Poland and others, 1975)

droughts in California in 1976–77 and 1987–91, diminished deliveries of imported water prompted some water agencies and farmers, especially in the western valley, to refurbish old pumping plants, drill new wells, and begin pumping ground water to make up for cutbacks in the imported water supply. The decisions to renew ground-water pumpage were encouraged by the fact that ground-water levels had recovered nearly to predevelopment levels. During the 1976–77 drought, after only one-third of the peak annual pumpage volumes of the 1960s had been produced, ground-water levels rapidly declined more than 150 feet over a large area and subsidence resumed. Nearly 0.5 feet of subsidence was measured in 1977 near Cantua Creek. This scenario was repeated during the more recent 1987–91 drought. It underscores the sensitive dependence between subsidence and the dynamic state of imported-water availability and use.

That a relatively small amount of renewed pumpage caused such a rapid decline in water levels reflects the reduced ground-water storage capacity—lost pore space—caused by aquifer-system compaction. It demonstrates the nonrenewable nature of the resource embodied in the “water of compaction.” It emphasizes the fact that extraction of this resource, available only on the first cycle of large-scale drawdown, must be viewed, like more traditional forms of mining, in terms not only of its obvious economic return but also its less readily identifiable costs.

## Hydrocompaction

Compaction near the surface



Hydrocompaction produces an undulating surface of hollows and hummocks with local relief, typically of 3 to 5 feet. In this view of a furrowed field, the hollows are filled with irrigation water.

Hydrocompaction—compaction due to wetting— is a near-surface phenomenon that produces land-surface subsidence through a mechanism entirely different from the compaction of deep, overpumped aquifer systems. Both of these processes accompanied the expansion of irrigated agriculture onto the arid, gentle slopes of the alluvial fans along the west side and south end of the San Joaquin Valley. Initially, the distinction between them, and their relative contributions to the overall subsidence problem, were not fully recognized.

In the 1940s and 50s farmers bringing virgin valley soils under cultivation found that standard techniques of flood irrigation caused an irregular settling of their carefully graded fields, producing an undulating surface of hollows and hummocks with local relief, typically of 3 to 5 feet. Where water flowed or ponded continuously for months, very localized settlements of 10 feet or more might occur on susceptible soils. These consequences of artificial wetting seriously disrupted the distribution of irrigation water and damaged pipelines, power lines, roadways, airfields, and buildings. In contrast to the broad, slowly progressive and generally smooth subsidence due to deep-seated aquifer-system compaction, the irregular, localized, and often rapid differential subsidence due to hydrocompaction was readily discernible without instrumental surveys. Recognition of its obvious impact on the design and construction of the proposed California Aqueduct played a major role in the initiation in 1956 of intensive studies to identify, characterize, and quantify the subsidence processes at work beneath the surface of the San Joaquin Valley.

### MECHANISMS OF COMPACTION WERE ANALYZED

The mechanisms and requisite conditions for hydrocompaction, initially known as “near-surface subsidence,” were investigated by means of laboratory tests on soil cores from depths to 100 or more feet, and by continuously flooded test plots equipped with subsurface benchmarks at various depths and, in some cases, with soil-moisture probes.

The combined field and laboratory studies demonstrated that hydrocompaction occurred only in alluvial-fan sediments above the highest prehistoric water table and in areas where sparse rainfall and ephemeral runoff had never



Hydrocompaction caused surface cracks and land subsidence at experimental Test Plot B, Fresno County.



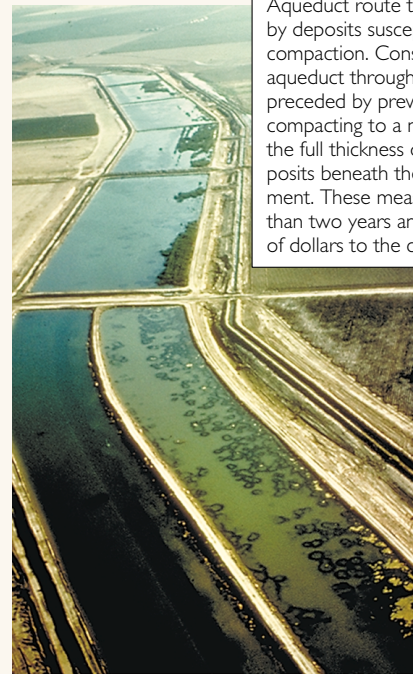
Mudflow containing hydrocompactible sediments, western Fresno County (1961)

penetrated below the zone subject to summer desiccation by evaporation and transpiration. Under these circumstances the initial high porosity of the sediments (often enhanced by numerous bubble cavities and desiccation cracks) is sun-baked into the deposits and preserved by their high dry strength, even as they are subjected to the increasing load of 100 or more feet of accumulating overburden. In the San Joaquin Valley, such conditions are associated with areas of very low average rainfall and infrequent, flashy, sediment-laden runoff from small, relatively steep upland watersheds that are underlain by easily erodible shales and mudstones. The resulting muddy debris flows and poorly sorted stream sediments typically contain montmorillonite clay in proportions that cause it to act, when dry, as a strong interparticulate bonding agent. When water is first applied in quantities sufficient to penetrate below the root zone the clay bonds are drastically weakened by wetting, and the weight of the overburden crushes out the excess porosity. The process of densifying to achieve the strength required to support the existing overburden may reduce the bulk volume by as much as 10 percent, the amounts increasing with increasing depth and overburden load.

Most of the potential hydrocompaction latent in anomalously dry, low-density sediments is realized as rapidly as the sediments are thoroughly wetted. Thus the progression of a hydrocompaction event is controlled largely by the rate at which the wetting front of percolating water can move downward through the sediments. A site underlain by a thick sequence of poorly permeable sediments may continue to subside for months or years as the slowly descending wetting front weakens progressively deeper deposits. If the surface water source is seasonal or intermittent, the progression is further delayed.

Localized compaction beneath a water-filled pond or ditch often leads to vertical shear failure at depth between the water-weakened sediments and the surrounding dry material. At the surface this process surrounds the subsiding flooded area with an expanding series of concentric tensional fissures having considerable vertical offset—a severely destructive event when it occurs beneath an engineered structure.

The hazards presented by hydrocompaction are somewhat mitigated by the fact that the process goes rapidly to completion with the initial thorough wetting, and is not subject to reactivation through subsequent cycles of decreasing and increasing moisture content. However, if the volume of water that infiltrates the surface on the first wetting cycle is insufficient to wet the full thickness of susceptible deposits, then the process will propagate to greater depths on subsequent applications, resulting in renewed subsidence. Also, an increase in the surface load such as a bridge footing or a canal full of water can cause additional compaction in prewetted sediments.



Studies undertaken in the mid-1950s led to a better understanding of hydrocompaction and to the identification of long reaches of the California Aqueduct route that were underlain by deposits susceptible to hydrocompaction. Construction of the aqueduct through these reaches was preceded by prewetting, and thus compacting to a nearly stable state, the full thickness of susceptible deposits beneath the aqueduct alignment. These measures added more than two years and tens of millions of dollars to the cost of the project.

Prewetting a new section of the California Aqueduct to precompact shallow deposits susceptible to hydrocompaction (near toe of Moreno Gulch, 1963)

#### MANY COSTS OF LAND SUBSIDENCE ARE HIDDEN

The economic impacts of land subsidence in the San Joaquin Valley are not well known. Damages directly related to subsidence have been identified, and some have been quantified. Other damages indirectly related to subsidence, such as flooding and long-term environmental effects, merit additional assessment. Some of the direct damages have included decreased storage in aquifers, partial or complete submergence of canals and associated bridges and pipe crossings, collapse of well casings, and disruption of collector drains and irrigation ditches. Costs associated with these damages have been conservatively estimated at \$25,000,000 (EDAW-ESA, 1978). These estimates are not adjusted for changing valuation of the dollar, and do not fully account for the underreported costs associated with well rehabilitation and replacement. When the costs of lost property value due to condemnation, regrading irrigated land, and replacement of irrigation pipelines and wells in subsiding areas are included, the annual costs of subsidence in the San Joaquin Valley soar to \$180 million per year in 1993 dollars (G. Bertoldi and S. Leake, USGS, written communication, March 30, 1993).

# AQUALLIANCE

DEFENDING NORTHERN CALIFORNIA WATERS



January 19, 2010

Mr. Brad Hubbard  
United States Bureau of Reclamation  
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**Subject: Comments on the Draft Environmental Assessment and Findings of No Significant Impact for the 2010-2011 Water Transfer Program**

Dear Messrs. Hubbard and Messer:

AquAlliance, the California Sportfishing Protection Alliance, and the California Water Impact Network ("the Coalition") submit the following comments and questions for the Draft Environmental Assessment ("EA") and Findings of No Significant Impact ("FONSI"), for the *2010-2011 Water Transfer Program* ("Project"). We also provide comments about the purpose and need for the 2010-2011 state and federal water transfer programs that are mirror images of the 2009 Drought Water Bank.

The Bureau of Reclamation's draft environmental review of the Project does not comply with the requirements of National Environmental Policy Act ("NEPA"), 42 U.S.C. §4321 *et seq.* First, we believe that the Bureau needs to prepare an environmental impact statement ("EIS") on this proposal, as we believed for the 2009 Drought Water Bank ("DWB") that allowed up to 600,000 acre-feet (AF) of surface water transfers, up to 340,000 AF of groundwater substitution, and significant crop idling. The *2010-2011 Water Transfer Program* seeks approval for 200,000 AF of CVP related water and suggests that the EA covers non-CVP transfer water. Unfortunately, the non-CVP water appears late in the EA (section 3.18 Cumulative impacts), where the table identifies the non-CVP water (p. 3-107), but does not supply a sub-total. When added, non-CVP water equals 195,910 AF of additional water for transfers. The EA reveals that "the cumulative total amount potentially transferred from all sources would be up to 392,000 acre feet," (p. 3-108) but the actual cumulative number is 395,910 AF of CVP and non-CVP water. The failure to

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 2 of 48

supply sub-totals and the mathematical carelessness leaves the reader wondering what other liberties have been taken within the 2010-2011 Water Transfer Program.

Bureau reliance on the EA itself violates NEPA requirements because, among other things, the EA fails to provide a reasoned analysis and explanation to support the Bureau's proposed finding of no significant impact. The EA contains a fundamentally flawed alternatives analysis, and treatment of the chain of cause and effect extending from project implementation leading to inadequate analyses of nearly every resource, growth inducing impacts, and cumulative impacts. An EIS would afford the Bureau, DWR, the State Water Resources Control Board, and the California public far clearer insight into how, where, and why the *2010-2011 Water Transfer Program* might or might not be needed. The draft EA/FONSI as released this month fails to provide adequate disclosure of these impacts.

Second, California Environmental Quality Act (CEQA) analysis of the 2010-2011 Water Transfer Program is completely absent at the programmatic level. Is the negligence in this regard due to the present litigation that challenges the 2009 Drought Water Bank exemption? The Project's actual environmental effects—which are similar to the 2009 DWB, the Sacramento Valley Water Management Agreement, and the proposed 1994 Drought Water Bank (for which a final Program Environmental Impact Report was completed in November 1993) – are not presented in the EA, FONSI, or in any CEQA document. The Sacramento Valley Water Management Agreement was signed in 2002 and the need for a programmatic EIS/EIR was clear and initiated, but never completed. In 2000, the Governor's Advisory Drought Planning Panel report, *Critical Water Shortage Contingency Plan* promised a program EIR on a drought-response water transfer program, but was never undertaken. Twice in recent history, the state readily acknowledged that CEQA review for a major drought water banking program was appropriate. So, the Bureau's failure to conduct scientifically supported environmental review in an EIS and DWR's negligence to provide CEQA review reflects an end-run around established law through the use of water transfers, and is therefore vulnerable to legal challenge under the National Environmental Protection Act ("NEPA") and CEQA.

Finally, we also question the merits of and need for the Project itself. The existence of drought conditions at this point in time is highly questionable and reflects the state's abandonment of a sensible water policy framework. Our organizations believe the Bureau's EA/FONSI and the absence of DWR's programmatic review go too far to help a few junior water right holders at the expense of agriculture, communities, and the environment north of the Delta. The 2010-2011 Water Transfer Program will directly benefit the areas of California whose water supplies are the least reliable by operation of state water law. Though their unreliable supplies have long been public knowledge, local, state, and federal agencies in these areas have failed to stop blatantly wasteful uses and diversions of water and to pursue aggressive planning for regional water self-sufficiency.

The proposed Project will have significant effects on the environment—both standing alone and when reviewed in conjunction with the multitude of other plans and programs (including the

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 3 of 48

non-CVP water that is mentioned in the EA cumulative impacts section) that incorporate and are dependent on Sacramento Valley water. Ironically, the Bureau appears to recognize in its cumulative impacts discussion that there is potential for significant adverse impacts associated with the Project, but instead of conducting an EIS as required, attempts to assure the public that the 2010-2011 Water Transfer Program will be deferred to the “willing sellers” through individual “monitoring and mitigation programs” as well as through constraining actions taken by both DWR and Bureau professional staff whose criteria ought instead be incorporated into the Proposed Action Alternative (EA at p. 2-1, FONSI at p. 1-9). It is impossible to evaluate whether or not the mitigation and monitoring plans will be adequate to relieve the Bureau and DWR of responsibility for impacts from the Project (including the non-CVP water transfers). The language used in the EA (p.3-25) and the *Draft Technical Information for Water Transfers in 2010* (November 2009) (p. 26-31) fail to pass the blush test (details below). Of course, this is not a permissible approach under NEPA; significant adverse impacts should be mitigated—or avoided altogether as CEQA normally requires.<sup>1</sup> Moreover, in light of the wholly inadequate monitoring and mitigation planned for the 2010-2011 Water Transfer Program’s extensive water transfer program, the suggestion that the public should be required to depend on the insufficient monitoring to provide the necessary advance notice of “significant adverse impacts” is an unacceptable position.

We incorporate by reference the following documents:

- Butte Environmental Council’s comments on the Supplemental Environmental Water Account EIR/EIR, 2006.
- Butte Environmental Council’s letter to DWR regarding the Drought Water Bank Addendum from Lippe Gaffney Wagner LLP, 2009.
- Butte Environmental Council’s letter to DWR regarding the Drought Water Bank Addendum.
- Multi-Signatories letter regarding the Drought Water Bank, 2008.
- Professor Kyran Mish’s White Paper, 2008.
- Professor Karin Hoover’s Declaration, 2008.

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<sup>1</sup> Perhaps even more telling, the Bureau actually began its own Programmatic EIS to facilitate water transfers from the Sacramento Valley and the interconnected actions that are integrally related to it, but never completed that EIS and now has impermissibly broken out this current segment of the overall Program for piecemeal review in the present draft EA. See 68 Federal Register 46218 (Aug 5, 2003) (promising a Programmatic EIS on these related activities, “include[ing] groundwater substitution in lieu of surface water supplies, conjunctive use of groundwater and surface water, refurbish existing groundwater extraction wells, install groundwater monitoring stations, install new groundwater extraction wells...” *Id.* At 46219. See also [http://www.usbr.gov/mp/nepa/nepa\\_projdetails.cfm?Project\\_ID=788](http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=788) (current Bureau website on “Short-term Sacramento Valley Water Management Program EIS/EIR”).

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 4 of 48

### **I. The Bureau and DWR Must Prepare an Environmental Impact Statement/ Environmental Impact Report on the Proposed 2010-2011 Water Transfer Program**

We strongly urge the Bureau to withdraw this inadequate environmental document and instead prepare a joint EIS/R on the 2010-2011 Water Transfer Program, before approval by the State Water Resources Control Board (SWRCB), in order to comply with both NEPA and CEQA requirements for full disclosure of human and natural environmental effects.

NEPA requires federal agencies to prepare a detailed environmental impact statement on all “major Federal actions significantly affecting the quality of the human environment . . . .” 42 U.S.C. §4332(2)(C). This requirement is to ensure that detailed information concerning potential environmental impacts is made available to agency decision makers and the public before the agency makes a decision. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). CEQA has similar requirements and criteria.

Under NEPA’s procedures, an agency may prepare an EA in order to decide whether the environmental impacts of a proposed agency action are significant enough to warrant preparation of an EIS. 40 C.F.R. §1508.9. An EA must “provide sufficient evidence and analysis for determining whether to prepare an [EIS]” (*id.*), and must demonstrate that it has taken a “‘hard look’ at the potential environmental impact of a project.” *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998) (internal quotation marks omitted). However, the U.S. Court of Appeals for the Ninth Circuit has cautioned that “[i]f an agency decides not to prepare an EIS, it must supply a convincing statement of reasons to explain why a project’s impacts are insignificant.” *Id.* (internal quotation marks omitted). The Bureau has not provided a convincing statement of reasons explaining why the DWB’s impacts are not significant. So long as there are “substantial questions whether a project *may* have a significant effect on the environment,” an EIS must be prepared. *Id.* (emphasis added and internal quotation marks omitted). Thus, “the threshold for requiring an EIS is quite low.” *NRDC v. Duvall*, 777 F. Supp. 1533, 1538 (E.D. Cal. 1991). Put another way, as will be shown through our comments, the bar for sustaining an EA/FONSI under NEPA procedures is set quite high, and the Bureau fails to surmount it on the 2010-2011 Water Transfer Program.

NEPA regulations promulgated by the Council on Environmental Quality identify factors that the Bureau must consider in assessing whether a project may have significant environmental effects, including:

- (1) “The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.” 40 C.F.R. §1508.27(b)(5).
- (2) “The degree to which the effects on the quality of the human environment are likely to be highly controversial.” *Id.* §1508.27(b)(4).
- (3) “Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate on a cumulatively significant impact on the environment. Significance



Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 5 of 48

- cannot be avoided by terming an action temporary or by breaking it down into small component parts.” *Id.* §1508.27(b)(7).
- (4) “The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.” *Id.* §1508.27(b)(6).
- (5) “The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.” *Id.* §1508.27(b)(9).

Here, the Bureau has failed to take a hard look at the environmental impacts of the Project. As detailed below, there are substantial questions about whether the 2010-2011 Water Transfer Program’s proposed water transfers will have significant effects on the region’s environmental and hydrological conditions especially groundwater, the interactions between groundwater and surface streams of interest in the Sacramento Valley region, and the species dependent on aquatic and terrestrial habitat. There are also substantial questions about whether the 2010-2011 Water Transfer Program will have significant adverse environmental impacts when considered in conjunction with the other related water projects that have occurred in the last decade and that are underway and proposed in the region. The Bureau simply cannot rely on the EA/FONSI for the foreseeable environmental impacts of the proposed 2010-2011 Water Transfer Program and still comply with NEPA’s requirements.

**A. The Proposed Action Alternative is poorly specified making it difficult to identify chains of cause and effect necessary to analyze adequately the alternative’s environmental effects.**

The Proposed Action Alternative is poorly specified and needs additional clarity before decision makers and the public can understand the human and environmental consequences of the 2010-2011 Water Transfer Program. The EA describes the Proposed Action Alternative as one reflecting the Bureau’s intention to approve transfers of Central Valley Project water from willing sellers who contract with the Bureau ordinarily to use surface water on their croplands. Up to 200,000 AF of CVP water are offered from these sellers, according to Table 2-1 of the EA. In contrast to the EA/FONSI for the 2009 Drought Water Bank, the EA contains no “priority criteria” to determine water deliveries and simply acknowledges that water will be transferred to agricultural and urban interests (p. 3-88). The EA fails to indicate how much water has been requested by the buyers of CVP or non-CVP water, which is also in contrast to the EA/FONSI and DWR’s addendum for the 2009 Drought Water Bank. This denial of information further obfuscates the need for the Project.

The EA/FONSI’s statement of purpose and need (p. 1-1) states specifically that, “To help facilitate the transfer of water throughout the State, Reclamation and the Department of Water Resources (DWR) are considering whether they should approve and facilitate water transfers between willing sellers and buyers.” This paragraph omits coherent discussion of need. Merely stating that, “The transfer water would be conveyed, using CVP or SWP facilities, to water users

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 6 of 48

that are at risk of experiencing water shortages in 2010 and 2011 due to drought conditions and that require supplemental water supplies to meet anticipated demands,” lacks specificity and rigor. The purpose and need should also state that this transfer program would be subject to specific criteria for prioritizing transfers.

The EA’s description of the proposed action alternative needs to make clear what would occur if sale criteria are in fact applied and if exceptions will be allowed, and if so, by what criteria would exceptions be made.. Do both Project agencies lack criteria to prioritize water transfers? What is the legal or policy basis to act without providing priority criteria? Without foundational criteria, the public is not provided with even a basic understanding of the need for the Project.

There is considerable ambiguity over just how many potential sellers there are and how much water they would make available. The EA states that, “Entities that are not listed in this table [2-1] may decide that they are interested in selling CVP water, but those transfers may require supplemental NEPA analysis to allow Reclamation to complete the evaluation of the transfers,” (p. 2-3 and 2-4). Allowing a roving Project location is not permissible and avoids accurate analysis of all impacts including growth inducing and cumulative impacts.

Absent buyers’ request numbers and the potential for the participation of unknown additional sellers signals that neither the Bureau nor DWR have a clear idea what the 2010-2011 Water Transfer Program is intended to be. This problem contributes greatly to and helps explain the poorly rendered treatment of causes and effects that permeate the Bureau’s EA. The project agencies, decision-makers, and the public all face a moving target with the 2010-2011 Water Transfer Program. Such discrepancies reflect hasty consideration and poor planning by project proponents. Nor can the agencies reasonably attribute their inadequate environmental reviews on lack of warning. The Governor, Senator Dianne Feinstein, and congressional representatives from the San Joaquin Valley have all made fear of drought a centerpiece of their water statements in 2008 and 2009. Yet DWR and the Bureau apparently are not able to present a stable Project with clear needs and criteria.

From data available in the EA and the Addendum, it is not possible to determine with confidence just how much water is requested by potential urban and agricultural buyers. There is no attempt to describe how firmly tendered are offers of water to sell or requests to purchase. Guessing at the possible requests based on the 2009 DWB where there were between 400,000 and 500,000 AF of presumably urban buyer requests<sup>2</sup> alone (which had priority over agricultural purchases, according to the 2009 DWB priorities) and a cumulative total of less than 400 TAF from willing sellers, which is also true for the 2010-2011 Water Transfer Program (with just over half that coming from CVP water), it would appear that many buyers are not likely to have their needs addressed by the 2010-2011 Water Transfer Program. If so, the Bureau and DWR should state

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<sup>2</sup> Neither DWR’s Addendum nor the Bureau’s EA specify numerical requests for the cities of Huron, Avenal, Coalinga, and the Avenal State Prison making it impossible to have a firmer number for the amount of urban request for water. Our estimate assumes SCVWD’s 30,000 AF and MWD’s 300,000 AF requests are for entirely urban uses of DWB-purchased water.

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 7 of 48

the likelihood that many requests will not be fulfilled in order to achieve a full and correct environmental compliance treatment of the proposed action. Such an estimate is necessary for accurate explication of the chains of cause and effect associated with the 2010-2011 Water Transfer Program—and which must propagate throughout a NEPA document for it to be adequate as an analysis of potential natural and human environmental effects of the proposed project. We have additional specific questions:

- What are the requests of the San Luis and Delta Mendota Water Authority (SLDMWA)? Is the request for an agricultural use or an urban use of Project water? If it is entirely for agricultural uses, how likely is it to be fulfilled under the non-stated Project priorities for water sales?
- What are the specific urban requests for water made by Avenal State Prison, and the cities of Avenal, Huron, and Coalinga, nested within the SLDMWA request?
- Will sale criteria be premised on full compliance with all applicable environmental and water rights laws? If so, how will cumulative impacts be analyzed under CEQA?

If priority criteria were revealed, how will intervening economic factors beyond the control of the Project be analyzed? Given the added uncertainty, an EIS should be prepared to provide the agencies with advance information and insight into what the sensitivity of the program's sellers and buyers are to the influences of prices—prices for water as well as crops such as rice, orchard and vineyard commodities, and other field crops. It is plausible that crop idling will occur more in field crops, while groundwater substitution would be more likely for orchard and vineyard crops. However, high prices for rice—the Sacramento Valley's largest field crop—would undermine this logic, and could lead to substantial groundwater substitution. These potential issues and impacts should be recognized as part of the 2010-2011 Water Transfer Program description and should directly apply to the Agriculture and Land Use, and Socioeconomic sections of the EA, because crop prices are key factors in choices potential water sellers would weigh in deciding whether to idle crops, substitute groundwater, or decline to participate in the DWB altogether. The EA is inadequate because it fails to identify and analyze the market context for crops as well as water that would ultimately influence the size and scope of the 2010-2011 Water Transfer Program.

Rice prices are high because of conditions for the grain in the world market. Drought elsewhere is a factor in reduced yields, but growing populations in south and east Asia demand more rice and the rice industry has struggled to meet that demand.<sup>3</sup>

This is very important. The Bureau tacitly admits that the Bureau—and by logical extension, DWR—has no idea how many sales of what type (public health, urban, agricultural) can be expected to occur. Put another way, there is a range of potential outcomes for the 2010-2011 Water Transfer Program, and yet the Bureau has failed utterly to use the EA to examine a

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<sup>3</sup> "Panic over rice prices hits California," *AZCentral.com*, April 24, 2008; UN News Service, "Bumper rice harvests could bring down prices but poor may not benefit, warns UN," 25 February 2009; "Era of cheap rice at an end in Taiwan: COA," *The China Post*, March 5, 2009; Jim Downing, "Sacramento Valley growers see rice prices soar," *Sacramento Bee*, 18 January 2009.

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 8 of 48

reasonable and representative range of alternatives as it concerns how the priority criteria would be established and affect Project transfers. And DWR has not bothered to conduct an appropriate level of review under CEQA...

Nor does the 2010-2011 Water Transfer Program prevent rice growers (or other farmers) from “double-dipping.” It appears to us they could opt to turn back their surface supplies from the CVP and the State Water Project and substitute groundwater to cultivate their rice crop—thereby receiving premiums on both their CVP contract surface water as well as their rice crop this fall when it goes to market. There appear to be no caps on water sale prices to prevent windfall profits to sellers of Sacramento Valley water in the event that groundwater is substituted in producing crops—especially for crops where market prices are high, such as in rice. The DWB in the 1990s capped water prices at \$125/acre-foot, much to the disappointment of some water sellers at that time. Why are the state and federal projects encouraging such potential windfall profits at a time when many others suffer through this recession?

As stated, neither the Bureau nor DWR state how much of these transfers would go to public health, urban or agricultural buyers. The EA must also (but fails to) address the ability and willingness of potential buyers to pay for Project water given the supplies that may be available. Historically, complaints from agricultural water districts were registered in the comments on the Draft EWA EIS/R and reported in the Final EIS/R in January 2004 indicating that they could not compete on price with urban areas buying water from the EWA. Given the DWB’s priority criteria, will agricultural water buyers identified in Table 2-2 of the EA be able to buy water when competing with the likes of the Santa Clara Valley Water District and the Metropolitan Water District, representing two of the wealthiest regions of California? As a matter of statewide water, infrastructure, and economic policy, is it wise to foment urban versus agricultural sector competition for water based solely on price? Shouldn’t other factors be considered in allocating water among our state’s regions? This fails dramatically to encourage regions to develop their own water supplies more efficiently and cost-effectively without damage to resources of other regions.

Full disclosure of each offer of and each request for 2010-2011 Water Transfer Program water should be provided as part of the EA. This is necessary so the public can understand and have confidence in the efficacy of the Project’s purpose and need, benefit from full disclosure of who requests what quantity of water and for what uses, and so that the public may easily verify chains of cause and effect. Urban application of transferred surface water is not examined in the EA/FONSI, as though how urban buyers would use their purchased water had no environmental effects. Since the dry period in California has lasted for over three years, how will purchased water be used and conserved? What growth inducing impacts will transferred water facilitate?

Nor is a hierarchy of priority uses among urban users for purchasing Project water presented. Could purchased water be used for any kind of landscaping, rather than clearly domestic purposes or strictly for drought-tolerant landscaping? We cannot tell from the EA/FONSI narrative. How can the citizens of California be assured that water purchased through the 2010-

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 9 of 48

2011 Water Transfer Program will not be used wastefully, in violation of the California Constitution, Article X, Section 2?

Will urban users need their Project purchased water only in July through September, or is that the delivery period preferred in the DWB because of ecological and fishery impact constraints on conveyance of purchased water?

Should agricultural water users be able to buy any Project water, how will DWR and the Bureau assure that transferred water for irrigation is used efficiently? Many questions are embedded within these concerns that DWR and the Bureau should address, especially when they approach the State Water Resources Control Board to justify consolidating their places of use in their respective water rights permits:

- How much can be expected to be purchased by agricultural water users, given the absence of any criteria, let alone priority criteria, in the 2010-2011 Water Transfer Program?
- How much can be expected to be consumptively used by agricultural water buyers?
- How much can be expected to result in tailwater and ag drainage?
- How much can be expected to add to the already high water table in the western San Joaquin Valley?
- What selenium and boron loads in Mud Slough and other tributaries to the San Joaquin River may be expected from application of this water to WSJ lands?
- What mitigation measures are needed to limit such impacts consistent with the public trust doctrine, Article X, Section 2 of the California Constitution, the Porter-Cologne Water Quality Control Act, and California Fish and Game Code Section 5937?

In other words, the most important chains of cause and effect—extending from the potential for groundwater resource impacts in the Sacramento Valley to potential for contaminated drainage water from farm lands in the western San Joaquin Valley where much of the agricultural buyers are located—are ignored in the Bureau's EA/FONSI and completely missing due to DWR's failure to comply with CEQA.

Will more of surface water transfers go to urban users than to ag users? The EA's silence on this is disturbing, and highlights the absence of priority criteria. What assurances will the Bureau and DWR provide that criteria exist or will be developed and how will these criteria be presented to the public and closely followed?

- The more that goes to urban water agencies the less environmental impacts there would be on drainage impaired lands of the San Joaquin Valley, a neutral to beneficial impact of the Project's operation on high groundwater and drainage to the SJR.
- However, the more Project water goes to agricultural users than to urban users, the higher would be groundwater levels, and more contaminated the groundwater would be in the western San Joaquin Valley and the more the San Joaquin River would be negatively affected from contaminated seepage and tailwater by operation of the Project.

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 10 of 48

The EA fails to provide a map indicating where the cumulative sources of the Project are located, and where the service areas are to which water would be transferred under the 2010-2011 Water Transfer Program.

Two issues concerning water rights are raised by this EA/FONSI:

- **Consolidated Place of Use.** Full disclosure of what the consolidated places of use for DWR and USBR would be, since the permit request to SWRCB will need NEPA coverage. Why is the flexibility claimed for the consolidated place of use necessary to this year's water transfer program? Couldn't the transfers be facilitated through transfer provisions of the Central Valley Project Improvement Act? Will the consolidation be a permanent or temporary request be limited to the duration of the governor's 2009 emergency declaration or of just the 2010-2011 Water Transfer Program? When is the 2010-2011 Water Transfer Program scheduled to sunset? How do the consolidated place of use permit amendments to the SWP and CVP permits relate to their joint point of diversion? Why doesn't simply having the joint point of diversion in place under D-1641 suffice for the purpose of the Project?
- **Description of the water rights of both sellers and buyers.** This would necessarily show that buyers clearly possess junior water rights as compared with those of willing sellers. Lack of full disclosure of these disparate rights is needed to help explain the actions and motivations of buyers and sellers in the 2010-2011 Water Transfer Program, otherwise the public and decision makers have insufficient information on which to support and make informed choices.
  - **Sacramento Valley water rights** – correlative groundwater rights, riparian rights and CVP settlement contract rights
  - **San Joaquin Valley water rights** – CVP contract rights only, junior-most contractors within the CVP priority system (especially Westlands Water District).
  - **Priority of allocations among water contractors within the CVP and SWP.**

To establish a proper legal context for these water rights, the Project Action Alternative section of the EA/FONSI should also describe more extensively the applicable California Water Code sections about the treatment of water rights involved in water transfers.

Thus, there are many avenues by which the 2010-2011 Water Transfer Program is a poorly specified program for NEPA and CEQA purposes, leaving assessment of its environmental effects at best murky, and at worst, risky to all involved, especially users of Sacramento Valley groundwater resources.

**B. Correcting the EA's poorly specified chains of cause and effect forces consideration of an expanded range of alternatives.**

The Proposed Action Alternative need not have sophisticated forecasts of prices for rice and other commodities. Instead, for an adequate treatment of alternatives, the EA should have examined several reasonable scenarios beyond simply the 2010-2011 Water Transfer Program

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 11 of 48

and a “no action” alternative. Three reasonable permutations would have considered relative proportions of crop idling versus groundwater substitution (e.g., high/low, low/high, and equal proportions of crop idled water and groundwater substitution). Other reasonable drought response alternatives that can meet operational and physical concerns merit consideration and analysis by the Bureau includes:

- Planned permanent retirement of upslope lands in the western San Joaquin Valley where CVP-delivered irrigation water is applied to lands contaminated with high concentrations of selenium, boron and mercury, and which contribute to high water table and drainage problems for lowland farmers, wetlands and tributaries of the San Joaquin River. Retirement of these lands would permanently free up an estimated 3 million acre-feet of state and federal water during non-critical water years. Ending irrigation of these lands would also result in substantial human environmental benefits for the San Joaquin River, the Bay-Delta Estuary, and the Suisun Marsh from removal of selenium, boron, and salt contamination. Having such reasonable and pragmatic practices in place would go a long way to eliminate the need for drought water banks in the foreseeable future.
- More aggressive investment in agricultural and urban water conservation and demand management among CVP and SWP contractors even on good agricultural lands, including metering of all water supply hook-ups by all municipal contractors, statewide investment in low-flush toilets and other household and other buildings’ plumbing fixtures, and increased capture and reuse of recycled water. Jobs created from such savings and investments would represent an economic stimulus that would have lasting job and community stability benefits as well as lasting benefits for water supply reliability and environmental stabilization.

**C. The 2010-2011 Water Transfer Program EA fails to specify adequate environmental baselines, or existing conditions, against which impacts would be assessed and mitigation measures designed to reduce or avoid impacts.**

The 2010-2011 Water Transfer Program environmental review by the Bureau incorporate by reference for specific facets of their review the 2003/2004 and 2007/2008 Environmental Water Account EIS/R documents. In both cases, these environmental reviews were conducted on a program whose essential purpose is to “provide protection to at-risk native fish species of the Bay-Delta estuary through environmental beneficial changes in State Water Project/Central Valley Project operations at no uncompensated water cost to the Projects’ water users. This approach to fish protection involves changing Project operations to benefit fish and the acquisition of alternative sources of project water supply, called the ‘EWA assets,’ which the EWA agencies use to replace the regular Project water supply lost by pumping reductions.”

The two basic sets of actions of the EWA were to:

- Implement fish actions that protect species of concern (e.g., reduction of export pumping at the CVP and SWP pumps in the Delta); and

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 12 of 48

- Increase water supply reliability by acquiring and managing assets to compensate for the effects of the fish actions (such as by purchasing water from willing sellers for instream flows that compensates the sellers for foregone consumptive use of water).

Without going into further detail on the EWA program, there is no attempt by the EWA agencies to characterize its environmental review as reflective of water transfer programs generally; the EWA was a specific set of strategies whose purpose was protection of fish species of concern in the Delta, not drought aid for junior water right-holding areas of California. One consequence of this attempt to rely on the EWA EIS/R is that it makes the public's ability to understand the environmental baseline of the 2010-2011 Water Transfer Program impossible, because environmental baselines, differing purpose and need for the project, and many relevant mitigation measures are not readily available to the public. Merely referring to the EWA documents (e.g.) p. 3-47) mocks NEPA and CEQA missions to inform the public adequately about the environmental setting and potential impacts of the proposed project's actions. Moreover, a Water Transfer Program for urban and agricultural sectors is plainly not the same thing as an Environmental Water Account.

Another consequence is that the chains of cause and effect of an EWA versus a 2010-2011 Water Transfer Program are entirely different because of their different purposes. While the presence of water purchases, willing sellers, and requesting buyers is similar, the timing of EWA water flows are geared to enhancing and protecting fish populations; the water was to flow in Delta channels to San Francisco Bay and the Pacific Ocean. In stark contrast, the DWB's water flows focus water releases from the SWP and CVP reservoirs to be exported for deliveries in the July through September period, whereas EWA assets would be "spent" year-round depending on the specific need to protect fish. EWA was about purchasing water to provide instream flows in the Delta, while the DWB is to acquire water to serve consumptive uses outside of the Delta.

Furthermore, to tease out the various ways in which the EWA review—itsself a two-binder document consisting of well over 1,000 pages—could be used to provide appropriate environmental compliance for the DWB is not even attempted by DWR and the Bureau which at least has staff that could have been assigned to undertake it; yet they do not. It is therefore well beyond the reach of non-expert decision-makers and the public, and the use of the EWA EIS/R as the basic environmental review for the DWB therefore violates both NEPA and CEQA.

Nor is any attempt made in the EWA EIS/R to characterize the EWA as a "program level" environmental review off of which a Water Transfer Program-like project could perhaps legitimately tier. In our view, this reliance on the EWA EIS/R obscures the environmental baselines of the DWB from public view, inappropriately conflates the purposes of two distinct environmental reviews, and flagrantly violates NEPA and CEQA. This could only be redressed by preparation of an EIS/R on the 2010-2011 Water Transfer Program.



Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 13 of 48

Finally, the most significant baseline condition omitted in the Bureau's inadequate and DWR's negligent reporting relates to Sacramento Valley groundwater resources, discussed in the next section.

**D. Scientific uncertainties and controversy about Sacramento Valley groundwater resources merit consideration that only an EIS can provide.**

There is substantial evidence that the 2010-2011 Water Transfer Program may have significant impacts on the aquifer system underlying the project and the adjacent region that overlies the Tuscan Formation. This alone warrants the preparation of an EIS.

Additionally, an EIS is necessary where “[a] project[’s] ... effects are ‘highly uncertain or involve unique or unknown risks.’” *Blue Mountains Biodiversity Project*, 161 F.3d at 1213 (quoting 40 C.F.R. §1508.27(b)(5)). Here, the draft EA/FONSI fails to adequately address gaps in existing scientific research on the hydrology of the aquifer system and the extent to which these gaps affect the Bureau's ability—and by logical extension, DWR's ability—to assess accurately the Project's environmental impacts.

**1. Existing research on groundwater conditions indicates that the 2010-2011 Water Transfer Program may have significant impacts on the aquifer system.**

The EA fails to describe significant characteristics of the aquifers that the 2010-2011 Water Transfer Program proposes to exploit. These characteristics are relevant to an understanding of the potential environmental effects associated with the 2010-2011 Water Transfer Program's potential extraction of up to 154,237 AF of groundwater (p, 2-4 and 3-107). First, the draft EA/FONSI fails to describe a significant saline portion of the aquifer stratigraphy of the 2010-2011 Water Transfer Program area. According to Toccoy Dudley, former Groundwater Geologist with the Department of Water Resources and former director of the Butte County Water and Resources Department, saline groundwater aquifer systems of marine origin underlie the various freshwater strata in the northern counties of Butte, Colusa, Glenn, and Tehama (“northern counties”). The approximate contact between fresh and saline groundwater occurs at a depth ranging from 1500 to 3000 feet. (Dudley 2005) (A list of all references cited in these comments can be found at the end of this letter.)

Second, the EA fails to discuss the pressurized condition of the down-gradient portion of the Tuscan formation, which underlies the northern counties Project area. Dudley finds that the lower Tuscan aquifer located in the Butte Basin is under pressure. “It is interesting to note that groundwater elevations up gradient of the Butte Basin, in the lower Tuscan aquifer system, are higher than the ground surface elevations in the south-central portion of Butte Basin. This creates an artesian flow condition when wells in the central Butte Basin are drilled into the lower Tuscan aquifer.” (Dudley 2005). The artesian pressure indicates recharge is occurring in the up-gradient portions of the aquifer located along the eastern margin of the Sacramento Valley.

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 14 of 48

Third, the EA fails to describe the direction of movement of water through the Lower Tuscan Formation that underlies the northern counties. According to Dudley: “From Tehama County south to the city of Chico, the groundwater flow direction in the lower Tuscan is westerly toward the Sacramento River. South of Chico, the groundwater flow changes to a southwesterly direction along the eastern margin of the valley and to a southerly direction in the central portion of the Butte Basin.” (Dudley 2005)

Fourth, the draft EA fails to disclose that the majority of wells used in the Sacramento Valley are individual wells that pump from varying strata in the aquifers. The thousands of domestic wells in the target export area that are vulnerable to groundwater manipulation and lack historic monitoring. The Bureau’s 2009 DWB EA elaborated on this point regarding Natomas Central MWC (p. 39) stating that, “Shallow domestic wells would be most susceptible to adverse effects. Fifty percent of the domestic wells are 150 feet deep or less. Increased groundwater pumping could cause localized declines of groundwater levels, or cones of depression, near pumping wells, possibly causing effects to wells within the cone of depression. As previously described, the well review data, mitigation and monitoring plans that will be required from sellers during the transfer approval process will reduce the potential for this effect.”

As the latter statement makes clear (even though this information was excluded from the Project EA), the Bureau hopes that individual mitigation and monitoring plans created by the sellers will reduce the potential for impact, but there is no assurance in the EA that it will reduce it to a level of insignificance for the thousands of well owners in the Sacramento Valley. The Coalition questions the adequacy of individual mitigation and monitoring plans and suggests that an independent third party, such as USGS, oversee the mitigation and monitoring program and not the Bureau and DWR. After the fiasco in Butte County during the 1994 Drought Water Bank and with the flimsy, imprecise proposal for mitigation and monitoring in the 2010-2011 Water Transfer Program (see details below), the agencies lack credibility as oversight agencies.

Fifth, the draft EA fails to provide recharge data for the aquifers. Professor Karin Hoover, Assistant Professor of hydrology, hydrogeology, and surficial processes from CSU Chico, found in 2008 that, “Although regional measured groundwater levels are purported to ‘recover’ during the winter months (Technical Memorandum 3), data from Spangler (2002) indicate that recovery levels are somewhat less than levels of drawdown, suggesting that, in general, water levels are declining.” According to Dudley, “Test results indicate that the ‘age’ of the groundwater samples ranges from less than 100 years to tens of thousands of years. In general, the more shallow wells in the Lower Tuscan Formation along the eastern margin of the valley have the ‘youngest’ water and the deeper wells in the western and southern portions of the valley have the ‘oldest’ water,” adding that “the youngest groundwater in the Lower Tuscan Formation is probably nearest to recharge areas.” (Dudley 2005). “This implies that there is currently no active recharge to the Lower Tuscan aquifer system (M.D. Sullivan, personal communication, 2004),” explains Dr. Hoover. “If this is the case, then water in the Lower Tuscan system may constitute fossil water

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 15 of 48

with no known modern recharge mechanism, and, once it is extracted, it is gone as a resource,” (Hoover 2008).

All of these aquifer characteristics are important to a full understanding of the environmental impacts of the 2010-2011 Water Transfer Program because there are numerous indications that other aquifer strata associated with the Lower Tuscan Formation are being operated near the limit of overdraft and could be affected by the 2010-2011 Water Transfer Program (Butte County 2007). The Bureau has not considered this important historic information in the draft EA. According to Dudley, the Chico area has a “*long term average decline in the static groundwater level of about 0.35 feet-per-year.*” (2007) (emphasis added.) Declining aquifer levels are not limited to the Chico Municipal area. This trend of declining aquifer levels in Chico, Durham and the Cherokee Strip is illustrated in a map submitted with this comment letter (CH2M Hill 2006).

Declining groundwater elevations have been observed specifically in Butte County. A 2007 Butte Basin Groundwater Status Report describes the “historical trend” in the Esquon Ranch area as showing “seasonal fluctuation (spring to fall) in groundwater levels of about 10 to 15 feet during years of normal precipitation and less than 5 feet during years of drought.” The report further notes: “Long-term comparison of spring-to-spring groundwater levels shows a decline of approximately 15 feet associated with the 1976-77 and 1986-94 droughts (Butte Basin Water Users Association, 2007). The 2008 report indicates that, “The spring 2008 groundwater level measurement was approximately three feet higher than the 2007 measurement, however it was still four feet lower than the average of the previous ten spring measurements. Fall groundwater levels are approximately nine feet lower than the averages of those measured during either of the previous drought periods on the hydrograph. At this time it appears that there may be a downward trend in groundwater levels in this well,” (Butte Basin Water Users Association, 2008). Thus, “*it appears that there may be a downward trend in groundwater levels in this well.*” *Id.* (emphasis added).

Groundwater elevations in the Pentz sub-area in Butte County also reveal significant historical declines. The historical trend for this sub-area “...shows that the average seasonal fluctuation (spring to fall) in groundwater levels averages about 3 to 10 feet during years of normal precipitation and approximately 3 to 5 feet during years of drought. Long-term comparison of spring-to-spring groundwater levels shows a decline in groundwater levels during the period of 1971-1981, perhaps associated with the 1976-77 drought. Since a groundwater elevation high of approximately 145 feet in 1985 the measured groundwater levels in this well have continued to decline. Recent groundwater level measurements indicate that the groundwater elevation in this well is approximately 15-25 feet lower than the historical high in 1985. *Id.* Water elevations at the Pentz sub-area well have been monitored since 1967. “Since 1985 spring groundwater levels in this well have been declining and the spring 2009 measurement hit an historic low level ten feet below historical high levels and continues the downward trend on the hydrograph.” *Id.* The Pentz area is located east of U.S. 99, in the eastern, upslope portion of the Tuscan aquifer. Further evidence of changing groundwater levels appear in the Vina sub-region of Butte County, where water elevations have been monitored since 1947 at well 23N/01W09E001M . The

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 16 of 48

historical averages, including 2008 data, are; Spring=156 feet and Fall=150 feet (Butte County p. 37-38). Unfortunately, the groundwater level measurement at this well in 2008 was the lowest recorded since 1994 (Butte County p. 38). Rock Creek, which is also in the Vina sub-unit once held water all year and salmon fishing was robust prior to the 1930s (Hennigan 2010). Declining groundwater levels have caused the valley portion of Rock Creek to run completely dry each year and have also been noticed with Hennigan Farms' wells since the 1960s. For example, a 1968 well had to be lowered 40 feet in 1974, another well constructed in 1978 had to be lowered 20 feet in 2009, and an old 1940s flood pump was lowered in the early 1960s, lowered again in 1976 when it was converted to a pressure pump, and lowered again in 1997 (Hennigan 2010).

In light of this downward trend in regional groundwater levels, the Bureau's EA should closely analyze replenishment of the aquifers affected by the proposed 2010-2011 Water Transfer Program. The draft EA fails to provide any in-depth assessment of these issues. For example, the EA fails to discuss the best available estimates of where groundwater replenishment occurs. Lawrence Livermore National Laboratory analyzed the age of the groundwater in the northern counties to shed light on this process: "Utilizing the Tritium (H3) Helium-3 (He3) ratio, the age of each sample was estimated. Test results indicate that the "age" of the groundwater samples ranges from less than 100 years to tens of thousands of years, (Dudley et al. 2005). As mentioned above, Dudley opines that the youngest groundwater in the Lower Tuscan Formation is probably nearest to recharge areas. (2005).

Are isotopic groundwater data available for other regions in the Sacramento Valley? If so, they would be crucial for all concerned to understand the potential impacts from the proposed 2010-2011 Water Transfer Program. For example, the EA states, "The WFA area that could be affected by the proposed action includes only the 'North Area' bounded on the north and east by the Sacramento County line, by the Sacramento River on the west, and by the American River on the south." EA at p. 34. If this is the area in Sacramento County that is identified as most vulnerable to groundwater impacts, yet two major rivers surround it, shouldn't the Bureau understand the hydrologic relationship between the groundwater basin and the rivers? If that understanding exists, where is it presented in the EA? It is well known that the Sacramento River is already a losing river south of Princeton.

The City of Sacramento proposes to transfer surface water into the state water market and substitute 3,000 AF of groundwater (EA p.2-4), but the *Sacramento County Water Agency Water Management Plan* indicates that intensive use of this groundwater basin has resulted in a general lowering of groundwater elevations that will require extensive conservation measures to remediate. The Sacramento County Water Agency has devised a plan to help lead the city to a sustainable groundwater use to avoid problems associated with unrestrained overuse. The most reliable strategy is to reduce demand. Integrating the City's water supply into the state water supply would obviously increase demand and make the SCWA goals impossible to achieve.

The Bureau should prepare an EIS that discloses the fallacies inherent in its policies and actions. The need for almost 400,000 AF of water south of the Delta springs from failed business

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 17 of 48

planning. The Bureau and DWR must acknowledge this and further disclose that their agencies are willing to socialize the risks taken by corporate agribusiness and developers while facilitating private profit. Instead of asking northern California water districts and municipal water purveyors to place their own water at risk as well as the water of their neighboring communities and thousands of residential well owners, water quality, fisheries, recreation, stream flow, terrestrial habitat, and geologic stability, the Bureau and DWR must disclose all the uncertainty in the 2010-2011 Water Transfer Program and then evaluate the risks with scientific methodology. This has clearly not been done.

**2. The 2010-2011 Water Transfer Program proposes to rely on inadequate monitoring and mitigation to avoid the acknowledged possibility of significant adverse environmental impacts.**

The draft EA and the Draft Technical Information for Water Transfers in 2010 referenced in the EA (Bureau and DWR 2009) require “willing sellers” to prepare individual monitoring and mitigation plans and to conduct the monitoring with oversight provided by the Bureau and DWR (p. 3-24 and 3-25). This fails to provide the most basic framework for governmental authority to enforce the state’s role as trustee of the public’s water in California, let alone a comprehensive and coordinated structure, for a very significant program that could transfer up to 154,239 AF of water from the Sacramento Valley. (Recall that DWR believes it has environmental compliance coverage for up to 600,000 AF of water sales from the Sacramento Valley, including 340,000 AF in groundwater substitution alone under the Governor’s 2009 emergency exemption) The draft EA further defers responsibility to “willing sellers” for compliance with local groundwater management plans and ordinances to determine when the effects of the proposed extraction become “adverse,” (p. 3-25). “Each district will be required to confirm that the proposed groundwater pumping will be compatible with state and local regulations and groundwater management plans,” (EA at p. 3-25). It is not acceptable that the draft EA and the Draft Technical Information for Water Transfers in 2010 merely provide monitoring direction to “willing sellers” without identifying rigorous standards for the risks at hand, specific actions, acceptable monitoring and reporting entities, or funding that will be necessary for this oversight.

The Coalition proposes instead that the Bureau and DWR require, at a minimum, that local governments select independent third-party monitors, who are funded by surcharges on Project transfers paid by the buyers, to oversee the monitoring that is proposed in lieu of Bureaus and DWR staff, and that peer reviewed methods for monitoring be required. If this is not done, the Project’s proposed monitoring is insufficient and cannot justify the significant risk of adverse environmental impacts.

For example, the EA and the Draft Technical Information for Water Transfers in 2010 fail to identify standards that would be used to monitor the 2010-2011 Water Transfer Program’s impacts. It fails to identify any specific monitoring protocols, locations (particularly in up-gradient recharge portions of the groundwater basins), and why chosen locations should be deemed effective for monitoring the effects of the proposed groundwater extraction. It also fails

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 18 of 48

to describe how the objectives in the Draft Technical Information for Water Transfers in 2010 will be met and by whom (EA at p.3-24 and 3-25). Moreover, it fails to provide a mitigation strategy for review and comment by the public, but defers this vital mitigation planning effort to future documents created by “willing sellers,” (EA at p.3-24 and 3-25) despite the fact that the EA acknowledges the potential for significant impacts. For example:

- Surface water and groundwater interact on a regional basis, and, as such, gains and losses to groundwater vary significantly geographically and temporally. In areas where groundwater levels have declined, such as in Sacramento County, streams that formerly gained water from groundwater now lose water to the groundwater system through seepage (EA at p. 3-12).
- *Groundwater substitution transfers would alter ground water levels and potentially affect natural and managed seasonal wetlands and riparian communities, upland habitats and wildlife species depending on these habitats.* As a part of groundwater substitution transfers, the willing sellers would use groundwater to irrigate crops and decrease use of surface water. Pumping additional groundwater would decrease groundwater levels in the vicinity of the sellers’ pumps. Natural and managed seasonal wetlands and riparian communities often depend on surface water/groundwater interactions for part or all of their water supply. Under the Proposed Action, subsurface drawdown related to groundwater substitution transfers could result in hydrologic changes to nearby streams and marshes, potentially affecting these habitats. Reduced groundwater elevations could also affect trees that access groundwater as a source of water through taproots in addition to extensive horizontal roots that use soil moisture as a water source. Decreasing groundwater levels could reduce part of the water base for species within these habitats (EA at p. 3-53 and 3-54).

The reader is directed to the Draft Technical Information for Water Transfers in 2010 to discover the minimal objectives and required elements of the monitoring and mitigation component of the Project. “The seller must implement an effective mitigation program to verify and correct problems that could arise due to transfer-related groundwater pumping,” but the reader and possibly the sellers are left wondering what exactly is an “effective mitigation plan” since there is no particular guidance to manage and analyze the very complex hydrologic relationships internal to groundwater and connected to surface waters. Certainly the public has no idea or ability to comment, which fails the full disclosure mandate in NEPA and CEQA. Located on pages 30 and 31 of the Draft Technical Information for Water Transfers in 2010 is a brief list of a “number of potential impacts [that] are sufficiently serious that they must be avoided or mitigated for a project to continue.”

- Contribution to long-term conditions of overdraft;
- Dewatering or substantially reducing water levels in nonparticipating wells;
- Measurable contribution to land subsidence;
- Degradation of groundwater quality that substantially impairs beneficial uses or violates water quality standards; and
- Affecting the hydrologic regime of wetlands and/or streams to the extent that ecological integrity is impaired.

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 19 of 48

The Draft Technical Information for Water Transfers in 2010 continues with suggestions to curtail pumping lower bowls, and pay higher energy costs to ease the impacts to third party wells owners (p. 30 and 31). While this bone thrown at mitigation is appreciated, the glaring omissions are notable. The Draft Technical Information for Water Transfers in 2010 completely fails to mention, even at a very general level, how individual well owners will determine and prove where the impacts to their wells are coming from, that water quality and health could become a significant impact for impacted wells and users and streams, and that there are no mitigation measures even mentioned for streams and wetlands. There also appears to be no consideration for species monitoring, just “practices” or “conservation measures” to “minimize impacts to terrestrial wildlife and waterfowl,” (Draft Technical Information p. 16). And please disclose why the 2009 DWB Biological Opinion is a reference to guide “specific practices on page 17 of the Draft Technical Information for Water Transfers in 2010.

Another example of the inadequacy of the proposed monitoring is that the draft EA fails to include any coordinated, programmatic plan to monitor stream flow of creeks and rivers located in proximity to the “willing sellers” that will evacuate more water than used historically. The potential for immediate impacts would be very close to water sellers’ wells, but the long term impacts could be more subtle and more geographically diverse. What precautions has the Bureau and DWR made for the cumulative impacts that come not only from this two-year Project, but in combination with the water sales from the last three years and those that are planned by the Bureau into the future ( see list in g, iv below)? Bureau and DWR water transfers are not just one or two year transfers, but many serial actions in multiple years by the agencies, sellers, and buyers without the benefit of comprehensive environmental analysis under NEPA and CEQA.

As discussed above, adequate monitoring is vital to limit the significant risks posed by the Project to the health of the region’s groundwater, streams, and fisheries (more discussion below). One unfortunate example is the EA’s focus on groundwater substitution impacts that reflect the priority for water accounting and payment accuracy as opposed to the impacts to the groundwater system and streams. “The implementation of groundwater substitution pumping can lower the groundwater table and may change the relative difference between the groundwater and surface water levels. This change has a direct impact on the volume that a seller receives credit for being transferred,” ( EA p.3-22 and 3-23). Moreover, to the extent this Project is conceived as a two-year drought or hardship program that will provide knowledge for future groundwater extraction and fallowing, its failure to include adequate monitoring protocols is even more disturbing and creates the risk of significant long-term and even irreversible impacts from the Project.

a. The Bureau’s assertion that the Project may be modified or halted in the event of significant adverse impacts to hydrologic resources is an empty promise in light of the wholly inadequate monitoring provided for in the 2010-2011 Water Transfer Program. Knowing that the Bureau and DWR knowingly violated the X2 standard in the Delta in February 2009 does little to instill confidence from the Coalition in non-specific program and mitigation criteria.

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 20 of 48

The EA repeatedly illustrates that there is potential for significant injury to other groundwater users, water quality, streams, flora and fauna, and the soil profile (p. 3-12, 3-23, 3-24, 3-53, 3-54). Chapter three contains numerous examples that illustrate the need for an EIS since there is insufficient, comprehensive planning for, let alone preparation to mitigate, adverse environmental impacts:

- *Acquisition of water via groundwater substitution or cropland idling would change the rate and timing of flows in the Sacramento River compared to the No Action Alternative.*
- *In Figure 3.2-2, groundwater substitution pumping results in a change in the groundwater/surface water interaction characteristics. In this case, the water pumped from a groundwater well may have two impacts that reduce the amount of surface water compared to pre-pumping conditions. These mechanisms are:*
  - *Induced leakage. The lowering of the groundwater table causes a condition where the groundwater table is lower than that the water level in the surface water. This conditions causes leakage out of the surface water.*
  - *Interception of groundwater. The placement of groundwater substitution pumping may intercept groundwater that may normally have discharged to the surface water (i.e., water that has already percolated into the ground may be pumped out prior the water reaching the surface water and being allowed to enter the “gaining” stream).*
- *The changes in groundwater flow patterns (e.g., direction, gradient) due to increased groundwater substitution pumping may result in changes in groundwater quality from the migration of reduced quality water.*
- *Groundwater substitution transfers would alter ground water levels and potentially affect natural and managed seasonal wetlands and riparian communities, upland habitats and wildlife species depending on these habitats.*
- *Rice land idling transfers would reduce habitat and forage for resident and migratory wildlife populations.*
- *Water transfers could change reservoir releases and river flows and potentially affect special status fish species and essential fish habitat.*
- *Water transfers could affect fisheries and aquatic ecosystems in water bodies, including Sacramento and American River systems, the Sacramento-San Joaquin Delta, San Luis Reservoir, and DWR and Metropolitan WD reservoirs in southern California.*
- *Increased groundwater pumping for groundwater substitution transfers would increase emissions of air pollutants.*

The Bureau thus recognizes the potential for significant decline in groundwater levels as a result of the proposed activity (EA at p. 3-23, 3-24, 3-53, 3-54). This acknowledgement alone is sufficient to require a full EIS. Moreover, as detailed below, the monitoring proposed by the 2010-2011 Water Transfer Program is so inadequate that there can be no guarantee that adverse impacts will be discovered, or that they will be discovered in time to avoid significant environmental impacts.



Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 21 of 48

Glenn County will have groundwater substitution if the Project moves forward. The County realizes that its management plan may not be sufficient for the challenges presented by this Project and the myriad others and cautions that “[s]ince the groundwater management plan is relatively new and not fully implemented, the enforcement and conflict resolution process has not been vigorously tested,” ([http://www.glenncountywater.org/management\\_plan.aspx](http://www.glenncountywater.org/management_plan.aspx)). Moreover, the Glenn County Groundwater Management Plan does not have any provisions to monitor or protect the environment. The 2010-2011 Water Transfer Program EA fails to disclose the inadequacies of this and other local ordinances and plans.

b. Monitoring based on the Glenn County Groundwater Management Plan is inadequate. Since the Bureau omitted discussion of the Glenn County Groundwater Management Plan in the 2010-2011 Water Transfer Program, we refer to the language used in the 2008 Stony Creek Fan EA/FONSI that explained that the existing Glenn County groundwater management plan will ensure the testing project will have no significant adverse effects on groundwater levels: “This Finding of No Significant Impact (FONSI) is based upon the following: ... Implementation of the Glenn County Groundwater Management Plan during the aquifer performance testing plan will ensure that the proposed action will not result in any significant adverse effect to existing groundwater levels.” Stony Creek Fan EA/FONSI at p. 2.

But the Butte County Department of Water and Resource Conservation explains that local plans are simply not up to the task of managing a regional resource:

*Glenn County does not have an export ordinance because it relies on Basin Management Objectives (BMO) to manage the groundwater resource, and subsequently to protect third parties from transfer related impacts. Recently, Butte County also adopted a BMO type of groundwater management ordinance. Butte County, Tehama County and several irrigation districts in each of the four counties have adopted AB3030 groundwater management plans. All of these groundwater management activities were initiated prior to recognizing that a regional aquifer system exists that extends over more than one county and that certain activities in one county could adversely impact another. Clearly the current ordinances, AB3030 plans, and local BMO activities, which were intended for localized groundwater management, are not well suited for management of a regional groundwater resource like that theorized of the Lower Tuscan aquifer system.*

(Butte County DWRC 2007)<sup>4</sup>

c. The EA fails to propose real time monitoring for land subsidence. Third-party independent verification, perhaps by scientists from the U.S. Geological Survey, should be incorporated by DWR and the Bureau into the project description of the 2010-2011 Water Transfer Program. We applaud the initiation of a regional GPS network in the Sacramento

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 22 of 48

Valley, but remain concerned about the 13 existing extensometers in the Sacramento Valley that measure land subsidence, and a Global Positioning System land subsidence network established by one county (EA p. 13). The remaining responsibility is again deferred to the “willing sellers.” Unfortunately, voluntary monitoring by pumpers does not strike us as a responsible assurance given the substantial uncertainties involved in regional aquifer responses to extensive groundwater pumping in the Sacramento Valley.

Not only is there a failure to discuss real time monitoring for subsidence, there also is no discussion regarding delayed subsidence that should also be monitored according to the findings of Dr. Kyran Mish, Presidential Professor, School of Civil Engineering and Environmental Science at the University of Oklahoma. Dr. Mish notes: “It is important to understand that *all* pumping operations have the potential to produce such settlement, and when it occurs with a settlement magnitude sufficient enough for us to notice at the surface, we call it *subsidence*, and we recognize that it is a serious problem (since such settlements can wreak havoc on roads, rivers, canals, pipelines, and other critical infrastructure),” (Mish 2008). Dr. Mish further explains that “[b]ecause the clay soils that tend to contribute the most to ground settlement are highly impermeable, their subsidence behavior can continue well into the future, as the rate at which they settle is governed by their low permeability.” *Id.* “Thus simple real-time monitoring of ground settlement can be viewed as an *unconservative* measure of the potential for subsidence, as it will generally tend to underestimate the long-term settlement of the ground surface.” *Id.* (emphasis added).

The EA acknowledges the existence and cause of serious subsidence in one area of the valley. “The area between Zamora, Knights Landing, and Woodland has been most affected (Yolo County 2009). Subsidence in this region is generally related to groundwater pumping and subsequent consolidation of aquifer sediments,” (EA p. 3-13). This fact alone illustrates the need for more extensive analysis throughout the export area in an EIS.

d. The 2010-2011 Water Transfer Program EA fails to require streamflow monitoring. The 2009 DWB EA/FONSI deferred the monitoring and mitigation planning to “willing sellers,” but even that requirement has been completely eliminated. We can’t emphasize enough the importance of frequent and regular streamflow monitoring by either staff of the project agencies or a third, independent party such as the USGS, paid for by Project transfer surcharges mentioned above. It is clear from existing scientific studies and the EA that the Project may have significant impacts on the aquifers replenishment and recharging of the aquifers, so the 2010-2011 Water Transfer Program should therefore require extensive monitoring of regional streams. The radius for monitoring should be large, not the typical two to three miles as usually used by DWR and the Bureau. Though not presented for the 2010-2011 Water Transfers Program, the *Stony Creek Fan Aquifer Performance Testing Plan*, which is a much smaller project, recognized that there may be a drawdown effect on the aquifer by considering results from a DWR Northern District spring 2007 production well test (EA/FONSI p. 28). However, it did not assess the anticipated scope of that effect—or even what level of effect would be considered acceptable. Moreover, the results from that test well indicate that the recharge source for the solitary

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 23 of 48

production well “is most likely from the foothills and mountains, to the east and north”—which at a minimum is more than fifteen miles away. (DWR, Glenn-Colusa Irrigation District Aquifer Performance Testing Glenn County, California).

The Butte County Department of Water and Resource Conservation have identified streams that must be monitored to determine impacts to stream flows that would be associated with pumping the Lower Tuscan Aquifer. These “[s]treams of interest” are located on the eastern edge of the Sacramento Valley and include: Mill Creek, Deer Creek, Big Chico Creek, Butte Creek, and Little Dry Creek (The Butte County DWRC 2007). The department described the need and methodology for stream flow gauging:

*The objective of the stream flow gaging is to determine the volume of surface water entering into or exiting the Lower Tuscan Aquifer along perennial streams that transect the aquifer formation outcropping for characterization of stream-aquifer interactions and monitoring of riparian habitat. Measurement of water movement into or out of the aquifer will allow for testing of the accuracy of the Integrated Water Flow Model, an integrated surface water-groundwater finite differential model developed for the eastern extent of the Lower Tuscan aquifer.*

*Two stream gages will be installed on each of five perennial streams crossing the Lower Tuscan Formation to establish baseline stream flow and infiltration information. The differences between stream flow measurements taking upstream and downstream of the Lower Tuscan Formation are indications of the stream-aquifer behavior. Losses or gains in stream volume can indicate aquifer recharge or discharge to or from the surface waters.*

*Id.*

As evident in the following conclusory assertions, the draft EA/FONSI fails to define the radius of influence associated with the aquifer testing and thus entirely fails to identify potential significant impacts to salmon:

“An objective in planning a groundwater substitution transfer is to ensure that groundwater levels recover to their typical spring high levels under average hydrologic conditions. Because groundwater levels generally recover at the expense of stream flow, the wells used in a transfer should be sited and pumped in such a manner that the stream flow losses resulting from pumping peak during the wet season, when losses to stream flow minimally affect other legal users of water,” (EA p. 2-7).

As mentioned above, streamflow monitoring is not a requirement of the Project, which is unfathomable. Monitoring of flow on streams associated with the Lower Tuscan Formation is particularly important to the survival of Chinook salmon which use these “streams of interest” to spawn and where salmon fry rear. Intensive groundwater pumping would likely lower water table elevations near these streams of interest, decreasing surface flows, and therefore reducing

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 24 of 48

salmon spawning and rearing habitat through dewatering of stream channels in these northern counties. This would be a significant adverse impact of the Project and is ignored by the EA.

A similar effect has been observed in the Cosumnes River, where “[d]eclining fall flows are limiting the ability of the Cosumnes River to support large fall runs of Chinook salmon,” (Fleckenstein, et al 2004). This is a river that historically supported a large fall run of Chinook Salmon. *Id.* Indeed, “[a]n early study by the California Department of Fish and Game . . . estimated that the river could support up to 17,000 returning salmon under suitable flow conditions.” *Id.*, citing CDFG 1957 & USFWS 1995. But “[o]ver the past 40 years fall runs ranged from 0 to 5,000 fish according to fish counts by the CDFG (USFWS 1995),” and “[i]n recent years, estimated fall runs have consistently been below 600 fish, according to Keith Whitener,” (Fleckenstein, *et al.* 2004). Indeed, “[f]all flows in the Cosumnes have been so low in recent years that the entire lower river has frequently been completely dry throughout most of the salmon migration period (October to December).” *Id.*

Research indicates that “groundwater overdraft in the basin has converted the [Cosumnes River] to a predominantly losing stream, practically eliminating base flows. . . .” (Fleckenstein, *et al.* 2004). And “investigations of stream-aquifer interactions along the lower Cosumnes River suggest that loss of base flow support as a result of groundwater overdraft is at least partly responsible for the decline in fall flows.” *Id.* Increased groundwater withdrawals in the Sacramento basin since the 1950s have substantially lowered groundwater levels throughout the county.” *Id.*

The draft EA acknowledges the potential for impacts to special status fish species from altered river flows and commits to maintaining flow and temperature requirements already in place ( p. 3-59). The coalition would like to have greater assurance of a commitment considering that the Bureau and DWR failed to meet the X2 standard in February 2009. The Bureau and DWR should make X2 compliance and streams of interest monitoring in real time part of their permit amendment applications to the SWRCB this spring. If stream levels are affected by groundwater pumping, then pumping would cease.

Unfortunately, the draft EA fails to anticipate possible stream flow declines in important salmon rearing habitat in the 2010-2011 Water Transfer Program area. Many important streams, such as Mud Creek, are located within the 2010-2011 Water Transfer Program and flows through probable Tuscan recharge zones, yet are not mentioned in the EA (also see comments above regarding Rock Creek). While a charged aquifer is likely to add to base flow of this stream, a dewatered aquifer would pull water from the stream. According to research conducted by Dr. Paul Maslin, Mud Creek provides advantageous rearing habitat for out-migrating Chinook salmon (1996). Salmon fry feeding in Mud Creek grew at over twice the rate by length as did fry feeding in the main stem of the Sacramento River. *Id.*

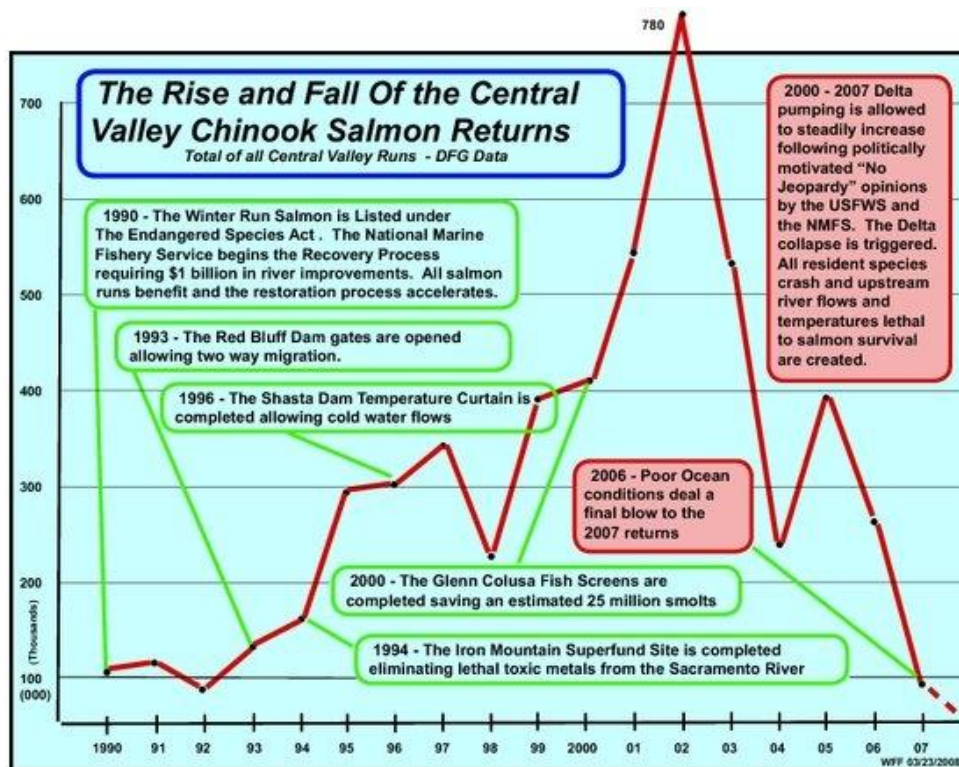
Another tributary to the Sacramento River, Butte Creek, hosts spring-run Chinook salmon, a threatened species under the Endangered Species Act. 64 Fed. Reg. 50,394 (Sept. 16, 1999).

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 25 of 48

Butte Creek contains the largest remaining population of the spring-run Chinook and is designated as critical habitat for the species. *Id.* at 50,399; 70 Fed. Reg. 52,488, 52,590-91 (Sept. 2, 2005). Additionally, Butte Creek provides habitat for the threatened Central Valley steelhead. *See* 63 Fed. Reg. 13,347 (Mar. 19, 1998); 70 Fed. Reg. at 52,518. While Butte Creek is mentioned in the EA (p. 2-11, 3-4, 3-49, 3-57), the only protection afforded this vital tributary are statements that cropland idling will not occur adjacent to it, yet that is contradicted on page 3-19. The Bureau should not overlook the importance of rearing streams, and should not proceed with this Project unless and until adequate monitoring and mitigation protocols are established.

Existing mismanagement of water in California’s rivers, creeks, and groundwater has already caused a precipitous decline in salmon abundance. There is no mention of the fall-run salmon numbers in the main stem Sacramento River or its essential tributaries despite the fact that their numbers dropped precipitously in 2007 (see graphic below) 2008, and 2009. After the commercial salmon fishery was closed for two years for fear of pushing these fish to extinction, scientists are waiting until February 2010 to determine if the commercial and sport fishing seasons will open this year. As noted above, the EA casually asserts that maintaining flow and temperature requirements in the main stem will be sufficient to protect aquatic species, but it fails to consider the impacts of almost 400,000 AF of water transfers, fallowing, and groundwater substitution on the tributaries. How much additional pumping does the Project represent, given CVP and SWP contractual commitments, available reservoir supplies, and other environmental restrictions south of the Delta? The EA and DWR’s missing environmental review are silent on this.

Where are the data to support assertions that impacts to aquatic species will be below a level of significance? Habitat values are also essential to many other special status species that utilize the aquatic and/or riparian landscape including, but not limited to, giant garter snake, bank swallow, greater sandhill crane, American shad, etc. Where is the documentation of the potential impacts to these species?



Graphic is courtesy of Dick Pool.  
 In addition to the direct decline in the salmon populations is the food chain affect that will influence species such as killer whales.

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 26 of 48

**3. The EA fails to address the significant unknown risks raised by the 2010-2011 Water Transfer Program's proposed groundwater extraction.**

The EA fails to identify and address the significant unknown risks associated with this Project. There are substantial gaps in scientists' understanding of how the aquifer system recharges.

The EA fails to reveal the scientifically known and unknown characteristics of the Lower Tuscan aquifer. Expert opinion and experience is offered by Professor Karin Hoover from CSU Chico who asserts that: "[T]o date there exists no detailed hydrostratigraphic analysis capable of distinguishing the permeable (water-bearing) units from the less permeable units within the subsurface of the Northern Sacramento Valley. In essence, the thickness and extent of the water-bearing units has not been adequately characterized." (p. 1)

Though the Project fails to disclose the limitations in knowledge of the geology and hydrology of the northern counties, it was disclosed in 2008 in the EA for the *Stony Creek Fan Aquifer Performance Testing Plan* (Testing Plan EA). It revealed that there is also limited understanding of the interaction between the affected aquifers, and how that interaction will affect the ability of the aquifers to recharge. The Testing Plan EA provides:

*The Pliocene Tuscan Formation lies beneath the Tehama Formation in places in the eastern portion of the SCF Program Study Area, although its extent is not well defined. Based on best available information, it is believed to occur at depths ranging between approximately 300 and 1,000 feet below ground surface. It is thought to extend and slope upward toward the east and north, and to outcrop in the Sierra Nevada foothills. The Tuscan Formation is comprised of four distinct units: A, B C and D (although Unit D is not present within the general project area). Unit A, or Upper Tuscan Formation, is composed of mudflow deposits with very low permeability and therefore is not important as a water source. Units B and C together are referred to as the Lower Tuscan Formation. Very few wells penetrate the Lower Tuscan Formation within the SCF Program study area.*

(The Testing Plan EA/FONSI at p. 23). The Tehama Formation, however, generally behaves as a semi-confined aquifer system and the EA contains no discussion of its relationship with the adjoining formations. Nor is there any discussion of the role of the Pliocene Tehama Formation as "the primary source of groundwater produced in the area," (DWR 2003).

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 27 of 48

The EA fails to offer any in-depth analysis of which strata in the aquifers will be most likely affected by the 2010-2011 Water Transfer Program's proposed extraction of groundwater. Thousands of domestic wells in the upper layers of the aquifers are not even considered in the EA. In addition, the EA provides no assessment of the interrelationship of varying strata in the aquifers in the Sacramento Valley or between the aquifers themselves.

The EA fails to provide basic background information regarding the recharge of groundwater. The document states, "Groundwater is recharged by deep percolation of applied water and rainfall infiltration from streambeds and lateral inflow along the basin boundaries," (EA p. 3-10). How was the conclusion reached that applied water leads to recharge of the aquifer? Where are the supporting data? This claim is unsubstantiated by any of the work that has been performed to date. For example, the RootZone water balance model used by a consultant with Glenn Colusa Irrigation District, Davids Engineering, was designed to simulate root zone soil moisture. It balances incoming precipitation and irrigation against crop water usage and evaporation, and whatever is left over is assigned to "deep percolation." Deep percolation in this case means below the root zone, which is anywhere from a few inches to several feet below the surface, depending on the crop. There is absolutely no analysis that has been performed to insure that applied water does, indeed, recharge the aquifer. For example, if the surface soils were to dry out, water that had previously migrated below the root zone might be pulled back up to the surface by capillary forces. In any case, the most likely target of the "deep percolation" water in the Sacramento Valley is the unconfined, upper strata of the aquifer and possibly the Sacramento River. The EA has not demonstrated otherwise.

A public hearing concerning the Monterey Agreement was held in Quincy on November 29, 2007 and hosted by DWR. At the hearing Barbara Hennigan presented the following testimony: "So for the issues of protecting the water quality, protecting the stream flow in the Sacramento, one of the things that we have learned is that the Sacramento River becomes a permanently losing stream at the Sutter buttes. When I first started looking at the water issues that point was at Grimes south of the [Sutter B]uttles, now it is at Princeton, moving north of the buttes. As the Sacramento becomes a losing stream farther and farther north because of loss of the Lower Tuscan Aquifer, that means that it, there will be less water that the rest of the State relies on," ([http://www.water.ca.gov/environmentalservices/docs/mntry\\_plus/comments/Quincy.txt](http://www.water.ca.gov/environmentalservices/docs/mntry_plus/comments/Quincy.txt)). How and when will the Bureau and DWR address this enormously important condition and amplify the risk to not only the northstate, but the entire State of California?

#### **4. The EA contains numerous errors and omissions regarding groundwater resources.**

There are numerous errors, omissions, and negligence in addressing existing conditions before and with the Project in Section 3.2 Groundwater Resources. The failure to address stated problematic conditions and the lack of accuracy in this section of so many elemental issues and

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 28 of 48

facts raises questions about the content of the entire EA and FOSI. A partial list of statements and questions follows.

- On pages 3-10, 3-12, and 3-13 of the EA the Sierra Nevada [mountain range] and “Coast ranges” are identified, but there is no mention of the southern Cascade Range that is a prominent geologic feature of the northern Sacramento Valley and a significant contributor to the hydrology of the region.
- Page 3-12 mentions “major tributaries” to the Sacramento River, but omits the northern rivers the McCloud and the Pit. It also mentions “Stony, Cache, and Putah Creeks,” but fails to mention Battle, Mill, Big Chico, and Butte creeks. These omissions again reflect an odd lack of understanding of the Cascade Range.
- The EA states quite straightforwardly on page 3-12 that, “Surface water and groundwater interact on a regional basis, and, as such, gains and losses to groundwater vary significantly geographically and temporally. In areas where groundwater levels have declined, such as in Sacramento County, streams that formerly gained water from groundwater now lose water to the groundwater system through seepage.” This knowledge alone requires substantive environmental review under NEPA and CEQA.
- Page 3-12. “Groundwater production in the basin has recently been estimated to be about 2.5 million acre-feet or more in dry years.” What is the citation for this assertion?
- Page 3-12. “Historically, groundwater levels in the Basin have remained steady, declining moderately during extended droughts and recovering to pre-drought levels after subsequent wet periods. DWR extensively monitors groundwater levels in the basin. The groundwater level monitoring grid includes active and inactive wells that were drilled by different methods, with different designs, for different uses. Types of well use include domestic, irrigation, observation, and other wells. The total depth of monitoring grid wells ranges from 18 to 1,380 feet below ground surface.” As presented above, groundwater levels have been changing, historically. Since the Bureau and DWR have access to a monitoring grid, for NEPA and CEQA compliance, they must present current facts, not general statements that relate to social science.
- Page 3-12. “In general, groundwater flows inward from the edges of the basin and south parallel to the Sacramento River. In some areas there are groundwater depressions associated with extraction that influence local groundwater gradients.” Where are the groundwater depressions? How have they affected groundwater gradients? How will the Project exacerbate a negative existing condition?
- Page 3-12. “Prior to the completion of CVP facilities in the area (1964-1971), pumping along the west side of the basin caused groundwater levels to decline. Following construction of the Tehama-Colusa Canal, the delivery of surface water and reduction in groundwater extraction resulted in a recovery to historic groundwater levels by the mid to late-1990s.” Please provide the citation(s).
- Pg 3-15 "According to the SWRCB, there are no elevated concentrations of arsenic or selenium in the Sacramento Groundwater Basin." The GAMA domestic well Project, Tehama County Focus Area, 2009, Arsenic in Domestic and Public Wells indicates variable levels of arsenic in the cited basin. The study found that, "Fourteen percent of



Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 29 of 48

the wells [in the Tehema County focus area] had concentrations of both arsenic and iron above their associated CDPH MCLs or secondary MCLs."

- Page 3-15. "The State Water Code (Section 1745.10) requires that for short term water transfers, the transferred water may not be replaced with groundwater unless the following criteria are met (SWRCB 1999)..." The Project is not a short term water transfer, but a set of serial actions in multiple years by the agencies, sellers, and buyers without the benefit of comprehensive environmental analysis under NEPA and CEQA.
- Page 3-16. "California Water Code Section 1810 and the CVPIA protect against injury to third parties as a result of water transfers. Three fundamental principles include (1) no injury to other legal users of water; (2) no unreasonable effects on fish, wildlife or other in-stream beneficial uses of water; and (3) no unreasonable effects on the overall economy or the environment in the counties from which the water is transferred. These principles must be met for approval of water transfers." The disclosures and analyses contained in the EA, FONSI, and its appendices are inadequate to satisfy the California Water Code requirements and the Bureau's requirements under NEPA. DWR has clearly failed its obligations under CEQA by providing no disclosure or analysis.

**E. Other resource impacts flowing from corrected chains of cause and effect are unrecognized in the EA and should be considered in an EIS instead.**

Regarding surface water reservoir operations in support of the 2010-2011 Water Transfer Program, we have several questions and concerns:

- Regarding fisheries, we note that the Bureau intends to comply with the State Water Resources Control Board's Water Rights Orders 90-05 and 91-01 in order to provide temperature control at or below 56 degrees Fahrenheit for anadromous fish, their redds, and hatching wild salmonid fry, and to provide minimum instream flows of 3,250 cubic feet per second (cfs) between September 1 and February 28, and 2,300 cfs between March 1 and August 31. How will the Bureau and DWR comply with Fish and Game Code Section 5937—to keep fish populations below and above their dams in good condition, as they approve transfers of CVP water from willing CVP contractors to willing buyers? We urge this compliance effort be integrated with the streams of interest and groundwater monitoring programs we recommended above.
- We also find confusing the EA's treatment of instream flows for fisheries. On one hand, minimum flows and temperature criteria established in the above-mentioned water rights orders is to be adhered to by the Bureau for the Sacramento River. The necessity for April and May storage is not well explained.
- Concerning the social and economic effects of the proposed 2010-2011 Water Transfer Program, crop idling transfers will delete fields from production and result in employment impacts on Sacramento Valley's agricultural labor market at a time when the

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 30 of 48

national recession is at its worst. The lack of descriptive information about what crops are to be idled by specific "willing sellers" means that a reasonably plausible estimate of employment impacts in the Sacramento Valley are unavailable, rendering the EA inadequate from this standpoint. Has the Bureau reviewed the President's policies on economic recovery to be certain that its water transfer program that would shift employment impacts from one Valley to another rather than work to increase employment generally is consistent with the intent of the President and Congress? What would be the effects of employment shifting on the poverty rates of Sacramento Valley counties? Such an estimate, provided with basic information about what acreages of specific crops are to be idled, is within the reach of the Bureau to make.

- On its own terms, the Bureau's EA makes no attempt to establish baseline agricultural crop acreages for each agricultural county offering or seeking DWB water in order to calculate and apply its 20 percent threshold for limiting economic impacts to agriculture in selling counties. Moreover, this 20 percent threshold needs to be incorporated into the description of the Proposed Action Alternative, since it appears to be an integral part of DWB actions.
- Regarding public health and safety, the EA negligently denies the potential for impacts (p.3-1). Fluctuating domestic wells can lead to serious contamination from heavy metals and non-aqueous fluids. Additionally, there are numerous hazardous waste plumes in Butte County, which could easily migrate with the potential increased groundwater pumping proposed for the Project. All of this must be disclosed and analyzed.

In general, the 2010-2011 Water Transfer Program EA/FONSI—and by logical implication, DWR's actions—consistently avoids full disclosure of existing conditions and baseline data, rendering their justifications for the 2010-2011 Water Transfer Program at best incoherent, and at worst, dangerous to groundwater users and resources, and to vulnerable fisheries in tributary streams of the Sacramento River.

**F. The 2010-2011 Water Transfer Program is likely to have a cumulatively significant impact on the environment.**

The draft EA/FONSI does not reveal that the current Project is part of a much larger set of plans to develop groundwater in the region, to develop a "conjunctive" system for the region, and to integrate northern California's groundwater into the state's water supply. These are plans that the Bureau, together with DWR and others, have pursued and developed for many years. Indeed, one of the plans—the short-term phase of the Sacramento Valley Water Management Program—is the subject of an ongoing scoping process for a Programmatic EIS that has not yet been completed.

In assessing the significance of a project's impact, the Bureau must consider "[c]umulatively actions, which when viewed with other proposed actions have cumulatively significant impacts

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 31 of 48

and should therefore be discussed in the same impact statement.” 40 C.F.R. §1508.25(a)(2). A “cumulative impact” includes “the impact on the environment which results from the incremental impact of the action when added to *other past, present and reasonably foreseeable future actions* regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* §1508.7. The regulations warn that “[s]ignificance cannot be avoided by terming an action temporary or by breaking it down into small component parts.” *Id.* §1508.27(b)(7).

An environmental impact statement should also consider “[c]onnected actions.” *Id.* §1508.25(a)(1). Actions are connected where they “[a]re interdependent parts of a larger action and depend on the larger action for their justification.” *Id.* §1508.25(a)(1)(iii). Further, an environmental impact statement should consider “[s]imilar actions, which when viewed together with other *reasonably foreseeable or proposed agency actions*, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.” *Id.* §1508.25(a)(3) (emphasis added).

As detailed below, instead of assessing the cumulative impacts of the proposed action as part of the larger program that even the Bureau has recognized should be subject to a programmatic EIS (but for which no programmatic EIS has been completed), the Bureau has attempted to separate this program and approve it through an inadequate EA. Further, the Bureau has failed to take into account the cumulative effects of other groundwater and surface water projects in the region, the development of “conjunctive” water systems, and the anticipated further integration of Sacramento Valley surface and ground water into the state water system.

### **G. The Environmental Assessment Fails to Meet the Requirements of NEPA.**

Even if an EIS were not clearly required here, the draft EA/FONSI prepared by the Bureau violates NEPA on its own. As discussed above, the draft EA does not provide the analysis necessary to meet NEPA’s requirements and to support its proposed finding of no significant impact. Further, as outlined above, the draft document fails to provide a full and accurate description of the proposed Project, its relationship to myriad other water transfer and groundwater extraction projects, its potentially significant adverse effects on salmon critical habitat in streams of interest tributary to the Sacramento River, and an assessment of the cumulative environmental impacts of the 2010-2011 Water Transfer Program when considered together with other existing and proposed water programs.

Additionally, the draft EA/FONSI fails to provide sufficient evidence to support its assertions that the 2010-2011 Water Transfer Program would have no significant impacts on the human or natural environments, neither decision makers nor the public are fully able to evaluate the significance of the 2010-2011 Water Transfer Program’s impacts. These informational failures complicate the Coalition’s efforts to provide meaningful comments on the full extent of the potential environmental impacts of the DWB and appropriate mitigation measures. Accordingly, many of the Coalition’s comments include requests for additional information.

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 32 of 48

### **1. The EA Fails to Consider a Reasonable Range of Alternatives.**

NEPA's implementing regulations call for analysis of alternatives is "the heart of the environmental impact statement," 40 C.F.R. §1502.14, and they require an analysis of alternatives within an EA. *Id.* §1408.9. The statute itself specifically requires federal agencies to:

*study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning available uses of resources.*

42 U.S.C. §4332(2)(E). Here, because the Bureau's EA considers only the proposed Project and a "No Action" alternative, the EA violates NEPA.

The case law makes clear that an adequate analysis of alternatives is an essential element of an EA, and is designed to allow the decision maker and the public to compare the environmental consequences of the proposed action with the environmental effects of other options for accomplishing the agency's purpose. The Ninth Circuit has explained that "[i]nformed and meaningful consideration of alternatives ... is ... an integral part of the statutory scheme." *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988) (holding that EA was flawed where it failed adequately to consider alternatives). An EA must consider a reasonable range of alternatives, and courts have not hesitated to overturn EAs that omit consideration of a reasonable and feasible alternative. *See People ex rel. Van de Kamp v. Marsh*, 687 F.Supp. 495, 499 (N.D. Cal. 1988); *Sierra Club v. Watkins*, 808 F.Supp. 852, 870-75 (D.D.C. 1991).

Here, there are only two alternatives presented: the No Action and the Proposed Action. The lack of *any* alternative action proposal is unreasonable and is by itself a violation of NEPA's requirement to consider a reasonable range of alternatives.

Even more significantly, there are numerous other alternative ways to ensure water is allocated reliably when California experiences dry hydrologic years. We described several elements of reasonable alternatives above. These are the alternatives that should have been presented for the Bureau's draft EA/FONSI on the 2010-2011 Water Transfer Program to comply with NEPA. 42 U.S.C. § 4332(2)(E).

### **2. The EA Fails to Disclose and Analyze Adequately the Environmental Impacts of the Proposed Action**

The discussion and analysis of environmental impacts contained in the EA is cursory and falls short of NEPA's requirements and stems from having an unclear and poorly described narrative for the proposed 2010-2011 Water Transfer Program. It obscures realistic chains of cause and effect, which in turn prevent accurate and comprehensive accounting of environmental baselines and measurement of the DWB's potential impacts. NEPA's implementing regulations require that an EA "provide sufficient evidence and analysis for determining whether to prepare an

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 33 of 48

[EIS].” 40 C.F.R. §1508.9(a). For the reasons discussed above, the EA fails to discuss and analyze the environmental effects of the water transfers, crop idling, and groundwater substitution proposed by the 2010-2011 Water Transfer Program. The Bureau must consider and address the myriad of environmental consequences that are likely to flow from this proposed agency action.

Along with our significant concerns about the adequacy of the proposed monitoring, the draft EA/FONSI also fails to explain what standards will be used to evaluate the monitoring data, and on what basis a decision to modify or terminate the pumping would be made. In light of the document’s silence on these crucial issues, the draft EA/FONSI’s conclusion that there will not be significant adverse impacts withers quickly under scrutiny.

### **3. The EA Fails to Analyze Cumulative Impacts Adequately.**

The Ninth Circuit Court makes clear that NEPA mandates “a useful analysis of the cumulative impacts of past, present and future projects.” *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 810 (9th Cir. 1999). Indeed, “[d]etail is required in describing the cumulative effects of a proposed action with other proposed actions.” *Id.* The very cursory cumulative effects discussion contained in the EA plainly fails to meet this standard.

As discussed in Part I.C. above, the proposed DWB does not exist in a vacuum, and is in addition to a broader program to develop regional groundwater resources and a conjunctive use system. The 2010-2011 Water Transfer Program is also only one of several proposed and existing projects that affect the regional aquifers. The existence of these numerous related projects makes an adequate analysis of cumulative impacts especially important.

### **4. The Bureau Has Failed to Consider the Cumulative Impact of Other Groundwater Development and Surface Water Diversions Affecting the Region**

In addition to the improper segmentation evident in the draft EA/FONSI, the assessment of environmental impacts is further deficient because the Bureau has failed to consider the cumulative impacts of the proposed groundwater extraction when taken in conjunction with other projects proposed for the development of groundwater and surface water.

The Bureau and its contractors are party to numerous current and reasonably foreseeable water programs that are related to the water transfers contemplated in the DWB including the following:

- Sacramento Valley Integrated Regional Water Management Plan (2006)
- Sacramento Valley Regional Water Management Plan (January 2006)
- Stony Creek Fan Conjunctive Water Management Program
- Sacramento Valley Water Management Agreement (Phase 8, October 2001)

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 34 of 48

- Draft Initial Study for 2008-2009 Glenn-Colusa Irrigation District Landowner Groundwater Well Program
- Regional Integration of the Lower Tuscan Groundwater Formation into the Sacramento Valley Surface Water System Through Conjunctive Water Management (June 2005)
- Stony Creek Fan Aquifer Performance Testing Plan for 2008-09
- Lower Tuscan Integrated Planning Program, a program funded by the Bureau that will “integrate the Lower Tuscan formation aquifer system into the management of regional water supplies.”
- Annual forbearance agreements (2008 had an estimated 160,00 acre feet proposed).

We briefly describe some of their key elements here.

Stony Creek Fan Conjunctive Water Management Program. The SCF Aquifer Plan is part of and in furtherance of the Stony Creek Fan Conjunctive Water Management Program (“SCF Program”). This program is being carried out by GCID, Orland-Artois and Orland Unit Water Association.

The long-term objective of the SCF Program is the development of a “regional conjunctive water management program consisting of a direct and in-lieu recharge component, a groundwater production component, and supporting elements...” (SVWMA: Project 8A Stony Creek Fan Conjunctive Water Management Program (“SVWMA Project 8A”), at 8A-1). The potential supply from such a program was estimated at 50,000 af per year to 100,000 af per year. *Id.*

The SCF Program has 3 Phases: (1) a feasibility study; (2) a demonstration project; and (3) project implementation. Phase I of the SCF Program has already been completed. The SCF Aquifer Plan described in a draft EA/FONSI is part of Phase II of the larger SCF Program. Phase III of the SCF Program will implement the program’s goal of integrating test and operational production wells into the water supply systems for GCID, Orland-Artois, and Orland Unit Water Association for long-term groundwater production in conjunction with surface water diversions.

The Bureau is well aware of the SCF Program, but declined to analyze the environmental effects of the program as a whole, and simply considered the effects of an isolated component of the larger program. Indeed, the Bureau recently awarded a grant to GCID to fund the SCF Program. The Bureau’s grant agreement states that the SCF Program “target[s] the Lower Tuscan Formation and possibly other deep aquifers in the west-central portion of the Sacramento Valley ... as the source for all or a portion of the additional groundwater production needed to meet [the SCF Partners’] respective integrated water management objectives.” BOR Assistance Agreement No. 06FG202103 at p. 2. The agreement further provides that provides that “[a]dditional test wells and production wells will be installed within the Project Area.” *Id.*

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 35 of 48

Moreover, the Bureau's own description of the reasons for not choosing the "No Action" alternative indicate the Bureau's recognition that the primary goal of the SCF Aquifer Plan is to realize the objectives of the SCF Program – "increas[ing] reliable water supplies through conjunctive management of groundwater and surface water" at a fast pace. *See* EA/FONSI at p. 5. The Bureau was obligated to assess the potentially significant environmental impacts associated with such conjunctive management of groundwater and surface water, and wholly failed to do so.

There are serious concerns raised by the proposal to engage in conjunctive management of groundwater and surface water that are not addressed in the EA. For example, in 1994, following seven years of low annual precipitation, Western Canal Water District and other irrigation districts in Butte, Glenn and Colusa counties exported 105,000 af of water extracted from the Tuscan aquifers to buyers outside of the area. This early experiment in the *conjunctive use* of the groundwater resources – conducted without the benefit of environmental review – caused a significant and immediate adverse impact on the environment (Msangi 2006). Until the time of the water transfers, groundwater levels had dropped but the aquifers had sustained the normal demands of domestic and agricultural users. The water districts' extractions, however, lowered groundwater levels throughout the Durham and Cherokee areas of eastern Butte County (Msangi 2006). The water level fell and the water quality deteriorated in the wells serving the City of Durham (Scalmanini 1995). Irrigation wells failed on several orchards in the Durham area. One farm never recovered from the loss of its crop and later entered into bankruptcy. Residential wells dried up in the upper-gradient areas of the aquifers as far north as Durham.

The SCF Program is a Component of the Sacramento Valley Water Management Program. The Sacramento Valley Water Management Program (Phase 8) ("SVWMP") also includes the SCF Program as one of its elements. (SVWMA Project 8A at pp. 8A-1 to 8A-13).

The SVWMP recognizes that the SCF Program "has the potential to improve operational flexibility on a regional basis resulting in measurable benefits locally in the form of predictable, sustainable supplies, *and improved reliability for water users' elsewhere in the state.*" *Id.* at p. 8A-2 (emphasis added). By piecemealing this program improperly and analyzing only the small component of the SCF Program, the Bureau has failed to assess the environmental impacts associated not just with the anticipated conjunctive use of the groundwater, but also the effect of the anticipated export of water to other regions of the state.

Additionally, approximately seven years ago, on August 5, 2003, the Bureau published a notice in the Federal Register announcing its intention to prepare a programmatic EIS to analyze the short-term phase of the SVWMP. 68 Fed. Reg. 46218, 46219 (Aug. 5, 2003). Like the SVWMP, this "Short-term Program" for which the Bureau stated its intent to conduct a programmatic EIS included implementation of the SCF Program. *Id.* at 46219, 46220.

The SCF Program is Also a Component of the Sacramento Valley Integrated Regional Water Management Program. The Bureau has been working with GCID and others to realize the

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 36 of 48

Sacramento Valley Integrated Regional Water Management Program (“SVIRWMP”). SVIRWMP is comprised of a number of sub-regional projects, including the SCF Program. *See* SVIRWMP, Appendix A at A-5; BOR Assistance Agreement No. 06FG202103. Here again, even though the SCF Aquifer Plan is clearly a necessary component of the SCF Program – which is in turn a component of the SVIRWMP – the draft EA/FONSI failed to even acknowledge, let alone assess, the cumulative impacts of these related projects.

Most obviously, the draft EA wholly fails to assess the impact of the Bureau’s *Sacramento Valley Regional Water Management Plan (2006)* (SVRWMP) and the forbearance water transfer program that the Bureau and DWR facilitate jointly. As noted above, the Programmatic EIS for the 2002 Sacramento Valley Water Management Agreement or Phase 8 Settlement was initiated, but never completed, so the SVRWMP was the next federal product moving the Phase 8 Settlement forward. The stated purpose of the Phase 8 Settlement and the SVRWMP are to improve water quality standards in the Bay-Delta and local, regional, and statewide water supply reliability. In the 2008 forbearance program, 160,000 af was proposed for transfer to points south of the Delta. To illustrate the ongoing significance of the demand on Sacramento Valley water, we understand that GCID alone entered into “forbearance agreements” to provide 65,000 af of water to the San Luis and Delta Mendota Water Association in 2008, 80,000 af to State Water Project contractors in 2005, and 60,000 af to the Metropolitan Water District of Southern California in 2003.

Less obvious, but certainly available to the Bureau, are the numerous implementation projects that Phase 8 signatories are pursuing, such as Glenn Colusa Irrigation District’s (GCID) 2008 proposal to divert groundwater pumped from private wells to agricultural interests in the District. *See* Attach. (GCID Proposed Negative Declaration, GCID Landowner Groundwater Well Program for 2008-09). Additionally, the draft EA does not consider the cumulative effect of the Lower Tuscan Integrated Planning Program, a program funded by the Bureau that will “integrate the Lower Tuscan formation aquifer system into the management of regional water supplies.” Grant Agreement at 4. This program, as described by the Bureau, will culminate in the presentation of a proposed water management program for the Lower Tuscan Formation for approval and implementation by the appropriate authorities. Clearly, the cumulative impact of this program and the 2010-2011 Water Transfer Program’s proposed groundwater extraction should have been assessed.

Finally, with the myriad projects and programs that are ignored in the EA and have never been analyzed cumulatively, the EA finally discloses that there could be a *devastating* impact to groundwater: “The reduction in recharge due to the decrease in precipitation and runoff in the past years in addition to the increase in groundwater transfers would lower groundwater levels. Multi-year groundwater acquisition under cumulative programs operating in similar areas of the Sacramento Valley could further reduce groundwater levels. Groundwater levels may not fully recover following a transfer and may experience a substantial net decline in groundwater levels over several years. This would be a substantial cumulative effect,” (EA p. 3-108). While the



Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 37 of 48

honesty is refreshing, the lack of comprehensive monitoring, mitigation, and project cessation mechanisms is startling. This alone warrants the preparation of an EIS.

Here again, the current document does not discuss or analyze these potential impacts, their potential scope or severity, or potential mitigation efforts. Instead, it relies on the existence of local ordinances, plans, and oversight with the monitoring and mitigation efforts of individual “willing sellers” to cope with any adverse environmental effects. However, as we have shown above, for example, the Glenn County management plan is untested and does not provide adequate protection and monitoring of the region’s important groundwater resources. To further clarify the inadequacy of relying on local plans and ordinances, Butte County’s Basin Management Objectives have no enforcement mechanism and Butte County’s Chapter 33, while it requires CEQA review for transfers that include groundwater, has never been tested. As one can see, there is very limited local protection for groundwater and no authority to influence pumping that is occurring in a different county.

**5. The 2010-2011 Water Transfer Program is likely to serve as precedent for future actions with significant environmental effects.**

As set forth above, this Project is part of a broader effort by the Bureau and DWR to develop groundwater resources and to integrate GCID’s water into the state system. For these reasons, the 2010-2011 Water Transfer Program is likely to “establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration” (40 C.F.R. §1508.27(b)(6)), and should be analyzed in an EIS.

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 38 of 48

**6. The 2010-2011 Water Transfer Program has potential adverse impacts for a threatened species.**

As the Bureau of Reclamation is well aware, the purpose of the ESA is to conserve the ecosystems on which endangered and threatened species depend and to conserve and recover those species so that they no longer require the protections of the Act. 16 U.S.C. § 1531(b), ESA § 2(b); 16 U.S.C. § 1532(3), ESA §3(3) (defining “conservation” as “the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary”). “[T]he ESA was enacted not merely to forestall the extinction of species (i.e., promote species survival), but to allow a species to recover to the point where it may be delisted.” *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Service*, 378 F.3d 1059, 1069 (9th Cir. 2004). To ensure that the statutory purpose will be carried out, the ESA imposes both substantive and procedural requirements on all federal agencies to carry out programs for the conservation of listed species and to insure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. 16 U.S.C. § 1536. See *NRDC v. Houston*, 146 F.3d 1118, 1127 (9th Cir. 1998) (action agencies have an “affirmative duty” to ensure that their actions do not jeopardize listed species and “independent obligations” to ensure that proposed actions are not likely to adversely affect listed species). To accomplish this goal, agencies must consult with the Fish and Wildlife Service whenever their actions “may affect” a listed species. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). Section 7 consultation is required for “any action [that] may affect listed species or critical habitat.” 50 C.F.R. § 402.14. Agency “action” is defined in the ESA’s implementing regulations to “mean all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States.” 50 C.F.R. § 402.02.

The giant garter snake (“GGS”) is an endemic species to Central Valley California wetlands. (Draft Recovery Plan for the Giant Garter Snake (“DRP”) 1). The giant garter snake, as its name suggests, is the largest of all garter snake species, not to mention one of North America’s largest native snakes, reaching a length of up to 64 inches. Female GGS tend to be larger than males. GGS vary in color, especially depending on the region, from brown to olive, with white, yellow, or orange stripes. The GGS can be distinguished from the common garter snake by its lack of red markings and its larger size. GGS feed primarily on aquatic fish and specialize in ambushing small fish underwater, making aquatic habitat essential to their survival. Females give birth to live young from late July to early September, and brood size can vary from 10 to up to 46 young. Some studies have suggested that the GGS is sensitive to habitat change in that it prefers areas that are familiar and will not typically travel far distances. The EA discloses that one GGS study in Colusa County revealed the “longest average movement distances of 0.62 miles, with the longest being 1.7 miles, for sixteen snakes in 2006, and an average of 0.32 miles, with the longest being 0.6 miles for eight snakes in 2007. However, in response to droughts and other changes in water availability, the GGS has been known to travel up to 5 miles in only a few days,

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 39 of 48

but the impacts on GGS survival and reproduction from such extreme conditions are unknown due to the deficiency in data and analysis.

Flooded rice fields, irrigation canals, and wetlands in the Sacramento Valley can be used by the giant garter snake for foraging, cover and dispersal purposes. The draft EA fails to comprehensively analyze the movements and habitat requirements for the federal and state-threatened giant garter snake and yet again defers responsibility to a future time. The 2009 Biological Assessment acknowledged the failure of Bureau and DWR to complete the Conservation Strategy that was a requirement of the 2004 Biological Opinion. (BA at p. 19-20) [The BA appears to have no page numbers] What possible excuse delayed this essential planning effort?

The 2010-2011 Water Transfer Program also proposes to delete or modify other mitigation measures previously adopted as a result of the EWA EIR process to substantially reduce significant impacts, but without showing they are infeasible. For example, the Bureau and DWR propose to delete the 160 acre maximum for “idled block sizes” for rice fields left fallow rather than flooded and to substitute for it a 320 acre maximum. (See 2003 Draft EWA EIS/EIR, p. 10-55; 2004 Final EWA EIS/EIR, Appendix B, p. 18, Conservation Measure # 4.) There is no evidence to support this change. In light of the agencies failure to complete the required Conservation Strategy mentioned above and the data gathered in the Colusa County study, how can the EA suggest that doubling the fallowing acreage is in any way biologically defensible? The agencies additionally propose to delete the mitigation measure excluding Yolo County east of Highway 113 from the areas where rice fields may be left fallow rather than flooded, except in three specific areas. (See 2004 Final EWA EIS/EIR, Appendix B, p. 18, Conservation Measure # 2.) What is the explanation for this change? What are the impacts from this change?

Deleting these mitigation measures required by the EWA approval would violate NEPA and CEQA’s requirements that govern whether, when, and how agencies may eliminate mitigation measures previously adopted under NEPA and CEQA. (See *Napa Citizens for Honest Government v. Napa County Board*.)

The 2010-2011 Water Transfer Program fails to include sufficient safeguards to protect the giant garter snake and its habitat. The EA concludes, “The frequency and magnitude of rice land idling would likely increase through implementation of water transfer programs in the future. Increased rice idling transfers could result in chronic adverse effects to giant garter snake and their habitats and may result in long-term degradation to snake populations in the lower Sacramento Valley. In order to avoid potentially significant adverse impacts for the snake, additional surveys should be conducted prior to any alteration in water regime or landscape,” (p. 3-110). To address this significant impact the Bureau proposes relying on the 2009 DWB Biological Opinion, which was a one-year BO. The expired BO highlights the Bureau and DWR’s avoidance of meeting federal and state laws stating, “This office has consulted with Reclamation, both informally and formally, approximately one-half dozen times over the past 8 years on various forbearance agreements and proposed water transfers for which water is made available for delivery south of

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 40 of 48

the delta by fallowing rice (and other crops) or substituting other crops for rice in the Sacramento Valley. Although transfers of this nature were anticipated in our biological opinion on the environmental Water Account, that program expired in 2007 and, to our knowledge, no water was ever made available to EWA from rice fallowing or rice substitution. The need to consult with such frequency on transfers involving water made available from rice fallowing or rice substitution suggests to us a need for programmatic environmental compliance documents, including a programmatic biological opinion that addresses the additive effects on giant garter snakes of repeated fallowing over time, and the long-term effects of potentially large fluctuations and reductions in the amount and distribution of rice habitat upon which giant garter snakes in the Sacramento Valley depend,” (p.1-2). The Coalition agrees with the U.S. Fish and Wildlife Service that programmatic environmental compliance is needed under the Endangered Species Act, NEPA, CEQA, and the California Endangered Species Act.

It is conspicuously noticeable that there isn't a claim of a less-than-significant impact for the Giant Garter Snake (*Thamnophis gigas*), in the EA/FONSI. There is really no conclusion reached due to the fundamental absence of science for the species. The Bureau should also prepare an EIS because the 2010-2011 Water Transfer Program will likely have significant environmental effects on the Giant Garter Snake, a listed threatened species under the federal Endangered Species Act and California Endangered Species Act. 40 C.F.R. §1508.27(b)(9).

## **II. Purpose and Need Issues of the 2010-2011 Water Transfer Program**

### **A. The Purpose and Need Section of the EA/FONSI fails to specify the policy framework upon which the 2010-2011 Water Transfer Program is based.**

Avoiding the requirements of the California Environmental Quality Act (CEQA) for the 2010-2011 Water Transfer Program does not reflect the actual environmental effects of the proposal—which are similar to the proposed 1994 Drought Water Banks and for which a final Program Environmental Impact Report was completed in November 1993. In 2000, the Governor's Advisory Drought Planning Panel report, *Critical Water Shortage Contingency Plan* promised a program EIR on a drought-response water transfer program, but was never undertaken. Twice in recent history, the state readily acknowledged that CEQA review for a major drought water banking program was appropriate. So, the 2009 DWB Notice of Exemption and complete avoidance of CEQA review for the 2010-2011 Water Transfer Program reflects an end-run around established water law through the use of water transfers, and is therefore vulnerable to legal challenge under the California Environmental Quality Act.

We question the merits of and need for the 2010-2011 Water Transfer Program itself. The existence of drought conditions at this point in time is highly questionable and reflects the state's abandonment of a sensible water policy framework given our state and national economic recession and tattered public budgets. Our organizations believe the agencies continue to go too far to help a few junior water right holders, and that at bottom the 2010-2011 Water Transfer Program is not needed. The Project intends to directly benefit the areas of California whose

Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 41 of 48

water supplies are the least reliable by operation of state water law. Though their unreliable supplies have long been public knowledge, local, state, and federal agencies in these areas have failed to stop blatantly wasteful uses and diversions of water and to pursue aggressive planning for regional water self-sufficiency.

The EA/FONSI's statement of purpose and need on page 1-2 states specifically that, "The purpose of the Proposed Action is to help facilitate the transfer of water throughout the State from willing sellers of CVP water upstream of the Delta to buyers that are at risk of experiencing water shortages in 2010 and 2011." This paragraph and the section that it is in omit a coherent discussion of need. The purpose and need should also state that this transfer program would be subject to specific criteria and delineate priorities, but they are absent.

The EA/FONSI makes no attempt to place the 2010-2011 Water Transfer Program into the context of the 2005 California Water Plan that the state recently completed. It appears to us that this plan is largely on the shelf now, perhaps because of the state's dire fiscal problems. It does contain many good recommendations concerning increasing regional water self-sufficiency. However, our review of the 2005 California Water Plan reveals no mention of the 2000 Critical Water Shortage Reduction Marketing Program or any overarching drought response plan that the state could have planned for in 2005, but did not. We sadly conclude that the state of California has no meaningful adopted drought response policy, save for gubernatorial emergency declarations to suspend protective environmental regulations. This is not a sustainable water policy for California.

The purpose and need section of the EA/FONSI *and the 2009 Governor's drought emergency declaration* cry out for placing the 2010-2011 Water Transfer Program into a policy framework. What is the state doing otherwise to facilitate regional water self-sufficiency for these areas with the least reliable water rights? How does the 2010-2011 Water Transfer Program fit into the state and federal government's water and drought policy framework? Instead, the state and federal response to this third consecutive dry year falls back on simply the Drought Water Bank model that ran into environmental and water users' opposition in 1991 and 1992. Is anybody home at our water agencies?

**B. The 2010-2011 Water Transfer Program is not needed because the state's current allocation system—in which the federal Bureau of Reclamation participates—wastes water profligately.**

The incentive from the state's lax system of regulation of California's State Water Project and Central Valley projects is to deliver the water now, and worry about tomorrow later. Indeed, the State Water Resources Control Board (SWRCB) has been AWOL for decades. In response to inquiries from the Governor's Delta Vision Task Force last fall, the SWRCB acknowledged that while average runoff in the Delta watershed between 1921 and 2003 was 29 million acre-feet annually, the 6,300 active water right permits issued by the SWRCB is approximately 245 million acre-feet. In other words, **water rights on paper are 8.4 times greater than the real**

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 42 of 48

**water in California streams diverted to supply those rights on an average annual basis.** *And the SWRCB acknowledges that this “water bubble” does not even take account of the higher priority rights to divert held by pre-1914 appropriators and riparian water right holders, of which there are another 10,110 disclosed right holders. Many more remain undisclosed.*

Like federal financial regulators failing to regulate the shadow financial sector, subprime mortgages, Ponzi schemes, and toxic assets of our recent economic history, the state of California has been derelict in its management of scarce water resources here. This in no way justifies suspension of environmental and water quality regulations, for which the Governor’s drought emergency declaration calls. We supplement our comments on this matter of wasteful use and diversion of water by incorporating by reference the joint complaint to the State Water Resources Control Board of the California Water Impact Network and the California Sportfishing Protection Alliance on public trust, waste and unreasonable use and method of diversion as additional evidence of a systematic failure of governance by the State Water Resources Control Board, the Department of Water Resources and the U.S. Bureau of Reclamation, filed with the Board on March 18, 2008 (attached).

We question the Bureau and DWR’s contention of continued dry conditions, since the current storms have greatly increased reservoir levels throughout California. Non-state and non-federal reservoirs indicate conditions fast approaching normal for their facilities: Bullard’s Bar in Yuba County is at 99 percent of the 15-year average for this time of year, EBMUD’s Pardee Lake is at 97 percent of normal, San Francisco’s Hetch Hetchy Reservoir on the Tuolumne River is at 152 percent of normal, while Don Pedro Reservoir on the same river is at 106 percent. The CVP’s Millerton and Folsom reservoirs are below average for this time of year, but with the strong storms California is now getting through this week and into next, their storage figures are likely to improve dramatically when snowpack melts. These two reservoirs must provide water to the agricultural San Joaquin River Exchange Contractors first, and they have among the most senior rights on that river. Rice growers in the Sacramento Valley are generally expecting close to full deliveries from the CVP and their Yuba River water supplies. The CVP’s own New Melones Reservoir on the Stanislaus River, which contributes to Delta water quality as well as to meeting eastern San Joaquin Valley irrigation demands, is at 87 percent of normal for this time of year.

Moreover, the SWP’s terminal reservoirs at Pyramid (104 percent of average) and Castaic (99 percent of average) Lakes are right at about normal storage levels for this time of year, presumably because DWR has been releasing water from Oroville for delivery to these reservoirs.

The fact that reservoirs of the CVP with more senior responsibilities in the water rights hierarchy do well with storage for this time of year suggests that at worst this will be a year of below normal runoff in 2010—hardly a drought scenario. Low storage levels at Oroville, Shasta and San Luis may easily be attributed to redirected releases to terminal reservoirs or groundwater banks in the San Joaquin Valley and Tulare Lake Basin—these latter storage venues and their

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 43 of 48

current performance are not disclosed on DWR's Daily Reservoir Storage levels web site. Still, given what is known, from what these reservoir levels indicate many major cities and most Central Valley farmers are very likely to have enough water for this year.

The ones expecting to receive little water this year do so because of the low priority of their water service contracts within the Central Valley Project—their imported surface supplies are therefore less reliable in dry times. It is the normal and appropriate functioning of California's system of water rights law that makes it so. Among those with more junior water contractor allocations, the Metropolitan Water District and the Santa Clara Valley Water District are the wealthiest regions and the agencies most capable of undertaking aggressive regional water self-sufficiency actions. They should be further encouraged and assisted to do so through coherently formulated state and federal water policies and programs.

On the agricultural side, the Bureau and DWR's efforts appear to benefit mainly the few western San Joaquin Valley farmers whose contractual surface water rights have always been less reliable than most—and whose lands are the most problematic for irrigation. In excess of 1 million acres of irrigated land in the San Joaquin Valley and the Tulare Lake Basin are contaminated with salts and trace metals like selenium, boron, arsenic, and mercury. These lands should be retired from irrigation to stop wasteful use of precious fresh water resources. This water drains back—after leaching from these soils the salts and trace metals—into sloughs and wetlands and the San Joaquin River carrying along these pollutants. Retirement of these lands from irrigation usage would help stem further bioaccumulation of these toxins that have settled in the sediments of these water bodies.

The 2010-2011 Water Transfer Program would exacerbate pumping of fresh water from the Delta, which has already suffered from excessive pumping in earlier years of this decade. Pumped exports cause reverse flows to occur in Old and Middle Rivers and can result in entrainment of fish and other organisms in the pumps. Pumping can shrink the habitat for Delta smelt as well, since less water flows out past Chipps Island through Suisun Bay which Delta smelt often prefer. Our organizations share the widely held view that operation of the Delta export pumps is the major factor causing the Pelagic Organism Decline (POD) and in the deteriorating populations of fall-run Chinook salmon. The State Water Resources Control Board received word in early December that the Fall Midwater Trawl surveys for September and October showed the lowest abundance indices for Delta smelt, American shad, and striped bass in history. The index for longfin smelt is the third lowest in history. 2009 was the second consecutive year where no commercial fishing of fall-run Chinook fish will be allowed because of this species' population decline. While it is too early to know, 2010 could be the third straight year where no commercial fishing will be allowed, which would be unprecedented. Operation of the DWB at a time when others refrain from taking these fish and other organisms strikes us as a consummate unwillingness on the part of the State of California and the U.S. Bureau of Reclamation to share in the sacrifices needed to help aquatic ecosystems and anadromous fisheries of the Bay-Delta Estuary recover.

Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 44 of 48

New capital facilities should be avoided to save on costly, unreliable, and destructive water supplies that new dams and canals represent. Moreover, these facilities would need new water rights; yet the most reliable rights in California are always the ones that already exist—and of those, they are the ones that predate the California State Water Project and the federal Central Valley Project. We should apply our current rights far more efficiently—and realistically—than we do now. California should instead pursue a “no-regrets” policy incorporating aggressive water conservation strategies, careful accounting of water use, research and technological innovation, and pro-active investments.<sup>5</sup>

### III. Conclusion

The Bureau’s EA/FONSI states on page 3-16:

*California Water Code Section 1810 and the CVPIA protect against injury to third parties as a result of water transfers. Three fundamental principles include (1) no injury to other legal users of water; (2) no unreasonable effects on fish, wildlife or other in-stream beneficial uses of water; and (3) no unreasonable effects on the overall economy or the environment in the counties from which the water is transferred.*

We unreservedly state to you that the draft EA/FONSI on the proposed 2010-2011 Water Transfer Program appears to describe a project that would fail all three of these tests as currently described. The 2010-2011 Water Transfer Program clearly has the potential to affect the human and natural environments, both within the Sacramento Valley as well as in the areas of conveyance and delivery. It is entirely likely that injuries to other legal users of water, including those entirely dependent on groundwater in the Sacramento Valley, will occur if this project is approved. Groundwater, fishery and wildlife resources are likely also to suffer harm as instream users of water in the Sacramento Valley. And the economic effects of the proposed DWB are at best poorly understood through the EA/FONSI. To its credit, at least the Bureau studied the proposed project, while DWR has completely avoided CEQA, thereby enabling the agency to ignore these potential impacts.

Taken together, the Bureau and DWR treat these serious issues carelessly in the EA/FONSI, and in DWR’s specious avoidance of CEQA review. In so doing, they deprive decision makers and the public of their ability to evaluate the potential environmental effects of this Project, and violate the full-disclosure purposes and methods of both the National Environmental Policy Act and the California Environmental Quality Act.

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<sup>5</sup> See especially, Pacific Institute, *More with Less: Agricultural Water Conservation and Efficiency in California, A Special Focus on the Delta*, September 2008; Los Angeles Economic Development Corporation, *Where Will We Get the Water? Assessing Southern California’s Future Water Strategies*, August 2008, and Lisa Kresge and Katy Mamen, *California Water Stewards: Innovative On-farm Water Management Practices*, California Institute for Rural Studies, January 2009.



Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 45 of 48

None of the signatory organizations to this letter received notice from the Bureau that this EA/FONSI had been released on January 5, 2010. With the Coalition's 2009 DWB comments on the EA/FONSI, we had the following request: *Our organizations request advance notification of any meetings that address this proposed Project or any other BOR projects in Butte, Colusa, Glenn, or Tehama counties that require consideration of NEPA/CEQA as well as water rights applications that will be needed as the 2010-2011 Water Transfer Program moves forward. Please add C-WIN, CSPA, BEC, and the Center for Biological Diversity to your basic public notice list on this Project, and send us each any additional documents that pertain to this particular Project.* While we do find record of a news release about the EA/FONSI on the Bureau's Mid-Pacific Region web site, we believe the Bureau has not met its obligations under NEPA for providing adequate public outreach to solicit review and comment of its environmental review documents in this matter. We learned of the Water Transfer Program on January 14th more than halfway through the review period set by the Bureau. Bureau staff rejected our request for additional time to review the documents, much to our disappointment. Please add our names and email addresses to all future environmental review news releases.

Sincerely,



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Brad Hubbard, US Bureau of Reclamation  
 Dean Messer, California Department of Water Resources  
 Comments on 2010-2011 Water Transfer Program Environmental Review  
 January 19, 2010  
 Page 46 of 48

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Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 47 of 48

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Brad Hubbard, US Bureau of Reclamation  
Dean Messer, California Department of Water Resources  
Comments on 2010-2011 Water Transfer Program Environmental Review  
January 19, 2010  
Page 48 of 48

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**AQUALLIANCE**  
DEFENDING NORTHERN CALIFORNIA WATERS

**Testimony on  
Water Availability Analysis  
for Trinity, Sacramento, and San Joaquin River Basins  
Tributary to the Bay-Delta Estuary**

**Submitted by  
Tim Stroshane  
Senior Research Associate  
California Water Impact Network (C-WIN)**

**and on behalf of  
California Sportfishing Protection Alliance  
and AquAlliance**

**October 26, 2012**

**for**

**Workshop #3  
Analytical Tools for Evaluating the Water Supply,  
Hydrodynamic, and Hydropower Effects of the Bay-Delta Plan  
November 13 and 14, 2012**

The State Water Resources Control Board called for workshops to receive information from and discuss with participating parties the scientific and technical bases for considering potential changes to the 2006 Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary for Phase II of the Board's comprehensive review of this plan.

According to the State Board's public notice for these workshops, the prompts for Workshop 3 testimony are:

1. What types of analyses should be completed to estimate the water supply, hydrodynamic, and hydropower effects of potential changes to the Bay-Delta Plan?
2. What analytical tools should be used to evaluate these effects? What are the advantages, disadvantages and limitations of these tools?

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

The California Water Impact Network, the California Sportfishing Protection Alliance, and AquAlliance (hereinafter, C-WIN) are pleased to submit this testimony to the State Water Resources Control Board. This testimony addresses the close linkage between the Board's public trust responsibilities on behalf of the State of California, its water quality control planning function, and its duty to regulate water rights in California. Water quality control planning efforts to date have led the Board to consider proportional tributary contributions needed to meet Delta inflow objectives from the Sacramento and San Joaquin River Basins to improve water quality and protect all beneficial uses, including fish and wildlife, in the Delta. The State Water Resources Control Board has authority over water rights in the Basins that would enable it to reallocate water usage and ensure compliance with the Board's new instream flow objectives.

Water availability analysis is an important method for modeling how the Board would implement new flow objectives. Our testimony illustrates the use of a planning-level water availability analysis for the Trinity River (much of whose flows are diverted to the Central Valley watershed of the Bay-Delta Estuary), and the major tributaries of the Sacramento and San Joaquin River Basins. We incorporate into the analysis the Basins' hydrologic variability, instream flow requirements based on the Board's 2010 public trust Delta flow determinations, and then operate publicly available water rights data and priorities on the divertable flows that remain in the system. We find that under public trust protective flow determinations, the promised water represented in water rights claims far exceed flow conditions available to these claims in most years.

We recommend for the Bay-Delta Plan's implementation program that the State Water Resources Control Board draw on its new flow determinations to increase the seasons during which rivers in the Bay-Delta Estuary's Central Valley watershed are fully appropriated, and push back the water rights priority date on which Term 91 curtailments are now based. Our water availability analysis suggests distinct parameters for both actions.

Finally, we conclude that the Board should use the Bay-Delta Plan process to tighten up its regulation of surplus water usage and export by the State Water Project and Central Valley Project to avoid permanently damaging Sacramento Valley groundwater resources. The Board's Delta flow determinations, coupled with comprehensive enforcement of water rights priorities, can help to protect both groundwater and surface water resources in the Sacramento Valley over the long term.

## **Government's Public Trust Responsibility**

Governments have a permanent fiduciary responsibility and obligation to protect the public trust. In *National Audubon Society v. Superior Court* (1983) 33 Cal 3d 419, 441, the court held that "the public trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when abandonment of that right is consistent with the purposes of the trust." The act of appropriating water is an acquisition of a property right from the waters of the state, an act that is therefore subject to regulation under the state's public trust responsibilities.

The State Water Resources Control Board has invoked its public trust responsibilities in regulating the waters of California and now acknowledges that the public trust is one of its ongoing regulatory responsibilities. Its most publicly prominent instance came in Water Rights Decision 1631 (D-1631) in 1994. In D-1631, the Board balanced the needs of the City of Los Angeles for water supply from the tributaries of Mono Lake with the lake's own needs for water to sustain its ecosystem. It required Los Angeles to make releases from each of its tributaries that would sustain riparian ecosystems and help restore fish populations to the tributaries by prescribing lake level targets in a

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

specified time period. (State Water Resources Control Board 1994) The Board has also adopted regulations governing how it treats the public trust in matters of the appropriation of water in California. (State Water Resources Control Board 2011b: Article 14, Standard Permit Terms and Conditions)

The trial court in *United States v. State Water Resources Control Board* (1986, 182 Cal.App.3d 82) determined that the State Water Resources Control Board had the authority to modify an appropriative water right permit once it had been issued, and that it could reduce the US Bureau of Reclamation's Central Valley Project permits to gain compliance from the Bureau. But the trial court held new fish and wildlife objectives the Board had approved in Water Rights Decision 1485 (D-1485) in 1978 to be invalid because the Board failed to identify the *source* of its authority. Justice John Racanelli, the author of the subsequent appellate court decision cited above, stated that the source of the Board's authority to issue and enforce new fish and wildlife objectives such as those contained in Water Rights Decision 1485 (D-1485) was the Public Trust Doctrine:

...the state as trustee of the public trust retains supervisory control of the state's waters such that no party has a vested right to appropriate water in a manner harmful to the interests protected by the public trust. (182 Cal.App.3d 82, 149)

Stevens (2005) summarizes the present range of coverage that American and California law gives the public trust doctrine:

1. It applies to all navigable streams.
2. It applies to ecological preservation.
3. It applies to wetland areas.
4. It applies underground (citing the Waiahole decision from Hawai'i).
5. It applies to artificially enlarged waters.
6. It applies to wild animals, including fish.<sup>1</sup>

## **The Public Trust and Paper Water**

In the next few years, the State Water Resources Control Board is expected to make several crucial decisions on California's water future. These decisions include:

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<sup>1</sup> The California Constitution also provides an absolute right to fish among the fundamental declared rights it accords all California citizens. Article I, Section 25 states:

### ARTICLE 1 DECLARATION OF RIGHTS

Section 25. The people shall have the right to fish upon and from the public lands of the State and in the waters thereof, excepting upon lands set aside for fish hatcheries, and no land owned by the State shall ever be sold or transferred without reserving in the people the absolute right to fish thereupon; and no law shall ever be passed making it a crime for the people to enter upon the public lands within this State for the purpose of fishing in any water containing fish that have been planted therein by the State; provided, that the legislature may by statute, provide for the season when and the conditions under which the different species of fish may be taken.

In combination with California Fish and Game Code Section 5937, which provides that owners of dams must preserve fish populations downstream in "good condition", preservation of this right logically should be construed as an important aspect of the public trust responsibilities of government. It retains meaning as a right only when there exist sufficient fish to catch sustainably.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

- Determining how to provide sufficient flows from the Sacramento and San Joaquin River's major tributaries to the Bay-Delta Estuary.
- Updating its 2006 Bay-Delta Water Quality Control Plan to include those new Sacramento and San Joaquin River flow and South Delta salinity objectives.
- Deciding whether to extend the water rights *permits* of the California State Water Project and the federal Central Valley Project, or instead *license* them at levels that represent reasonable and public trust protective water usage.
- Deciding whether and/or how to permit a "north Delta diversion"—a diversion that is now more familiarly known as the Peripheral Tunnels Project.
- Deciding whether and/or how to permit new reservoirs on the San Joaquin River and in the southwestern Sacramento Valley (and/or to raise existing dams to increase storage elsewhere) that would be added to the storage capacities of the Central Valley Project and the State Water Project.

As a regulatory agency, the State Water Resources Control Board is not known for making and holding to courageous or visionary decisions that protect beneficial uses of water throughout California. Their record of delay and incrementalism has contributed to the poor condition of the Bay Delta Estuary and the great rivers of its watershed, the great Sacramento and San Joaquin Rivers.

The State Water Resources Control Board has authority to make bold decisions and hold to them. (Cahill 2008)

The State Water Resources Control Board will need to balance protection of the public trust with other competing beneficial uses of water reliant on the Delta. The Board has already determined the flows that fish and other aquatic species need. (State Water Resources Control Board 2010: 114-123) In completing and implementing the Bay-Delta Plan, the Board's next step is to evaluate the feasibility of measures needed to protect public trust resources fully. (California Supreme Court 1983; Kibel 2011: 6) These steps will need to include: determination of flow needs of public trust resources, water rights reallocation, flow modification, benefit-cost analysis, and habitat restoration. In the process, key questions must be answered:

1. How does the State Water Resources Control Board intend to prioritize water use in terms of coequal goals, of public trust balancing? How does its long-established water rights priority system fit into this policy framework?
2. What does water supply reliability mean in an arid state where we have granted rights to far more water than actually exists? Should water supply reliability be conditioned upon specific requirements to maximize reclamation, reuse, conservation and development of alternative local sources of water?
3. Is the standard by which we measure water supply reliability the same for junior and senior appropriators? Do uses of water that require vast public subsidies have the same priority as uses that don't require subsidy of public funds? Are uses that internalize adverse impacts equal in priority to uses that externalize them?
4. Should the worth of water be confined only to its economic value in use? Or does water supply reliability apply to both public trust resource needs as well as consumptive uses (i.e., is legislation needed for better protection of public resources through water rights)?
5. Are statutory requirements to protect water quality and listed species equivalent to water supply reliability for lawns or surplus, subsidized, and non-food crops? Are food crops more



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

important than non-food commodities when it comes to allocating water? Does health and safety take precedence over certain agricultural uses of water?

6. Does efficient use of water have higher priority over wasteful and inefficient use? Is protection of the Bay-Delta Estuary as a “national treasure” and one of the world’s great estuaries more valuable to society than irrigating impaired soils, that by their nature when irrigated, discharge prodigious quantities of salt and toxic wastes back to our waterways and aquifers?

Answers to these questions are central to resolving California’s water problems.

The California Legislature consolidated the State of California’s water rights and water quality control responsibilities in the State Water Resources Control Board in 1967. Since that time, the Board has considerable authority to grapple with these questions and arrive at answers and solutions from them. The Board has authority to:

- Plan for water quality control.
- Receive, condition, and approve new water rights applications as permits.
- Regulate and license water rights permits specifying the point of diversion, diversion flows, place of use, and purpose of use for water.
- Investigate pre-1914 and riparian water rights to determine whether such claims to divert and use water are legal, including follow-up enforcement against illegal uses when determined (discussed below).
- Investigate and enforce the state’s prohibition of waste and unreasonable use and wasteful and unreasonable method of diversion of water under the California Constitution, Article X, Section 2.
- Protect the public trust. As an agency of the state, the Board is charged with ensuring the state of California carries out its fiduciary responsibility to protect air, running water, the sea, and the seashore, “these things that are common to all,” as stated originally in Roman law (the Institutes of Justinian).

California’s constitution promises water rights only up to what is a reasonable use. No one has a right in California to use water unreasonably, not even the federal government. (California Constitution, Article X, Section 2) The Public Trust Doctrine provides that no one has a vested right to appropriate water in a manner harmful to the interests protected by the public trust. (*National Audubon Society v. Superior Court*, 33 Cal.3d 419, 189 Cal.Rptr 346, 658 P.2d 709) And the dictionary definition of usufructuary rights, of which both riparian and appropriative water rights are examples, indicates that a fundamental principle of usufruct is that it connotes only a right to *use* a resource like water, not to waste or use it unreasonably. The State Water Resources Control Board, in taking up all of the key questions we outline above, will be deciding whether and how California’s abundant legal authorities apply to the Bay-Delta Estuary’s Central Valley watershed.

## **The Public Trust and Proportional Delta Inflows**

In mid-2009, the State Water Resources Control Board updated its review of the Water Quality Control Plan which its Water Right Decision 1641 (D-1641) implements. The Board took the position that to change its water quality and flow criteria it needed more scientific information about flows reasonably needed to protect fish and wildlife beneficial uses (State Water Resources Control Board, 2009: 17). Its impetus to consider making changes at that time included pronounced fisheries declines among both open water resident and migratory fish, and the still-unfolding impacts of climate change and its impacts on the Bay-Delta estuarine system (State Water

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

Resources Control Board, 2009: 9). The California Department of Fish and Game sought to build a salmon survival model to assist the Board's need for additional information. (California Department of Fish and Game 2010)

Later in 2009, the California Legislature directed the State Water Resources Control Board to prepare a report on Delta flow criteria that would "develop new flow criteria for the Delta ecosystem necessary to protect public trust resources" and in so doing "use the best available scientific information." The Legislature directed the Board to gather the information as part of an "informational proceeding" rather than through an evidentiary hearing. And the Legislature charged the Board with including volume, quality and timing of water necessary for the Delta ecosystem under different conditions (California Water Code: Section 85086(c)).

The Board produced its Delta flow criteria report after taking detailed testimony on the best available science for key fish species and ecosystems. The report identified a set of broad flow regimes for upstream tributaries providing inflow to the Bay-Delta Estuary that fish need to survive and recover. They represent the Board's consideration of the best available fishery and hydrologic science it considered during 2010 addressing the question: what flows do fish need? The Board confirms this when it stated in a footnote, "...the flow criteria developed in this proceeding are intended to halt population decline and increase populations of certain species," and acknowledged that, "Recent Delta flows are insufficient to support native Delta fishes for today's habitats....Flow and physical habitat interact in many ways, but they are not interchangeable." (State Water Resources Control Board 2010: 5, 120)

The Board states that the flow criteria "must be considered" in context:

- The flow criteria do not consider any balancing of public trust resource protection with public interest needs for water.
- The State Water Board does not intend that the criteria should supersede requirements for health and safety such as the need to manage water for flood control.
- There is sufficient scientific information to support increased flows to protect public trust resources; ***while there is uncertainty regarding specific numeric criteria, scientific certainty is not the standard for agency decision making.*** (State Water Resources Control Board 2010: 4; emphasis added)

The Board's flow determinations are:

- 75 percent of unimpaired Delta outflow from January through June.
- 75 percent of unimpaired Sacramento River inflow from November through June.
- 60 percent of unimpaired San Joaquin River inflow from February through June.
- Increased fall Delta outflow in wet and above normal years.
- Fall pulse flows on the Sacramento and San Joaquin Rivers to stimulate migrating fish.
- Flow criteria in the Delta interior to help protect fish from mortality in the central and southern Delta caused by operations of the state and federal water export pumps.

In essence, these flow determinations represent the Board's answer to the question, "what flows do fish need in the Central Valley watershed and the Bay-Delta Estuary?" The State Water Resources Control Board's 2010 Delta flow criteria report acknowledged that protective Delta outflows start with protective tributary inflows to the Delta. The Board's Delta inflow criteria rely on a percentage of unimpaired flow measure, which enables the flow criteria on the Sacramento and San Joaquin rivers to more closely mimic their natural hydrographs than now occurs.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

For the San Joaquin River, the State Water Resources Control Board approved its determination that 60 percent of unimpaired flow from February through June for the river basin would protect juvenile Chinook salmon during their peak emigration period. For the Sacramento River, the Board adopted the criterion of 75 percent of unimpaired flow from November through June. (This is because numerous runs of migratory salmon use the Sacramento River Basin for more of the year.) These constrained periods would also benefit the rearing period of juvenile salmon in the basin's major tributaries upstream. The Board also adopted in that report (2010) a fall season Delta inflow criterion calling for an average flow of 3,600 cubic feet per second for 10 days sometime during late October.

Nearly all scientists testifying to the Board in March 2010 agreed that mimicking the natural hydrograph (in shape if not in magnitude and volume of flow) is necessary to improve conditions for native fish species, and to counter invasive species in the Delta. Existing Board water quality and flow objectives intended to protect fish and wildlife beneficial uses in the south Delta are not working, as shown in abundant evidence presented to the Board at its hearings for the Delta Flow Criteria report. The Board includes much of that data in its report. (State Water Resources Control Board 2010) C-WIN provide a brief evaluation of the Vernalis Adaptive Management Plan to supplement this record of failure in Appendix A to this testimony.

In August 2010, the State Water Board approved these currently nonbinding Delta inflow determinations for the Sacramento and San Joaquin rivers. (State Water Resources Control Board 2010: 114-123) The State Water Resources Control Board observed that using such flow criteria would mean that "to achieve the attributes of a natural hydrograph, the criteria are advanced as a percentage of unimpaired flow on a 14-day average, *to be achieved on a proportional basis from the tributaries to the San Joaquin River.*" (State Water Resources Control Board, 2010: 120, emphasis added) The Board makes an important point that mimicking natural hydrograph and improving prospects for species recovery depends on achieving proportional flow allocations from all the major tributaries. Proportional tributary contributions would be needed to implement the Board's broader Delta inflow criteria. The Board will need to answer key questions including: what should those proportions be, how should responsibility for them be assigned, and who will be responsible for providing them? And: when will the upper San Joaquin River be included by the Board in making these determinations? (Right now, the Board excludes the upper San Joaquin River from its Bay-Delta Estuary planning deliberations. C-WIN evaluates the Board's stance in Appendix B.)

The question for the Board is how to do proportional flows *legally*. Proportional tributary contributions from Delta inflow are not new. In 1992, the California Department of Fish and Game proposed a method to identify tributary contributions to Delta inflows based on the pro rata share of unimpaired runoff each tributary generates to the Delta, as identified in the California Department of Water Resource's Bulletin 120 each year (California Department of Fish and Game, 1992). Other allocation methods could be devised as well, such as one based on reservoir storage on these same tributaries. The State Water Board in its Draft Water Right Decision 1630 presented such a method, but which excluded contributions from the San Joaquin River above Mendota Pool (State Water Resources Control Board, 1992: Tables IV and V).

Proportional tributary contributions needed to fulfill Delta inflow determinations from the Trinity River, and the major tributaries of the Sacramento and San Joaquin River Basins will require changes to the water rights of major water users in these Basins. The State Water Resources Control Board has authority over water rights to reallocate water usage and ensure compliance with the Board's Delta inflow objectives.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

## **Paper Water Means Boundary Disputes and Clouded Titles**

Property is often legally conceived as a bundle of rights representing “investment-backed expectations” of a future stream of benefits accruing to its owner, usually in the form of money. Water rights are a form of property, conveying to their owners rights to use water from a stream. Unlike real property in land, however, we have a situation in which far more in rights to use water have been granted by the state or claimed by right holders than Nature and reality actually provide.

California’s modern water code and its body of water rights case law is the result of more than a hundred and sixty years of legislation and legal precedent. Riparian water rights are the most paramount rights, followed by pre-1914 appropriative rights and, lastly, post-1914 appropriative rights, as determined by the seniority requirements of first-in-time-and-use.

But despite this accumulated legal tradition, human promises of water exceed Nature’s provisions. A shorthand description of this condition is “paper water.” The paper water problem in the area of water and rivers in California has close analogies in concepts like “clouded title,” and “boundary dispute” for a piece of real property (say, a house, or a plot of land) that has more than one owner claiming the same piece or portion of ground. Typically, boundary disputes are resolved by one or more disputants engaging the services of a surveyor to establish where the boundary is actually located. From there, the owners have a common set of facts on which they may agree to resolve their boundary dispute.

“Clouded title” has relevance here as well. A clouded title means the ownership of a title in water has some defect or potential defect arising from a competing claim for the same source of water.

One of the earliest recognitions of the problem of paper water in California occurred over a century ago and helps illustrate the clouded condition of paper water. In 1900, Frank Soulé, a professor of civil engineering at the University of California, was retained by the US Department of Agriculture’s Office of Irrigation Investigations to study water rights claims in the San Joaquin River basin. Soulé found that the San Joaquin River’s average winter and spring months’ flows were approximately 5,000 to 6,000 cubic feet per second. In drier late summer and fall months, flows could get as low as 150 cubic feet per second. Soulé researched water rights claims to all tributaries of the San Joaquin River watershed to see how they matched up with flows in the river. Actual flows from the 1895-1909 period averaged about 2.02 million acre-feet, according to state records. (State Water Resources Board 1951: Table 62) He visited the recorders’ offices for Stanislaus, Merced, and Fresno counties and itemized 315 claims to San Joaquin River waters totaling 36,571,471 miners inches of flow (there are 50 miners inches to a cubic foot per second). This converts to 731,429 cubic feet per second. Stretched out over a year (Soulé did not specify the seasons for which the claims were made), this translated into an annual claim of water rights of 529.9 million acre-feet of water, over 260 times greater than average flow of the San Joaquin River in that period. For an eight-month irrigation season of about 246 days, such flows would amount to 356.9 million acre-feet, nearly 180 times greater than San Joaquin River flows. These, Soulé contended, were the “definite claims,” ones that had well-defined diversion points and amounts claimed. Six separate individuals claimed “all the water flowing in the San Joaquin River,” a definite claim, if exaggerated. His summary for the San Joaquin did not include claims to the Fresno and Chowchilla rivers, which are much smaller watersheds, but the grandiosity continued there. On the Fresno River, some 670,799 miner’s inches were the subject of 50 claims (about 13,416 cubic feet per second or 9.7 million acre-feet a year), and on the Chowchilla just 14 claims aggregated to 31,008 cubic feet per second (or about 22.5 million acre-feet annually). (Soulé 1901: 222, 232)

Clouded titles in water have been allowed to fester since before Professor Soulé began studying the problem in 1900. Failure by the State of California to quiet titles to water since assuming authority

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

for appropriative water rights in 1914 contributes untold expectations for benefit streams that fuel controversy in California water resources planning and development ever since.

C-WIN is not a lone contemporary voice on the problem of paper water. In September 2008, State Water Resources Control Board staff informed the Delta Vision Blue Ribbon Task Force about water rights, use, and flows in the Delta watershed. It stated in part:

- The “total face value of the approximately 6,300 active water right permits and licenses within the Delta managed by the State Water Board, including the already assigned portion of state filings, is approximately 245 million AFA [acre-feet annually].” Our organizations note that this 245 million acre-feet of face value in water rights was permitted by the Board and its predecessors in the Central Valley watershed (including imports from watersheds like that of the Trinity River). (State Water Resources Control Board 2008)
- Face value “does not include pre-1914 and riparian water rights.” Riparian water rights, in the absence of some form of watershed adjudication, are usually unquantified but nonetheless require real, wet water. (State Water Resources Control Board 2008) And,
- That “the total face value of the unassigned portion of state filings for consumptive use (excluding state filings for the beneficial use of power) within the Delta watershed is approximately 60 million [acre-feet annually].” These are claims the State has filed to reserve water for further expansion of the State Water Project. (State Water Resources Control Board 2008; see also Appendix C.)

Other matters exacerbate the paper water problem:

- The SWRCB does not know how much water is actually used (and by whom) since state law has yet to require full accounting of either surface or ground water use.
- The SWRCB does not know the extent of paramount riparian or senior pre-1914 water rights either.
- Climate change is likely to alter the timing and reduce the volume of runoff into California’s rim dams and overall state and federal water systems. (Knowles and Cayan 2002) It is also likely to decrease natural groundwater recharge as well, which would further reduce runoff volumes where river reaches benefit from groundwater inflows.
- Increased cold water pools and groundwater support from gaining streams will be needed to maintain water temperatures below rim dams according to estimates by the SWRCB and Department of Fish and Game of the increased inflow and outflow necessary to protect rivers and the Delta public trust resources. (California Department of Fish and Game 2010: 51, Table 5)

Given these constraints, the obligation to achieve a public trust balancing of water supply reliability with fish and ecosystem survival cannot rest on maintenance of existing levels of supply from either Delta exports or the rim dams on all major Central Valley tributaries in the Delta watershed. The State Water Resources Control Board must use its water rights authority in the service of meeting these water quality challenges on behalf of public trust resources.

The Delta Watermaster acknowledges the problem of paper water in a recent report on the State Water Resources Control Board’s role in the Delta Stewardship Council’s Delta Plan process (Wilson 2011). He expresses concern, however, that “the face value of water rights is not a sufficient

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

measure of water that can be used to determine the over-allocation of water in the [Delta] watershed." He cites four main reasons for his concern:

- The face value of many water rights are for nonconsumptive uses, such as hydropower.
  - **C-WIN Response:** As much as possible, water availability analysis should factor out water rights claims that are primarily devoted to nonconsumptive uses and hydropower generation in particular. C-WIN's analysis factors out all single-purpose hydropower generation water rights claims, whether pre- or post-1914. Where multiple purpose of use claims include hydropower generation, we assume these rights are still primarily consumptive use claims, especially when irrigation is one of the other purposes of use for which claims are made. Hydropower generation is considered incidental to the other consumptive uses.
- The face value represents a maximum possible water diversion, which is far greater than what is actually used;
  - **C-WIN Response:** We agree that face value often represents a maximum possible diversion (and/or storage amount). We also agree that it may be far greater than what is actually used in many cases. But C-WIN's review of water right claims shows that some rivers' claims far exceed maximum unimpaired flows and even reservoir capacity on that river. (The Trinity River is a good example of this.) This is less a criticism of face value than an acknowledgement of paper water by the Delta Watermaster. Nor does it justify continuation of the practice by the State Water Resources Control Board. Since the maximum possible flow (and use) can occur only relatively rarely in California's hydrology, C-WIN suggests that this extra increment of claims be eliminated because it will occur in the future with even less frequency than now occurs. Reliable rights are only meaningful when they can be exercised with relative frequency.
- Permit/license terms, such as those for protection of instream uses, further reduce below the face value the amount of water that can be diverted;
  - **C-WIN Response:** The State Water Resources Control Board needs to continue having some standard method for quantifying the value of water rights as property. This is the only way that increments of title to water as property can be described and titles cleared or quieted in the event of dispute. Moreover, quantified water rights are the only way to conduct reality-based water resources planning and development. This extends to employing a standard method for quantifying and measuring instream flows that benefit public trust resources. If the Board and Delta Watermaster are to enforce instream flows, they must quantify instream flow commitments and ensure that they are fulfilled *prior* to the exercise of permitted or licensed water rights claims.
- Water, when applied, is typically not consumed up to the full face value and the same water (return flow) is often used multiple times as it runs downstream.
  - **C-WIN Response:** While C-WIN acknowledges the reality of return flow in diversion of water for consumptive irrigation uses, there is no consistently available data that measures the volume and occurrence of return flow to rivers. Some estimates, both recent (California Department of Water Resources 2005: water balances for Sacramento and San Joaquin River Basins) and historical (Wiel 1928: 259) put return flow at between 60 and 65 percent of originally diverted volumes. Of course, the reality of return flow, however, means that river flow can decrease by as much as a third of diversion quantities each time it is applied; the more frequently water is diverted to consumptive use, the sooner surface flows are depleted in the immediate

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

river reach downstream. Return flows do not reach the river from which they were diverted instantaneously. Once diverted there occurs a time lag between the diversion and its application, and when water actually returns to the river, and even then, it may only reach the river in small increments, depending on the surface return flow and/or subsurface transmissivity getting back to the river. Meanwhile, the diverted water is gone from the river, thereby depleting its flow until some later time and lower location. If return flow is truly important to determining water availability and avoiding boundary disputes and clouded water titles, then California needs to invest in getting data from each watershed that quantifies the volume, timing, and duration of return flow, instead of ignoring it. (State Water Resources Control Board 1983: 9-10)

C-WIN's methodology recognizes each of these facets of "face value" or face amount of water rights. Unfortunately, the Delta Watermaster's remarks do not clarify whatever else it is that face value quantities in water rights are supposed to positively describe. If the quantities in water rights are not relevant to face value, then on what basis can separable, stable, and reliable rights to water use be analyzed and judged? The Watermaster acknowledges that "while actual water use may be only a fraction of the face value of water rights, the state's water supplies have been over-allocated in many areas."<sup>2</sup> (Delta Watermaster 2011b: 5) C-WIN shows in this testimony that it is possible to use the "data" of water rights in combination with data on flows and diversions to generate a consistent and meaningful picture of the problem of overallocation of water supplies and rights in the San Joaquin River Basin. Our water availability analysis illustrates the usefulness of having *some idea* of the magnitude of the paper water problem as compared with having *no idea*. All of California needs better data on all facets of the problem of paper water.

Tables 1 and 2 provide static (snapshot) views of total water rights in the Trinity, San Joaquin River and Sacramento River Basins. Total water rights reported in these two tables are for consumptive uses. Hydropower generation water rights have been excluded from this analysis.

In Table 1, average annual unimpaired flow for the San Joaquin River Basin is about 6.2 million acre-feet compared with 32.7 million acre-feet of consumptive water rights claims. The ratio of total claims to average unimpaired flow for the San Joaquin Basin is 5.3 acre-feet of consumptive use claims to every acre-foot of unimpaired flow in the Basin. About 49 percent of total consumptive water claims are by riparian and pre-1914 claimants, while 51 percent is by post-1914 claimants (that is, permits and licenses) regulated by the State Water Resources Control Board.

Specifically on the major tributaries of the San Joaquin River Basin, the ratio of total consumptive use claims to unimpaired flow ranges from about 5.6 on the Stanislaus to 6.3 acre-feet of claims to every unimpaired acre-foot of flow on the San Joaquin River (including valley floor and upper watershed claims).

In Table 2, average annual unimpaired flow in the Sacramento Valley (essentially, average Sacramento River inflow to the Delta) is about 21.6 million acre-feet. Consumptive water rights claims are estimated at about 120.6 million acre-feet. The ratio of total consumptive use claims to average unimpaired flow in the Sacramento River Basin is about 5.6 acre-feet of claims per acre-foot of unimpaired flow. Ratios of claims to unimpaired flow to range from 2.2 on the Yuba River to 6.8 on the Trinity River.

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<sup>2</sup> The Delta Watermaster suggests that for the Delta the process for determination of fully appropriated streams from the Water Code Sections 1205 through 1207 be used (p. 5).

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

<b>Table 1</b>					
<b>Consumptive (Irrigation) Water Rights Summary for San Joaquin River Basin</b>					
<b>Flows and Consumptive Water Rights</b>	<b>Thousands of Acre-Feet</b>				
	<b>Stanislaus River</b>	<b>Tuolumne River</b>	<b>Merced River</b>	<b>San Joaquin</b>	<b>Basin Total</b>
Average Annual Unimpaired Flow	957	1,851	956	1,728	6,181
Total Consumptive Water Right Claims	5,318	11,015	5,495	10,828	32,656
Ratio of Total Claims to Unimpaired Flow	5.56	5.95	5.75	6.27	5.28
Total Riparian & Pre-1914 Claims	1,401	8,185	4,525	2,014	16,125
Ratio of Riparian & Pre-1914 Claims to Unimpaired Flow	1.46	4.42	4.73	1.17	2.61
Total Post-1914 Claims	3,917	2,831	970	8,814	16,532
Ratio of Post-1914 Claims to Unimpaired Flow	4.09	1.53	1.01	5.10	2.67
Sources: State Water Resources Control Board (e-WRIMS); Public Record Act responses from various public water and irrigation districts; California Water Impact Network. Sum of major tributaries' unimpaired flow does not equal Valley total due to omission of other watersheds from the table.					

<b>Table 2</b>					
<b>Consumptive (Irrigation) Water Rights Summary for Trinity and Sacramento River Basins</b>					
<b>Flows and Consumptive Water Rights</b>	<b>Thousands of Acre-Feet</b>				
	<b>Trinity River</b>	<b>Feather River</b>	<b>Yuba River</b>	<b>American River</b>	<b>Sacramento Valley Total</b>
Average Annual Unimpaired Flow	1,283	4,370	2,287	2,621	21,619
Total Consumptive Water Right Claims	8,725	15,717	5,093	9,847	120,571
Ratio of Total Claims to Unimpaired Flow	6.80	3.60	2.23	3.76	5.58
Total Riparian & Pre-1914 Claims	134	3,855	92	286	47,883
Ratio of Riparian & Pre-1914 Claims to Unimpaired Flow	0.10	0.88	0.04	0.11	2.21
Total Post-1914 Claims	8,591	11,863	3,596	9,561	72,688
Ratio of Post-1914 Claims to Unimpaired Flow	6.70	2.71	1.57	3.65	3.36
Sources: California Department of Water Resources, 2007; State Water Resources Control Board (e-WRIMS); Public Record Act responses from various public water and irrigation districts; California Water Impact Network. Sum of major tributaries' unimpaired flow does not equal Valley total due to omission of other watersheds from the table. Trinity River is included because a large portion of its runoff is exported to the Sacramento River via federal Central Valley Project facilities.					



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

On a basin-wide basis, riparian and pre-1914 water claims account for about 40 percent of total consumptive use claims of 120.7 million acre-feet, and post-1914 claims (permits and licenses) in the Sacramento River Basin amount to about 60 percent of total consumptive use claims.

The largest water claims on Sacramento River Basin tributaries belong to the Feather River and the American River. The mainstem Sacramento (which is incorporated into the total for the Valley) includes the Pit and McCloud rivers and numerous small creeks that enter it from the east and west. C-WIN estimate that the largest component of pre-1914 water rights claims is held by the Glenn-Colusa Irrigation District. This District claims 26 million acre-feet in rights to divert directly from the Sacramento, as well as another 12 million acre-feet in rights from west side creeks.

On the Trinity River, the US Bureau of Reclamation is a significant claimant of post-1914 water rights, and given the small amount of riparian and pre-1914 water rights claims on the Trinity, the Bureau's Trinity River rights are reliable, as conditioned and limited by the Trinity River Record of Decision. (US Department of the Interior 2000) The Trinity's ratio of total consumptive claims to average unimpaired flow is 6.8 acre-feet of claims to every acre-foot of unimpaired flow.

There is another, more dynamic approach that we also include in this testimony to characterize excess claims to water use relative to flows. This planning-level analysis of water availability incorporates into the model hydrologic variability, instream flow requirements and publicly available water rights priorities on the divertable flows that remain in the system.

## **Applying Water Availability Analysis**

In Tables 3A and 3B and accompanying charts, we present results of applying both a diversion cap (derived from the State Board's 2010 Delta flow determinations) and the water rights priority system in the manner that the State Water Resources Control Board is legally authorized to proceed. The unimpaired flow hydrology for this analysis was obtained from the California Department of Water Resources (2007). This analysis proceeds from the basic water rights premises that:

- 1) Instream flows needed to meet water quality and flow objectives have top priority.
- 2) When applying water rights, riparian rights are paramount, followed by—
- 3) Pre-1914 water rights claim water based on seniority date, followed by—
- 4) Any water left over is provided to junior water rights holders, in order of priority date (whether pre-1914 rights or post-1914 permits and licenses).

Detailed model results, water rights, and flow data employed in the analysis are found in Appendix D. Assumptions embedded in the method are itemized in Appendix E of this report.

To apply the water rights priority system in the context of providing new Delta inflows from the major tributaries, C-WIN's analysis builds in a range of flows from the 10<sup>th</sup> through 90<sup>th</sup> percentiles of the 82-year unimpaired flow hydrology available from the California Department of Water Resources (2007). 25<sup>th</sup>, 50<sup>th</sup> (median), and 75<sup>th</sup> percentile (quartile) flows are also considered. C-WIN's analysis summarizes total regulated period unimpaired flow, the Delta inflow contribution, and calculates a "diversion cap." (See Appendices D.1, D.2, and E.)

Water rights priorities are then assigned to allocate the diversion cap flows for the regulation period to paramount riparian and senior water right holders first. Detailed tables of our model results are provided in Appendix D.1 for the Trinity and the major Sacramento and San Joaquin River Basin tributaries. On the major tributaries, there are generally few significant water rights holders, and relatively small blocs of riparians may be known and allocated flows prior to pre-1914

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

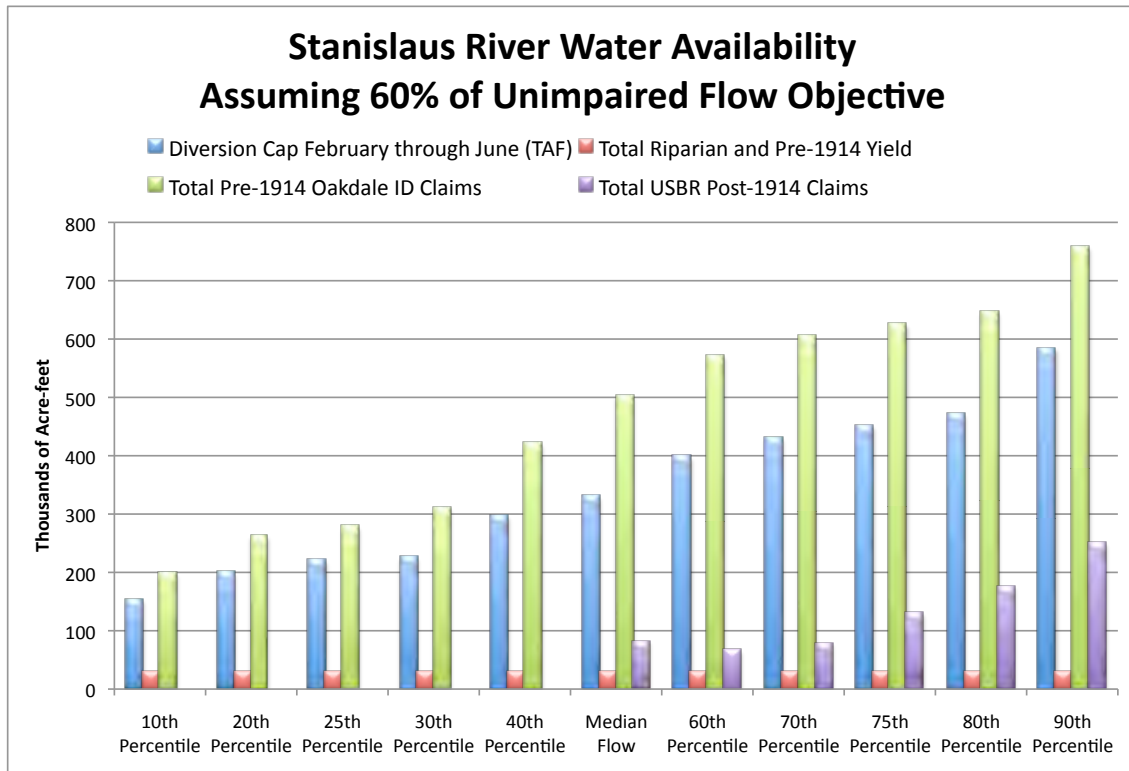
<b>Table 3A</b>			
<b>Summary of Water Availability Analysis Results Incorporating Water Rights Claims for Major Tributaries of the San Joaquin River Basin</b>			
<b>River/ Instream Flow Objective</b>	<b>Annual Total</b>		
	<b>Riparians and Senior Pre-1914 Right Holders</b>	<b>Major Water Right Claimants</b>	<b>Other Junior Major Claimants</b>
<b>Stanislaus</b>  40% Diversion Cap	<b>Various, including Tuolumne Utilities District</b>  29 TAF in all percentile flows.	<b>Oakdale &amp; South San Joaquin Irrigation Districts</b>  198 to 758 TAF in all percentile flows.	<b>US Bureau of Reclamation</b>  81 to 250 TAF in the 50 <sup>th</sup> to 90 <sup>th</sup> percentile flows.
<b>Tuolumne</b>  40% Diversion Cap	<b>Various, including Tuolumne Utilities District</b>  23 TAF across all percentile flows.	<b>Turlock Irrigation District, Modesto Irrigation District</b>  408 to 1,662 TAF across all percentile flows.	<b>City &amp; County of San Francisco</b>  95 TAF in only the 90th percentile flows.
<b>Merced</b>  40% Diversion Cap	<b>Various, including Gallo interests</b>  218 to 283 TAF across all percentile flows.	<b>Merced Irrigation District</b>  5 to 594 TAF from 40th to 90th percentile flows, about 14% of all claims.	<b>Not applicable</b>  Not applicable
<b>San Joaquin</b>  40% Diversion Cap	<b>Below Friant Dam, and along Fresno Slough</b>  172 TAF in all percentile flows.	<b>San Joaquin River Exchange Contractors</b>  248 to 817 TAF in all percentile flows.	<b>US Bureau of Reclamation</b>  89 to 413 TAF in 75th to 90th percentile flows.
Sources: California Department of Water Resources, 2007; State Water Resources Control Board, 2010, 2012; other primary and secondary sources compiled by the California Water Impact Network. See Appendix D for details of data and supporting model results.			

right holders. Pre-1914 water right claims tend to comprise the majority, or in most cases exceed the unimpaired flows in most (and in some cases, all) decile flows reported in the analysis.

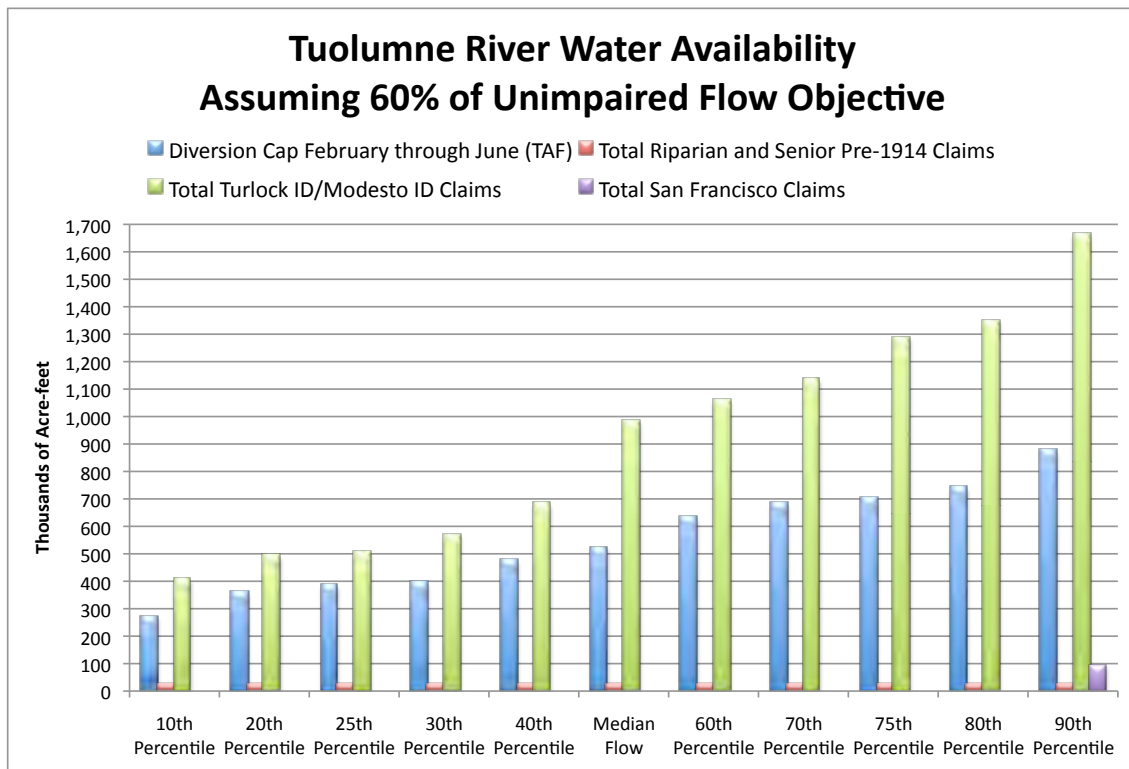
**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

<b>Table 3B</b>			
<b>Summary of Water Availability Analysis Results Incorporating Water Rights Claims for the Trinity River and the Major Tributaries of the Sacramento River Basin</b>			
<b>River/ Instream Flow Objective</b>	<b>Annual Total</b>		
	<b>Riparians and Senior Pre-1914 Right Holders</b>	<b>Major Water Right Claimants</b>	<b>Other Junior Major Claimants</b>
<b>Trinity</b>	<b>Various, small claimants</b>	<b>US Bureau of Reclamation</b>	<b>Not applicable</b>
25% Diversion Cap	134 TAF in all percentile flows.	77 to 454 TAF across all percentile flows.	Not applicable.
<b>Sacramento River above Feather River Confluence</b>	<b>Various, including Anderson-Cottonwood ID and Glenn Colusa ID</b>	<b>Early Post-1914 to early 1927 claimants</b>	<b>CVP and Feather River Project Filings from 1927 through 1961</b>
25% Diversion Cap	2,094 to 5,983 TAF ranging across all percentile flows.	0 TAF across range of all percentile flows.	0 TAF across range of all percentile flows.
<b>Feather River</b>	<b>Western Canal WD and Joint Water Districts, adjudication decrees</b>	<b>South Feather and Thermalito 1920s Rights</b>	<b>DWR 1927, 1951, and 1956 Claims</b>
25% Diversion Cap	729 to 1,972 TAF ranging across all percentile flows.	4 to 34 TAF from 20 <sup>th</sup> to 90 <sup>th</sup> percentile flows.	7 to 236 TAF in all percentile flows.
<b>Yuba River</b>	<b>Various, including Nevada ID, City of Nevada City</b>	<b>Nevada ID and Yuba Co WD 1920s Rights</b>	<b>Yuba County Water Agency 1927 Claims</b>
25% Diversion Cap	258 to 1,004 TAF ranging across all percentile flows.	10 to 12 TAF only at 25 <sup>th</sup> to 80 <sup>th</sup> percentile flows.	20 to 81 TAF among 50 <sup>th</sup> to 80 <sup>th</sup> percentile flows.
<b>Bear River</b>	<b>Various, including Nevada ID</b>	<b>Camp Far West and Nevada ID Claims</b>	<b>South Sutter Water District Claims</b>
25% Diversion Cap	26 to 92 TAF ranging across all percentile flows.	1 to 54 TAF across all percentile flows.	4 to 9 TAF from 50 <sup>th</sup> to 90 <sup>th</sup> percentile flows.
<b>American River</b>	<b>Various, including San Juan Water District, Nevada ID and City of Sacramento Post-1914 Claims</b>	<b>Georgetown Divide PUD and Placer County Water Agency</b>	<b>US Bureau of Reclamation</b>
25% Diversion Cap	291 to 1,006 TAF ranging across all percentile flows.	8 to 183 TAF from 50 <sup>th</sup> from all percentile flows.	9 to 139 TAF in all percentile flows.
Sources: California Department of Water Resources 2007; State Water Resources Control Board 2010 and 2012; other primary and secondary sources compiled by the California Water Impact Network. See Appendix D for details of data and supporting model results.			

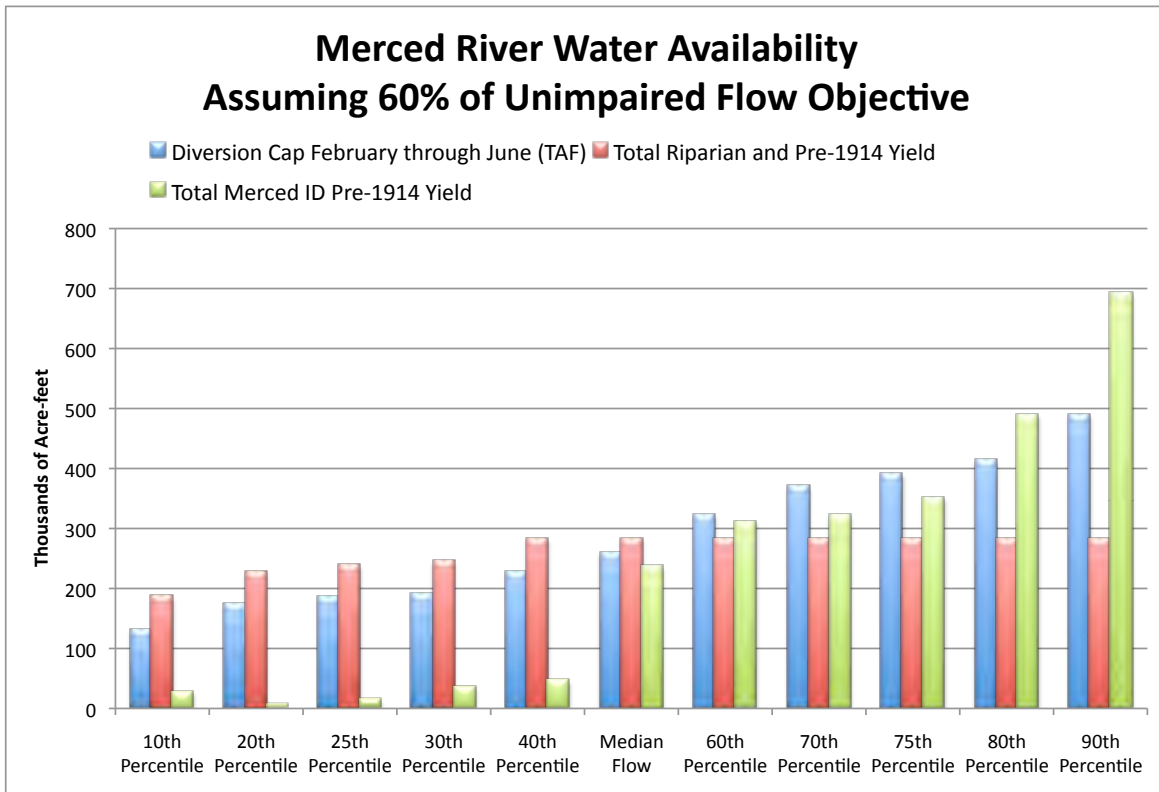
**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
 Submitted by California Water Impact Network,  
 California Sportfishing Protection Alliance, and AquAlliance



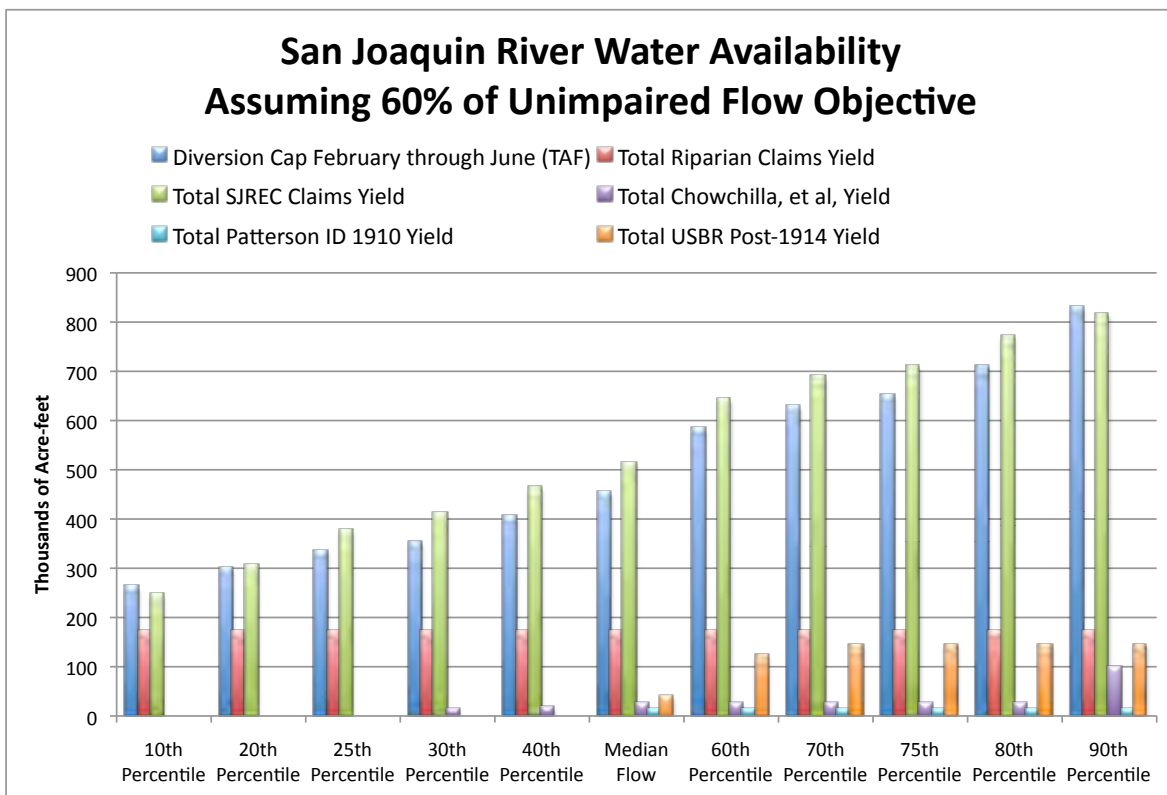
*Figure 1, above. Figure 2, below.*



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
 Submitted by California Water Impact Network,  
 California Sportfishing Protection Alliance, and AquAlliance



*Figure 3, above. Figure 4, below.*



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

### **Stanislaus River (Figure 1)**

**Implications:** Under strict application of both the 40 percent diversion cap and the water rights priority system in the Stanislaus River watershed, the US Bureau of Reclamation's water rights for New Melones Reservoir yields only a small fraction of Bureau claims in actual supplies.

### **Tuolumne River (Figure 2)**

**Implications:** Under strict application of both the 40 percent diversion cap and the water rights priority system, the City and County of San Francisco would have reliable rights to water only in the wettest 10 percent of flows.

### **Merced River (Figure 3)**

**Implications:** Under strict application of the water rights priority system to the 40 percent diversion cap, Merced Irrigation District's pre-1914 water rights exceed its post-1914 claims significantly, but are junior to a large amount of riparian and senior pre-1914 right holders.

### **San Joaquin River (Figure 4)**

**Implications:** Only the small riparian allocations along the upper San Joaquin River would have fully reliable flows. The Exchange Contractors would have full claims on flows about 30 percent of the time (at the 70<sup>th</sup> percentile flows and above). The Bureau of Reclamation would not receive allocations except in the wettest 30 percent of years at all, and would receive its full allocation no more than about 10 percent of the time.

### **Trinity River (Figure 5)**

**Implications:** Riparian and pre-1914 water right holders on this river system are few. The Bureau's post-1914 water rights to develop Trinity Reservoir and Lewiston Dam, and the hydropower complex linked to Keswick Dam along Clear Creek are the dominant water rights on the Trinity River. As noted in Table 2, however, the consumptive use rights alone appear to be quite excessive relative to Trinity River's unimpaired flow hydrology.<sup>3</sup>

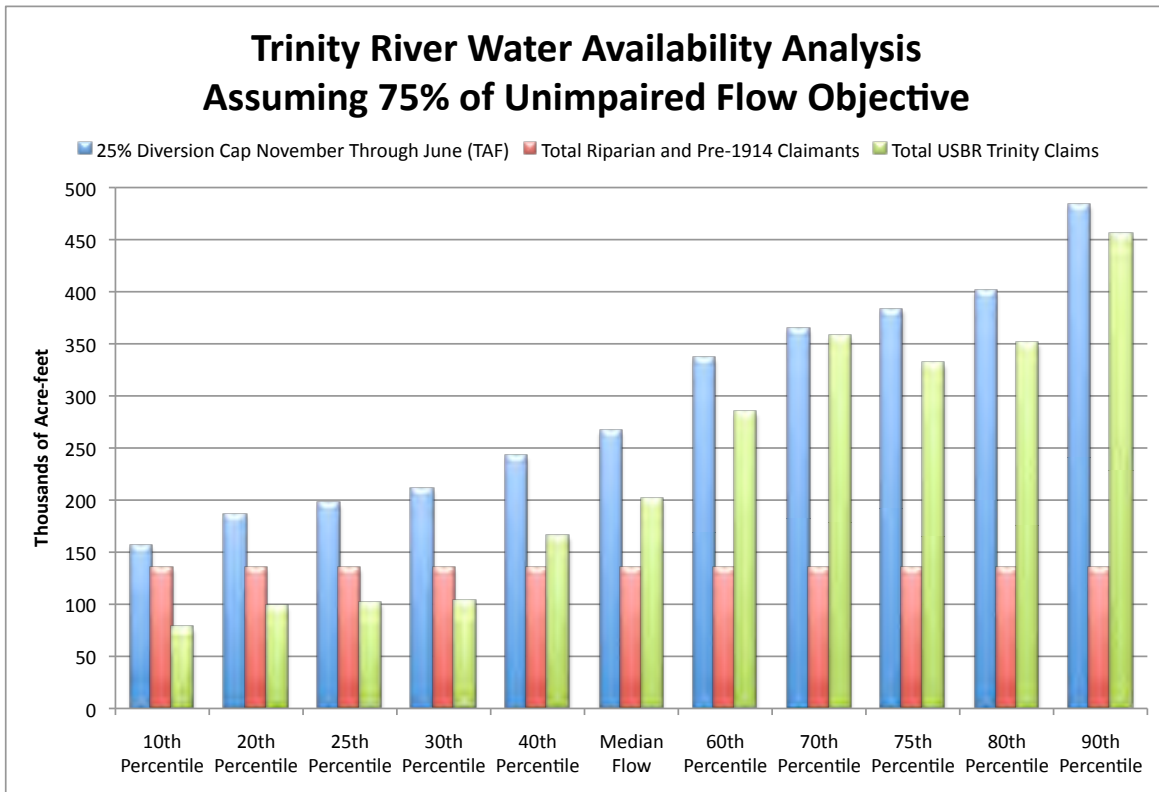
### **Sacramento River Above Feather River Confluence (Figure 6)**

**Implications:** Because of large pre-1914 water rights claims by Glenn-Colusa Irrigation District along the Sacramento River, no water would be available to the US Bureau of Reclamation, except from Trinity River exports. Strict application of this pattern of water rights claims would dramatically reduce water available for export from the Sacramento River Basin and potentially undermine the San Joaquin River Exchange Contract.

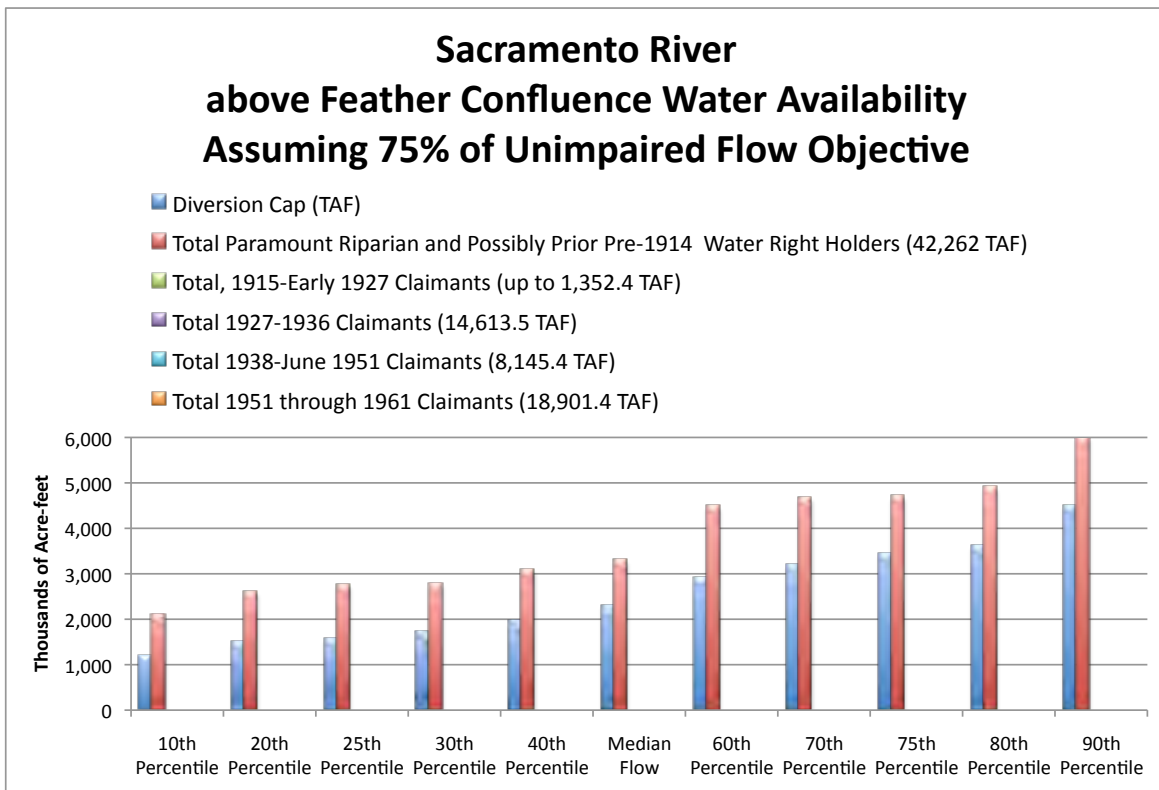
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<sup>3</sup> Our analysis applies to the Trinity the Board's 75 percent of unimpaired flow determination for November through June. This flow determination exceeds those of the 2000 Trinity Restoration Record of Decision. (US Department of the Interior 2000)

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
 Submitted by California Water Impact Network,  
 California Sportfishing Protection Alliance, and AquAlliance



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**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

### **Feather River (Figure 7)**

**Implications:** The Department of Water Resources' 1927, 1951, and 1956 water rights claims for the Feather River Project (now the State Water Project) would receive almost no water under a 25 percent diversion cap scenario. In drier years, even at relaxed diversion cap scenarios, DWR would receive only very small amounts. This is due to senior pre-1914 water rights claimants such as the Joint Water Districts<sup>4</sup> and Western Canal Water District, whose rights predate the cultivation of rice in the Butte County region, and were adjudicated in 1923. DWR's claims amount to about 10.4 million acre-feet (MAF) on the Feather River alone for consumptive uses.

### **Yuba River (Figure 8)**

**Implications:** Nevada Irrigation District and Yuba County Water District, through their pre-1914 claims and 1920s water rights claims, would have senior claims to Yuba River flows. Full operation of these claims would nearly eliminate Yuba County Water Agency diversions under a 25 percent diversion cap scenario.

### **Bear River (Figure 9)**

**Implications:** Because of senior water rights claims by Nevada Irrigation District and Camp Far West Irrigation District, South Sutter Water District would see its supplies reduced significantly relative to its claimed rights under a 25 percent diversion cap scenario.

### **American River (Figure 10)**

**Implications:** The US Bureau of Reclamation's Central Valley Project facilities along the American River would receive very little water supplies from operation of the water rights priority system under a 25 percent diversion cap, despite having claimed up to 5.35 million acre-feet.

## **Discussion**

Assuming that the State Water Board adopts the 75 percent unimpaired flow determination for the upstream tributaries of the Sacramento River Basin, the 60 percent of unimpaired flow determination for the San Joaquin River Basin, and that the water rights priority system is applied, it becomes evident that several significant water rights claimants that are junior in priority contribute dramatically to the problem of paper water: They have been promised water far in excess of flow conditions available to them in most years.

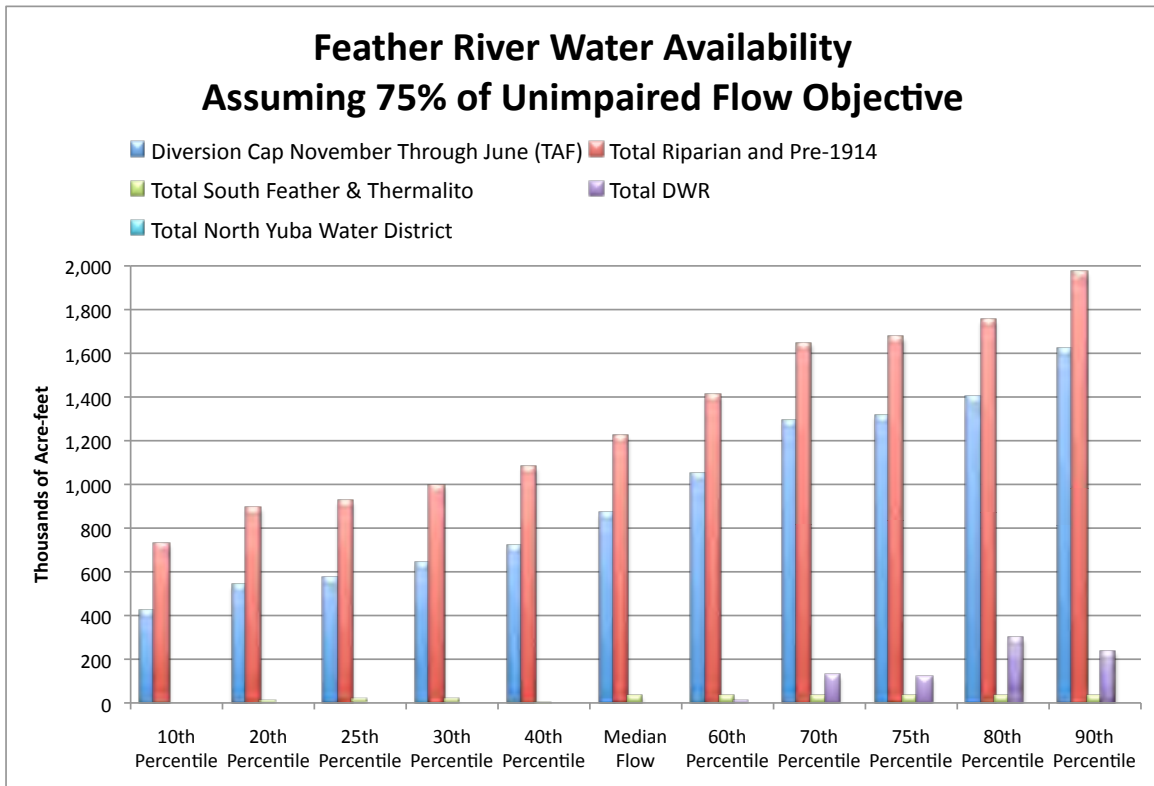
Table 4 summarizes the major water rights claimants whose titles to water in the Central Valley watershed tributaries should be considered clouded, whose property "boundaries" are in dispute.

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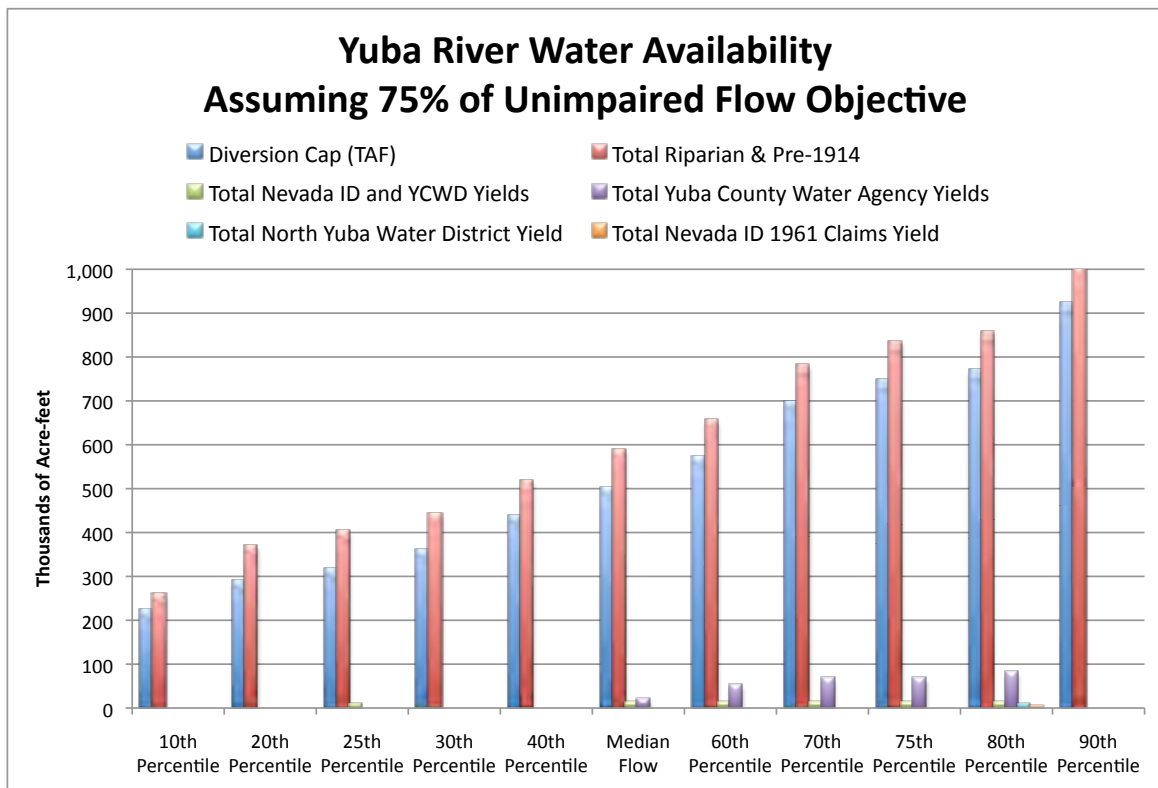
<sup>4</sup> The Joint Water Districts include Butte Water District, Biggs-West Gridley Water District, Richvale Irrigation District, and Sutter Extension Water District, the successors to pre-1914 water rights accumulated by the Sutter Butte Canal Company.



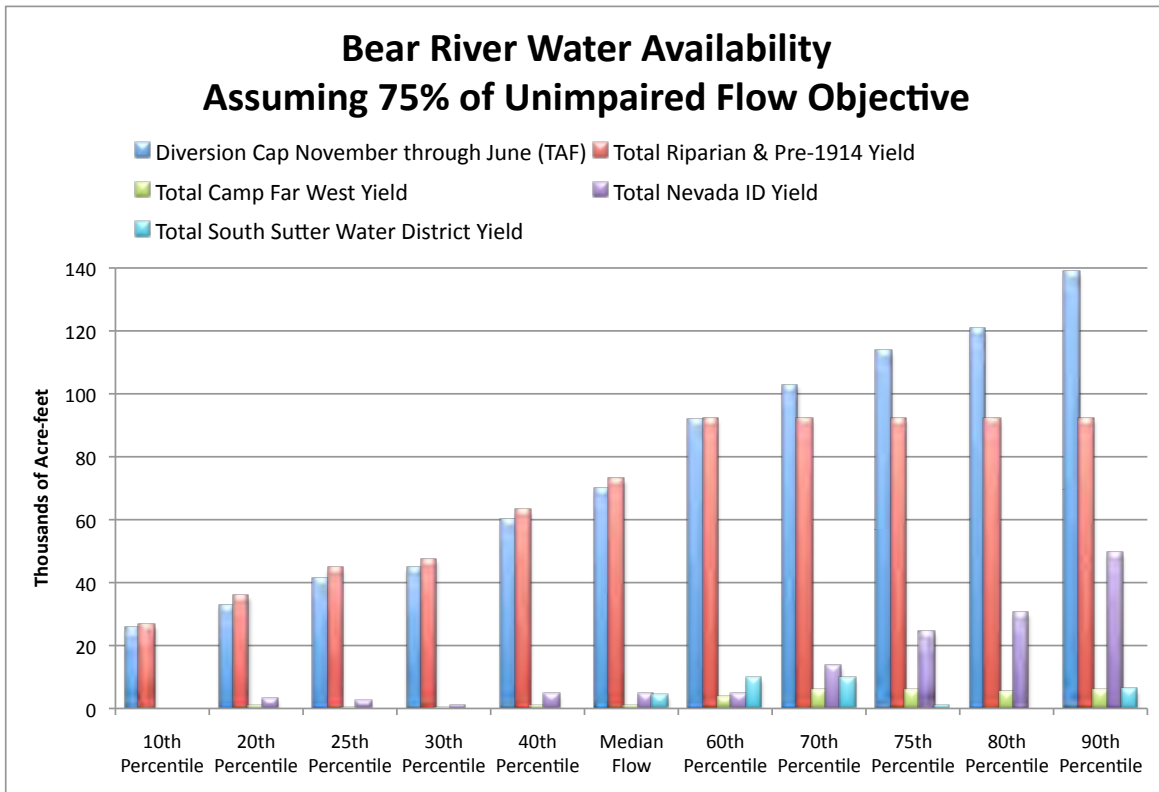
**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
 Submitted by California Water Impact Network,  
 California Sportfishing Protection Alliance, and AquAlliance



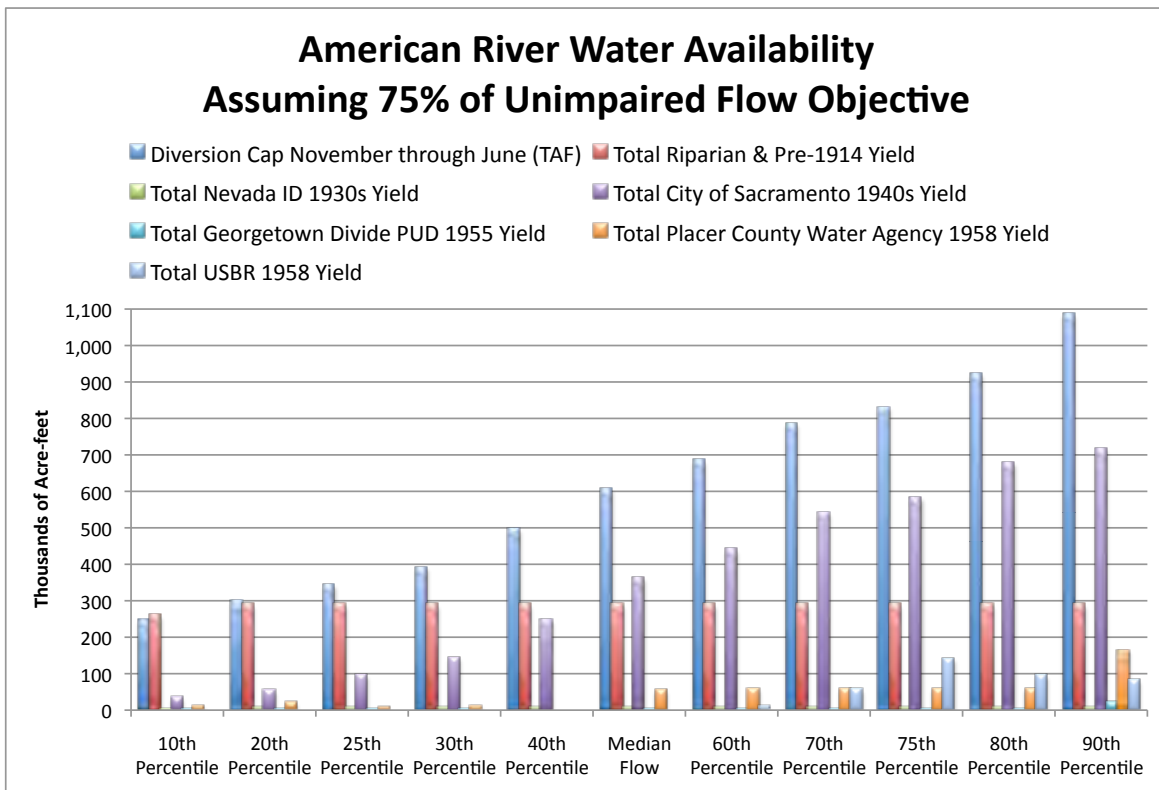
*Figure 7, above. Figure 8, below.*



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
 Submitted by California Water Impact Network,  
 California Sportfishing Protection Alliance, and AquAlliance



*Figure 9, above. Figure 10, below.*



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

<b>Table 4</b> <b>Summary of Watershed Consumptive Water Rights Claimants</b> <b>by Reliability (Based on Legal Priority) of Claims</b>		
<b>Watershed</b>	<b>Claimants with Highly Reliable Rights</b>	<b>Claimants with Potentially Clouded Titles to Water</b>
Stanislaus River	Various claimants covered by Stanislaus River decree of 1929; Oakdale ID, South San Joaquin ID	US Bureau of Reclamation (New Melones)
Tuolumne River	Tuolumne Utilities District, Turlock Irrigation District, Modesto Irrigation District	City and County of San Francisco (1901 through 1911 rights)
Merced River	Gallo, various riparian and pre-1914 parties to early Merced River decrees	Merced Irrigation District (post-1914 rights)
San Joaquin River	Paramount riparian claimants, San Joaquin River Exchange Contractors, Chowcilla WD, Tranquillity & James IDs, Patterson ID	US Bureau of Reclamation (post-1916 rights)
Trinity River	Various small riparian and pre-1914 claimants, US Bureau of Reclamation	US Bureau of Reclamation (has overstated water claims compared with actual basin hydrology)
Sacramento River (including west and east creeks, Pit and McCloud Rivers)	Various small riparian and pre-1914 claimants, claimants among adjudicated watersheds in Pit River region, Anderson-Cottonwood Irrigation District, Glenn-Colusa Irrigation District	US Bureau of Reclamation (Shasta Lake)
Feather River	Upper watershed adjudicated claimants, Joint Water Districts, Western Canal WD	California Department of Water Resources (Lake Oroville)
Yuba River	Browns Valley ID, Nevada ID, Yuba County WD	Yuba County Water Agency (1927 rights), Nevada ID (1930s rights), and North Yuba Water District (1958 rights)
Bear River	Nevada ID, Camp Far West ID	South Sutter Water District (1952 and 1981 rights)
American River	City of Folsom, San Juan WD, Georgetown Divide PUD, El Dorado ID, Nevada ID, Placer County Water Agency, City of Sacramento	US Bureau of Reclamation (Folsom Lake), Foresthill PUD
Sources: California Department of Water Resources; State Water Resources Control Board; California Water Impact Network.		

By adopting its public trust Delta inflow determinations as flow objectives in the Bay-Delta Plan for each major tributary, and applying water rights priorities—in that order—the State Water Resources Control Board can use its authority to eliminate paper water (water claims that do not have a basis in water rights law) in the Bay-Delta Estuary’s Central Valley watershed. The California Constitution reminds us that no one in California has a right to use or divert water wastefully or unreasonably. The state’s public trust responsibility requires protection of the waters of the state for the benefit of all beneficial users, not just water rights holders. The state’s water quality control planning obligations carry out this responsibility. It also helps the state meet its public trust

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

obligations as well. The doctrine of prior appropriation requires that senior water right holders be served before junior water right holders. The water quality control planning process and the water rights priority system on the major tributaries of the Sacramento and San Joaquin River Basins should be used as tools for eliminating paper water—that is, for quieting water titles, and ending trespasses and boundary disputes that compromise public trust resources—from the Bay-Delta Estuary’s Central Valley watershed.

## **Paths for Aligning Water Rights with All Other Beneficial Uses and River Flows**

We see three primary paths by which the State Water Resources Control Board can align water rights with all other beneficial uses and river flows:

- Water quality control plan implementation,
- Fully-appropriated streams declaration and Term 91, and
- Court adjudication.

***Water Quality Control Plan Implementation.*** The State Water Resources Control Board has approved a Delta inflow determination for the San Joaquin River at Vernalis of 60 percent of unimpaired flow during the February through June period. For the Sacramento the Board approved a 75 percent of unimpaired flow determination for the November through June period. In doing so, the Board would implicitly place a cap on total diversions for each major tributary of 40 percent of unimpaired flow for the San Joaquin River and 25 percent of unimpaired flow for the Sacramento River Basin. These objectives would result in instream flows that are substantially greater in most years than current instream flow requirements now provide. In our water availability analysis, we also apply the Sacramento River Basin 75 percent objective rather than the Trinity Record of Decision flow objectives to the water availability analysis for the Trinity River. (US Department of the Interior 2000: 12)

Key water rights holders in these basins possess riparian and pre-1914 water rights that exist prior to the regulatory powers of the State Water Resources Control Board. On the question of implementing water quality control plans and adhering to state water rights law, the issue has arisen of the Board’s jurisdiction over those water rights that the Board did not originally consent to.

Attorney Tim O’Laughlin, representing the San Joaquin River Group Authority (SJRG), has asked the State Water Resources Control Board to “identify the legal theory or approach it will use at the implementation proceeding in order to obtain the necessary flows to meet the additional flow requirements identified” in the Board’s flow studies. Without that legal theory or approach, O’Laughlin argues, the State Water Resources Control Board will be unable to complete economic or other impacts analysis in its Substitute Environmental Document on the San Joaquin River Flow and South Delta salinity objectives. He further contended in February 2011 that the Board is operating according to *some* kind of theory since it

blatantly **suggests** that additional flows will come from the Stanislaus, Tuolumne, and Merced Rivers. [State Water Resources Control Board 2011c, pp. 78, 81, and 85-89] This foreshadowing demonstrates that the SWRCB not only believes that, regardless of the Vernalis flow alternative eventually adopted, it will be able to obtain flow from all the tributaries, but that it intends to do so. That approach, however, completely ignores the existence of the water right priority system. (See, e.g., *Pleasant Valley Canal Company v. Borrer* (1998) 61 Cal.App.4<sup>th</sup> 742, 770; *City of*

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

*Barstow v. Mojave Water Agency* (2000) 23 Cal. 4<sup>th</sup> 1224, 1243; see also *El Dorado Irrigation District v. State Water Resources Control Board* (2006) 142 Cal. App.4<sup>th</sup> 937, 961). As the SJRGA has pointed out to the SWRCB on numerous occasions, any approach to allocating responsibility for new Vernalis flow requirements must incorporate the water rights priority system. That said, the SJRGA recognizes that strict application of the water right priority system does not produce straightforward results such that the water required to meet the selected Vernalis flow alternative would come from a particular waterway or tributary, or that such water would roughly be divided equally or proportionally among such waterways and tributaries. (O’Laughlin 2011a: 1-2; emphasis in original)

O’Laughlin, on behalf of SJRGA, asserts that the Board has no jurisdiction to regulate pre-1914 appropriative water rights or riparian rights, regardless of any legal theory the Board intends to use in the implementation phase. If responsibility for new Vernalis flow requirements is determined solely based on the water rights priority system, writes O’Laughlin, “junior water right holders will be required to reduce or completely cease their water use before senior appropriators will be required to reduce theirs” as required in California’s doctrine of prior appropriation. (O’Laughlin 2011a)

He wrote to the Board subsequently in June 2011 about its jurisdiction in the Bay-Delta proceedings. There he stated, “It now appears that the [Substitute Environmental Document] is being prepared solely on the basis of percentage of natural flow, without regard to the nature or priority of the water rights affected, and will therefore be the subject of immediate litigation.” (He is here apparently referring to the Board’s proposed use of a percentage of unimpaired flow as the basis for limiting diversions.) O’Laughlin also reiterated in this letter to the Board that it

does not have jurisdiction over pre-1914 appropriative water rights for any reason, including the implementation of water quality objectives adopted pursuant to the State Water Resources Control Board’s authority under Porter-Cologne. Given the prevalence of pre-1914 appropriative rights held in the San Joaquin River Basin, and the scope of the percentage of natural flow that the [Board] is considering, it is almost certain that there will be times and conditions where the [Board] will not be able to implement a percentage of natural flow. It is arbitrary and capricious for the [Board] to continue to consider a percentage of natural flow as one of its objectives without knowing how often, if ever, it will be able to require such percentages be met. (O’Laughlin 2011b)

O’Laughlin argues that the Board’s flow objective results may not be achievable if, for example, flow is 100 cfs and the Board applies a 60 percent instream flow criterion to this waterway while pre-1914 water right holders may claim 80 percent of the flow in the stream. In that case, the Board, contends O’Laughlin, “would not be able to obtain the full 60 percent flow it desired.” O’Laughlin contends that this not only renders the Delta flow criterion infeasible, it means that evaluation of criterion alternatives under the California Environmental Quality Act in the Substitute Environmental Document will also be infeasible and the SED thus inadequate.

Of course, contrary to the Racanelli decision, O’Laughlin elevates the water rights priority system to paramount status in California water and environmental law. It is plain from a review of state water case law that water rights priorities, while important, are not paramount considerations when the Board takes up the protection of beneficial uses of water. As Justice Racanelli stated, water quality control planning must concern itself with the regulation of *beneficial uses*, not water rights strictly speaking. Beneficial uses include, and go well beyond, water rights and their relative priorities. (See sidebar, page 26.) The Racanelli decision made clear that the State Water Resources Control Board has authority to implement its water quality control plan by regulating all beneficial uses. Adjusting quantities in water rights is within its authority.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

Moreover, the Board retains authority to regulate pre-1914 water rights under its constitutional authority to prohibit waste and unreasonable use of water. The Legislature provided in the California Water Code key sections that do not limit the Board's authority to investigate rivers and streams in the service of the state's constitutional provisions (emphases added).

*275. The department and board shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this state.*

...

1050. This division is hereby declared to be in furtherance of the policy contained in Section 2 of Article X of the California Constitution and in all respects for the welfare and benefit of the people of the state, for the improvement of their prosperity and their living conditions, and *the board and the department shall be regarded as performing a governmental function in carrying out the provisions of this division.*

1051. The board for the purpose of this division may:

(a) *Investigate all streams, stream systems, portions of stream systems, lakes, or other bodies of water.*

(b) Take testimony in regard to the rights to water or the use of water thereon or therein.

(c) *Ascertain whether or not water heretofore filed upon or attempted to be appropriated is appropriated under the laws of this State.*

...

1052. (a) *The diversion or use of water subject to this division other than as authorized in this division is a trespass.*

(b) Civil liability may be administratively imposed by the board pursuant to Section 1055 for a trespass as defined in this section in an amount not to exceed five hundred dollars (\$500) for each day in which the trespass occurs.

(c) The Attorney General, upon request of the board, shall institute in the superior court in and for any county wherein the diversion or use is threatened, is occurring, or has occurred appropriate action for the issuance of injunctive relief as may be warranted by way of temporary restraining order, preliminary injunction, or permanent injunction.

(d) Any person or entity committing a trespass as defined in this section may be liable for a sum not to exceed five hundred dollars (\$500) for each day in which the trespass occurs. The Attorney General, upon request of the board, shall petition the superior court to impose, assess, and recover any sums pursuant to this subdivision. In determining the appropriate amount, the court shall take into consideration all relevant circumstances, including, but not limited to, the

**Beneficial Uses Served in the Bay-Delta Water Quality Control Plan:**

- **Municipal and Domestic Supply**
- **Industrial Service Supply**
- **Industrial Process Supply**
- **Agricultural Supply**
- **Ground Water Recharge**
- **Navigation**
- **Water Contact Recreation**
- **Non-Contact Water Recreation**
- **Shellfish Harvesting**
- **Commercial and Sport Fishing**
- **Warm Freshwater Habitat**
- **Cold Freshwater Habitat**
- **Migration of Aquatic Organisms**
- **Spawning, Reproduction, and/or Early Development**
- **Estuarine Habitat**
- **Wildlife Habitat**
- **Rare, Threatened, or Endangered Species**

Source: State Water Resources Control Board 2006: 8-9.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

extent of harm caused by the violation, the nature and persistence of the violation, the length of time over which the violation occurs, and the corrective action, if any, taken by the violator.

(e) All funds recovered pursuant to this section shall be deposited in the Water Rights Fund established pursuant to Section 1550.

(f) The remedies prescribed in this section are cumulative and not alternative.

...

1825. It is the intent of the Legislature that *the state should take vigorous action* to enforce the terms and conditions of permits licenses, certifications, and registrations to appropriate water; to enforce state board orders and decisions, and *to prevent the unlawful diversion of water*.

...

2501. The board may determine, in the proceedings provided for in this chapter, all rights to water of a stream system whether based upon appropriation, riparian right, or other basis of right.

Nothing in these sections of the Water Code prevents the Board from investigating pre-1914 water rights and eliminating illegal diversions should they be found. Water Code Section 275, appears to extend this authority of the Board to determining whether any water use is wasteful or unreasonable, or any method of use, or method of diversion is wasteful or unreasonable.

These sections provided authority for the Board to investigate pre-1914 and riparian water rights in the Delta recently. In these investigations, the Board has issued water rights orders that in at least one instance adjusted the rights of a riparian water right holder. (Wilson 2012) Mr. O'Laughlin is surely aware of this authority. On behalf of the San Joaquin River Group Authority, his comments on the Board's 2008-2012 strategic work plan helped initiate the Delta water rights investigations in 2008. He cited California Water Code Section 1825 to support the San Joaquin River Group Authority's recommendation that the Board investigate Delta riparian and pre-1914 water rights. (San Joaquin River Group Authority 2008: 64)

When the Board moves to adjust diversion amounts in the Delta's major tributaries. The Board should apply a diversion cap during the regulated period applicable to each tributary (including the Upper San Joaquin River; see Appendix B) and then allocate diversions according to water rights priority. C-WIN analyzes operation of the water rights priority system in the following river profiles.

Our testimony analyzes water availability using water rights priorities as a way of identifying the legal method for allocating responsibility for Delta inflows that are fully protective of public trust resources in the Delta.

The Board announced in two notices (dated February 13, 2009, and April 1, 2011, the latter containing revisions to the earlier Notice) its intent to revise the Bay Delta Water Quality Control Plan of 2006. This plan traces its lineage to the 1995 Bay Delta Water Quality Control Plan and the Bay-Delta Accord. The San Joaquin River flow and South Delta salinity objective process is likely to be a step in the right direction away from these failed plans. The well-documented failures of this misguided loyalty include:

- Anadromous fishery declines throughout the Central Valley watershed of the Delta estuary.
- Declines of pelagic (open water) aquatic ecosystem regimes throughout the Delta
- Continued listing of endangered species, including salmon, steelhead, Delta smelt, longfin smelt, Sacramento splittail, and green sturgeon.
- Chronic violations from 2005 through 2009 of south Delta salinity objectives in both the Bay-Delta Water Quality Control Plan and Water Rights Decision 1641 that are intended to protect agricultural beneficial uses in this part of the Delta.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

- Historic record Delta pumped exports between 2000 and 2006, peaking at nearly 6.4 million acre-feet. (More recently, 2011 exports reached 6.7 million acre-feet.)

From the two NOPs, it appears the Board prepares to incorporate flow objectives for major tributaries of the San Joaquin River: the Stanislaus, the Tuolumne, and the Merced rivers. It appears to us the Board intends to require fair share flow contributions from each of these important rivers to flows of the mainstem San Joaquin as inflow to the Delta as measured at Vernalis. Our organizations welcome this prospect in concept, and support the Board's efforts toward this goal, despite legal, ecological, and engineering challenges ahead.

The 1986 Delta Water Cases decision (also named as the "Racanelli decision" for its author, presiding Justice John Racanelli of the Third District Court of Appeals in California) bears review because it defines the Board's water quality planning duties for the Delta and its watershed. (California Appeals Court, Third District 1986) When it comes to the Board's role in undertaking its duty to fulfill its water quality planning function, the Racanelli court stated:

In its *water quality* role of setting the level of water quality protection, the Board's task is not to protect water rights, but to protect 'beneficial uses.' The Board is obligated to adopt a water quality control plan consistent with the overall statewide interest in water quality [citation to California Water Code §13240] which will ensure 'the reasonable protection of *beneficial uses*' (§13241, emphasis added). Its legislated mission is to protect the 'quality of all the waters of the state...for use and enjoyment by the people of the state.' (§ 13000, 1<sup>st</sup> para., emphasis added.) (California Appeals Court, Third District 1986: 178)

Thus, protection of beneficial uses must be the Board's paramount goal in this process. Beneficial uses make up "all competing demands for water" which must receive Board attention during public trust balancing and analysis. Water rights are among the Board's implementation tools for achieving the protection of beneficial uses in California's Central Valley watershed and Delta estuary, not strictly ends in themselves in this context.

Justice Racanelli wrote that the State Water Resources Control Board has a dual role of regulating both water quality and adjudicating water rights. The Racanelli court stated:

In performing its dual role, including development of water quality objectives, the Board is directed to consider not only the availability of unappropriated water...but also *all* competing demands for water in determining what is a reasonable level of water quality protection. (California Appeals Court, Third District 1986: 179-180)

The Delta Water Cases came about because the Board construed its scope for water quality planning too narrowly, focusing on the major stakeholders in the Delta: the Bureau, the Department of Water Resources, and their respective contractors. The Board erred in doing so, the Racanelli court stated.

...the Board must consider 'past, present, and probable future beneficial uses of water'...as well as 'water quality conditions that could reasonably be achieved through the coordinated control of *all* factors which affect water quality in the area'. Unfortunately, the Board neglected to do so. (California Appeals Court, Third District 1986: 180)

That was 26 years ago. As we will indicate below, C-WIN is deeply concerned that the Board may still neglect significant, realistic alternatives that will be essential to fulfilling its water quality planning role for solving problems in the Bay-Delta estuary and the larger Central Valley watershed.



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

Fortunately, the Board can avoid such neglect. Justice Racanelli wrote that the Board “need only take *the larger view of the water resources* in arriving at a reasonable estimate of all water uses, an activity well within its water rights function to determine the availability of unappropriated water.” And he added, “We think a similar *global perspective* is essential to fulfill the Board’s water quality planning obligations.” (California Appeals Court, Third District 1986, emphasis added) Justice Racanelli stated later that the Board compromised its role in previous water quality control plans when it defined its scope for action too narrowly “in terms of enforceable water rights. In fact,” the judge wrote, “the Board’s water quality obligations are not so limited.”

...in order to fulfill adequately its water quality planning obligations, we believe the Board cannot ignore other actions which could be taken to achieve Delta water quality, such as remedial actions to curtail excess diversions and pollution by other water users. (California Appeals Court, Third District 1986: 182)

The Board’s “paramount duty” remains to “provide ‘reasonable protection’ to beneficial uses, considering all the demands made upon the water.” Finally, Justice Racanelli concludes about the Board’s water quality planning powers:

Thus, we do not believe that difficulty in enforcement justifies a bypass of the legislative imperative to establish water quality objectives which in the judgment of the Board will ensure reasonable protection of beneficial uses. (California Appeals Court, Third District 1986: 182)

C-WIN believes that a credible water quality control plan for the Bay Delta estuary must take what Racanelli deemed the “global perspective” in order to redress the ecological collapse and cumulative salinization and pollution resulting from the Board’s water quality planning efforts to date. The 1994 Bay-Delta Accord’s water quality control planning pendulum swung too far in favor of water right holders and water contractors, and their respective beneficial uses. The Board’s duty now is to credibly balance all of the beneficial uses of water in the estuary so that public trust resources are protected, and so that reasonable uses and methods of diversion of water are employed by all water users.

In addition to the water quality planning obligations that Justice Racanelli eloquently addressed, recent state legislation provides additional authority to the State Water Resources Control Board. Using this added authority, the Board can better protect water quality and beneficial uses in the Bay-Delta Estuary and the Central Valley watershed. We point to two new laws enacted in 2009.

The State Water Resources Control Board has already fulfilled its obligation under California Water Code Section 85086(c) and (e) to prepare a public trust assessment of the Bay-Delta flow criteria needed to protect fish and wildlife beneficial uses. While not a “balancing” analysis required under public trust doctrine, the Board’s *Delta Flow Criteria Report* provides valuable scientific analysis and findings that must be used to help the Board fulfill its water quality planning responsibilities and achieve protective public trust resource outcomes in the Bay-Delta estuary. The report employed the best available science in arriving at its findings. (State Water Resources Control Board 2010b)

The same legislative package also changed the California Water Code to recognize the need to reduce reliance on the Delta as a source of water for California:

85021. The policy of the State of California is to reduce reliance on the Delta in meeting California’s future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts.<sup>5</sup>

These new laws provide the Board with additional legal and political tools aiding the protection of all beneficial uses, particularly fish and wildlife beneficial uses whose protection has been neglected for decades.

***The Water Code's Fully Appropriated Stream Provisions and Term 91.*** The Board will need to revise its 1998 water rights order concerning fully appropriated streams, and revisit its application of Term 91 curtailment of post-1978 water rights permittees. Our water availability analysis helps show where key seasonal and priority thresholds may occur under the Board's new Delta inflow objectives.

California's Water Code implicitly acknowledges the potential for over-appropriation to occur and provides a process by which the State Water Resources Control Board may take steps to avoid or prevent excessive water promises. The Board can declare streams to be fully-appropriated on a month by month basis in every watershed of California under Sections 1205 through 1207. Its statutory language is reproduced in Appendix F to this testimony.

Section 1205(b) provides that a declaration that a stream system is fully appropriated shall contain a finding that the supply of water in the stream system is fully applied to beneficial uses where the Board finds that previous water rights decisions have determined that no water remains available for appropriation. According to Section 1206(a) once a stream system is declared fully appropriated by the Board, the Board shall not accept for filing any application for a permit to appropriate water from the stream system described in the declaration, and may cancel an application pending on that date. Section 1206(b) states that the the Board may provide for exceptions to application filings under specified conditions, which may limit the purpose of use, the instantaneous rate of diversion, the season of diversion or the amount of water diverted annually.

Past State Water Resources Control Boards have declared fully-appropriated streams in California. (State Water Resources Control Board 1989; 1991; and 1998) The Board's most recent 1998 declaration included major reaches of all tributaries to the Sacramento and San Joaquin River Basins as fully appropriated, including the Trinity River. (State Water Resources Control Board 1998: Exhibit A)

The Board has also designated as fully appropriated some rivers and streams that are adjudicated or have reaches designated for protection under state and federal wild and scenic river legislation. Major portions of the Trinity, Middle Fork of the Feather, the Tuolumne, and the Merced are designated as wild and scenic rivers. Wild and scenic rivers are off-limits to appropriations year-round. Other rivers and streams are fully-appropriated primarily during irrigation season. Appendix G summarizes selected critical reaches of the Bay-Delta Estuary's Central Valley Watershed that are designated as fully-appropriated by the State Water Resources Control Board.

The Board's Full Appropriation Declaration blurs the distinction between water rights claims and water usage by claimants. Commendably, the Board has identified reaches of streams that are off-limits to new permanent applications to appropriate water. C-WIN identified several streams where it appears that the Board has excluded riparian and pre-1914 water rights in formulating its declaration. This appears to be the case on the Sacramento mainstem, the Tuolumne, the Merced, and the Yuba. On these rivers, substantial periods of the year are still officially open under the

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<sup>5</sup> California Water Code §85021, passed November 2009.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

Board's declaration to applications to appropriate. Substantial amounts of pre-1914 water rights do not appear to be considered in the Board's determination that a stream is fully appropriated.

Section 1205(b) does require that the Board's declaration "shall contain a finding that the supply of water in the stream system is being fully applied to *beneficial uses* where the board finds that previous water rights decisions have determined that no water remains available for appropriation." (For a list of all Bay-Delta beneficial uses, see sidebar, page 26, above.) Note that the full-appropriation declaration legislation states that the supply of water is "being fully applied to beneficial uses" and not merely to the claims of water right holders.

There is no explicit analysis in the 1998 declaration by the State Water Resources Control Board of full application of water to beneficial uses as a direct consequence of citing its water rights decisions. This means that the full appropriation declarations are likely incomplete, albeit from a different standpoint. The Board may have construed Water Code Section 1205(b) as requiring the Board to rely on its archive of water rights decision, appropriately enough. But Water Code Section 1205(b) does not expressly limit the Board to use only water rights decisions, adjudications, and other determinative documents to justify these findings as evidenced by the Board's additional reliance on wild and scenic river designations. Its approved 2010 flow objectives for the Sacramento and San Joaquin River basin (while legislated to be informational and predecisional in Water Code Section 85086(c)(1)), could also be used to support findings of full appropriation for the Sacramento River, the San Joaquin River, and their other major tributaries. Instream flows serve natural beneficial uses as surely as water rights claims serve economic uses. Accounting for these instream flows as part of full appropriation declarations would increase the periods of full appropriation to include November through June throughout the Sacramento Basin, and February through June in the San Joaquin Basin, given the magnitude of water rights claims we have identified.

Moreover, Board decisions like Water Rights Decision 1594 (D-1594) acknowledge the Board's duty to account for all beneficial uses, such as those protected by the Board's Delta water quality and flow objectives.

C-WIN's planning-level water availability analysis allocates unimpaired flow hydrology, among instream flow objectives first, followed by water rights in order of priority status for the Sacramento and San Joaquin River basins. This planning-level method of water availability analysis demonstrates that the waters of the Sacramento and San Joaquin River Basin, from a planning standpoint, should indeed be declared fully appropriated. The full spectrum of beneficial uses is fully accounted for in allocating the Basins' flows to full protection of instream beneficial uses as well as those of all water rights claimants in California's water rights priority system. Moreover, this water availability analysis uses instream flow determinations that the Board itself endorsed in 2010 as Delta protective of public trust resources. It also indicates which major claimants have either poorly reliable or no water rights once all beneficial uses are accounted for.

A problem with the State Water Resources Control Board's fully-appropriated declaration involves its reliance on Water Right Decision 1594 (D-1594) from 1984. D-1594 authorizes the Board to place into permits (whose priority dates come after August 16, 1978) a new permit condition (called Term 91) notifying all permittees of its intent to curtail diversions of water right permittees. Curtailment occurs when flow and water quality conditions in the Delta demand that reservoir releases are needed to enable the California Department of Water Resources and the US Bureau of Reclamation to meet Delta water quality standards established by the Board. August 16, 1978, is significant as the date on which the Board adopted Water Right Decision 1485. This decision made the Bureau and the Department responsible for meeting water quality objectives in the Delta.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

D-1594 expressly addresses water availability for appropriation (diversion) in the Bay-Delta Estuary's Central Valley watershed by subordinating junior appropriative water rights to adherence to Delta water quality objectives. D-1594 is cited by the State Water Board as the water right decision authority for including the Sacramento-San Joaquin Delta in the 1998 fully-appropriated streams water right order. This decision reaffirms the Board's reserved jurisdiction to revisit the season of diversion of water right permittees in the Bay-Delta Estuary watershed, and it establishes with standard permit Term 91 its authority to curtail diversions by post-1978 diverters so that storage releases by the Bureau and the Department can meet Delta water quality objectives.

In this decision, the Board states:

The availability of water for appropriative water right permittees is affected by the quantity needed to satisfy holders of prior rights and the quantity necessary for protection of other beneficial uses. (State Water Resources Control Board 1983: 2)

In the process leading up to D-1594, the Board initiated a process to conduct a planning-level water availability analysis. Unfortunately, it abandoned that analysis:

Staff had originally proposed a comprehensive analysis of water supply and demand which attempted to identify and quantify water usage by all diverters below the foothill reservoirs within the Delta watershed. [SWRCB Exhibit. 1, pp. 19-20] This approach was discontinued [apparently in April 1983, according to reporter's transcript dated April 11, 1983, p. 14, lines 16-20] due to the lack of adequate data for factors such as return flow, groundwater accretions, unmeasured tributary inflow, riparian use, appropriative use, and Delta consumptive use. (State Water Resources Control Board 1983: 9-10)

D-1594 states at least twice that application of Term 91 to post-1978 permittees is an "interim solution" or an "interim measure." Nearly 30 years later, the Board still employs Term 91's method of calculating water availability. D-1594 commits the Board to occasionally requiring the post-1978 permittees in the Delta's extensive watershed to curtail deliveries when flows are insufficient to meet Delta water quality objectives and protect the Delta's beneficial uses.

Our planning-level water availability analysis focuses on water rights claims compared to historical hydrology. As we earlier showed, it finds there are far more water right diversion claims than there are flows in the Bay-Delta Estuary's Central Valley watershed (including the Trinity River claims of the Bureau). Our water availability analysis incorporates Board-approved instream flow determination the Board approved as fully protective of public trust resources in the Bay-Delta Estuary and its watershed. Its results suggest that *making Delta water quality and flow objectives fully protective of public trust resources will require moving the priority date of Term 80 permittees far earlier than 1978 for determining when and for whom Term 91 diversion curtailments would occur*. This is necessary because the State Water Resources Control Board (2010) found that current Delta flow objectives on the mainstem and tributaries of the two basins, including the Vernalis Adaptive Management Plan on the San Joaquin River, are insufficiently protective of the Delta's fish and wildlife beneficial uses. (State Water Resources Control Board 2010: 9-10) Conversely, this means that Term 91 *currently* applies Delta water quality objectives that are well known to be ineffective at protecting public trust resources in the Delta.

C-WIN believes it will be necessary for the State Water Resources Control Board to revisit Term 91 and D-1594's method of estimating water availability in the Bay-Delta Estuary's Central Valley watershed when implementing new Delta inflow (instream flow) objectives for the Sacramento and San Joaquin River Basins and their major tributaries upstream of the Delta. For the same reason, the Board's 1998 water rights order must also be revisited to update and expand the seasons where

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

appropriations would be prohibited as a matter of protecting all beneficial uses in compliance with Water Code Section 1205 through 1207. The Board should include these actions in the Bay-Delta Plan's implementation program.

In sum: the Board has acknowledged that existing Delta water quality and flow objectives for the Bay-Delta Estuary are inadequate. (State Water Resources Control Board 2000: 5) However, the Board *assumes* these water quality and flow objectives when it enforces Term 91 on post-1978 water rights permittees. Improving these objectives will mean the Board must curtail diversions by water right permittees (also probably licensees) with priority dates *earlier* than August 16, 1978, in order for Board-required Delta water quality and flow objectives to perform their functions protecting Delta watershed public trust resources. As part of its Phase III process to implement the Bay-Delta Plan, the Board must take testimony on how to determine this earlier priority date.

In all types of hydrology and using the Sacramento River Basin flow determination of 75 percent of unimpaired flow from November through June, C-WIN's water availability analysis suggests that for the Sacramento River Basin above the Feather River confluence, and the Feather River basin itself, the earliest date for curtailment should be December 19, 1914. On the Yuba and the Bear Rivers, the date of curtailment could be somewhat later, ranging from 1924 on the Yuba to 1941 on the Bear. On the American River, the earliest date should coincide with the priority date of Placer County Water Agency's 1958 water rights.

In all types of hydrology and applying the San Joaquin River Basin flow determination of 60 percent of unimpaired flow from February through June, C-WIN's water availability analysis suggests that for the Stanislaus and Merced Rivers, the Term 91 curtailment date should be December 19, 1914. On the Tuolumne River, the Term 91 curtailment date should be 1871. On the upper San Joaquin River, our analysis suggests that Term 91 curtailment dates should be on or before the dates of the Bureau of Reclamation's permits for Friant Dam and Millerton Lake in 1916. (See Appendix D.1 for Water Availability Analysis model results.)

The Board has acknowledged that current Delta water quality and flow objectives do not protect Delta fish and wildlife beneficial uses adequately. The Board must decrease the seasons of diversion for the Delta and its major tributaries of the Sacramento and San Joaquin River Basin watersheds, because the Board is obligated under the Public Trust Doctrine to protect all beneficial uses in the Delta. To implement this obligation, the Board must also revisit its Fully-Appropriated Streams Declaration and push back the priority date used to conduct diversion curtailments under Term 91.

***Court Adjudication.*** Still another path that may be used is that of adjudication by a court of competing water rights claims in a watershed. It may take years of painstaking testimony and argumentation by attorneys and (usually) engineers. But the present situation of extreme uncertainty and unreliability, clouded water titles, trespassing on the public trust, and related boundary disputes of many surface and groundwater water rights throughout the Bay-Delta Estuary's Central Valley watershed argues for its consideration.

In the 1930s and 1940s, staff within the Department of the Interior and the old State Water Rights Board advocated an adjudication of water rights prior to construction of the Central Valley Project. Both Governor Earl Warren and State Water Rights Board Chairman Henry Holsinger testified during the Clair Engle's Congressional hearings in 1951 that a complete adjudication of water rights on the Sacramento River should have occurred prior to the completion of the Central Valley Project. In fact, the Engle committee concluded that, "[t]hat for all practical purposes, the developed water supplies of the Sacramento River are overcommitted and oversubscribed." This was prior to approval and construction of the State Water Project. That project was predicated on obtaining some 5,000,000 acre- feet of water annually from north coastal streams (Figure 11). With the

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

exception of about 1 million acre-feet of Trinity River flows to the Central Valley Project service area, this “surplus” of surface water to the Delta system never arrived. Adjustments to the State Water Project should have been made earlier, but were not. The logical result is that the Delta’s native aquatic ecosystems have collapsed.

A reliable source of surplus water for the State Water Project and the Central Valley Project eludes the Department and the Bureau, so far. Because surface water imports from north coast watersheds were precluded by wild and scenic river designations the Department and the Bureau have instead tried to establish a “water market” to transfer water from northern California across the Delta as an interim strategy for increasing water supplies in dry years for low-priority water service contractors south of the Delta. C-WIN, CSPA and AquAlliance see this as a grave threat to the regional aquifers of the Sacramento Valley from the Delta to Redding.

This threat is manifest in “groundwater substitution transfers.” In such water transfers, surface water rights are transferred by “willing sellers” to the Department or the Bureau. The agencies facilitate the transportation of the water in the deal to the buyer south of the Delta using their export pumps near Tracy. To continue producing their crop however, the seller replaces or substitutes the surface water supply with water pumped from underground. The seller is thus able to achieve a net profit from the gross revenues from selling surface water rights, less the cost of pumping water from below ground, and still can sell a crop after harvest.

Such transactions however assume that groundwater may be treated simply as an individual’s property under their land. Such a legal theory runs straight into the reality of groundwater in the Central Valley watershed being a regional commons, a shared resource, particularly among all individual landowners of the Sacramento Valley who overlie its extensive aquifers. One landowner or a set of landowners in one general location may cause a region-wide cone of depression by pumping a lot of groundwater to replace surface water they sold to someone south of the Delta. Such intensive pumping can damage the wells of neighbors near to and far from the scene of the original pumping. Many of the Valley’s rivers are well known as “gaining” streams—that is, surface flows are actually enhanced upslope by accretions from groundwater sources. Too much groundwater pumping lower down in the aquifers for the “surplus” benefitting only the State Water Project and the Central Valley Project could drastically lower water tables upslope and reduce river flow permanently if allowed to become “the new normal.” Potentially permanent injuries to many beneficial users of water in the Sacramento Valley would result.

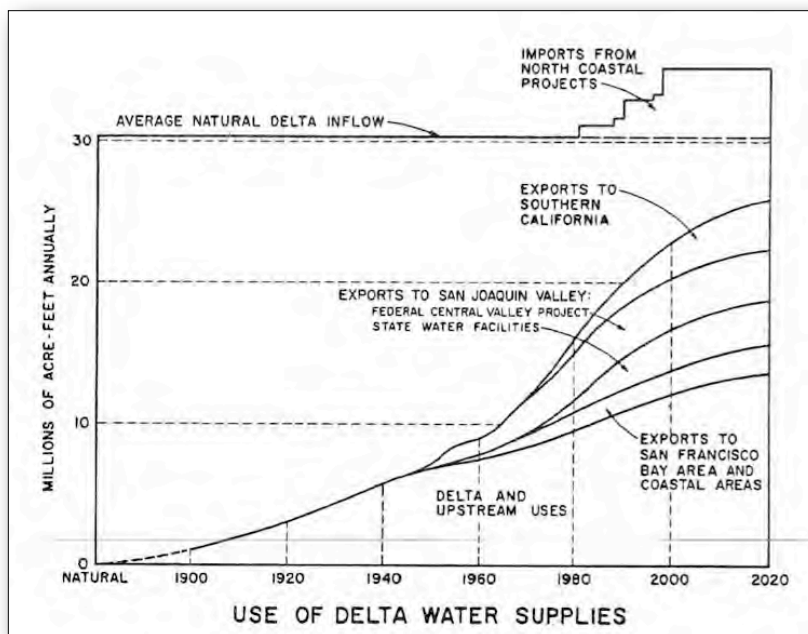


Figure 11

Source: California Department of Water Resources, 1960: 13.

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

A glimpse of this prospect occurred in 1994 when the Department sponsored a drought water bank program. The program resulted in damage to a municipal well and to individual wells in Durham and Cherokee areas of Butte County. More recently, the Department and the Bureau have since 2002 repeatedly sought “willing sellers” to offer surface water among the numerous public and private Sacramento Valley water right holders in Sacramento, Yolo, Sutter, Butte, Glenn, and Colusa counties. The State Water Resources Control Board in 1996 engaged in proceedings to determine the responsibility of Sacramento River Basin diverters to meet water quality standards in the Bay-Delta Estuary. The Board had completed phases 1 through 7 of the proceeding that led in 2000 to adoption of Water Rights Decision 1641 (D-1641). Phase 8 of that proceeding was to focus on the Sacramento River and its tributaries. In Phase 8, the Department of Water Resources and the Bureau of Reclamation, as operators of the state and federal export projects, claimed that certain water right holders in the Sacramento Valley must cease diversions or release water from storage to help meet water quality standards in the Delta. Sacramento Valley water users claimed that their water use has not contributed to any water quality problems in the delta, and, as senior water right holders and water users within the watershed and counties of origin, they are not responsible for meeting these standards. To avoid both litigation and independent regulatory action by the State Water Resources Control Board, water diverters throughout the Sacramento River Basin executed an agreement in April 2001. (Northern California Water Association, 2001) As a result of the Sacramento Valley Water Management Agreement, the Phase 8 process was dismissed by the State Water Resources Control Board. (State Water Resources Control Board 2001)

The Department and the Bureau have encouraged planning approaches to regional water management to facilitate water transfers, such as those in this partial list:

- The Department of Water Resources undertook a draft and final Program Environmental Impact Report in 1993 on a drought water bank, but to our knowledge has never certified this document.
- The Sacramento Valley Water Management Agreement, signed in 2002, but which ten years on still lacks a programmatic environmental review document. It expired December 31, 2010.
- The 2000 Governor’s Advisory Drought Planning Panel Report, Critical Water Shortage Contingency Plan, which also promised a program environmental document on a drought response water transfer program, but was never undertaken.
- The Sacramento Valley Integrated Regional Water Management Plan of 2006, overseen by a joint powers authority of numerous water agencies in the Valley.
- DWR’s last Drought Water Bank in 2009 sought authorization for over 100,000 acre-feet of temporary transfers of water, though only 16,000 acre-feet were eventually supplied to Southern California buyers.
- The Northern Sacramento Valley Integrated Regional Water Management Plan, now in development.
- The Delta Stewardship Council’s Delta Plan, whose planning scope includes the entire Sacramento Valley and assumes a groundwater surplus is necessary for meeting Delta export water demands. The Council has also expressed support for water transfers using groundwater substitution.
- The Bay Delta Conservation Plan, which would provide coverage from a 50-year habitat conservation plan for Governor Brown’s recently announced Peripheral Tunnels Project. This project has no identified water source, other than acknowledgement by the Bureau of Reclamation that it would reroute existing surface flows around the Delta from the Sacramento River Basin. (Vlams et al 2012)

C-WIN, CSPA, AquAlliance, and other knowledgeable experts are concerned that long term impacts of regional use of groundwater to substitute for transferred surface supplies will accelerate the depletion of the Valley’s groundwater supplies. There are significant gaps in scientists’ grasp of how

**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
**Submitted by California Water Impact Network,**  
**California Sportfishing Protection Alliance, and AquAlliance**

the aquifer system recharges; how surface flows and groundwater systems interact in the Valley's creeks and rivers; how supplies contained within upper and lower aquifers interact; how the aquifers respond in the long-term to increasingly intense demands on them, even during wetter years. And the regional effect of declines in groundwater levels on river and creek flows and riparian corridor species and wetland ecosystems has never been adequately explored. These are beneficial uses upstream along the major tributaries of the Sacramento River Basin that must also be considered part of the public trust responsibilities of the State Water Resources Control Board in its Bay-Delta Plan. (Vlaminis et al 2012)

State and federal water planners assume that surface and groundwater flows will always be there to support this hoped-for surplus. Based on that assumption they continue each winter and spring to plan the next water transfer program that relies on and encourages groundwater substitution transfers. This assumption has been built into the Department and the Bureau's chief water supply and operations planning tool, CalSIM II. When surface water supplies for riparian and appropriative water right holders are exhausted in model runs through CalSIM II, the model's automatic response is to add pumped groundwater to make up for any deficit to water demands in the model. (Draper and Bourez 2004: slide 20; Close et al 2003: 26-27; California Department of Water Resources and US Bureau of Reclamation 2004: Appendix A) Sacramento Valley groundwater activity is explicitly modeled to include "minimum groundwater pumping" for those land uses that rely exclusively on groundwater in the Valley. (California Department of Water Resources and US Bureau of Reclamation et al 2004: Appendix A) San Joaquin Valley groundwater is not modeled. (Close et al 2003) This can result in low estimates of salinity reaching the south Delta. (San Joaquin Valley CalSIM II External Review 2006: 45) Upper bounds on potential pumping from aquifers in the Sacramento Valley are undefined. According to Close et al:

This does not represent reality, since, if CalSIM II is used for statewide planning, it would allow pumping of vast quantities of water for export to southern parts of the state, something which agency staff [i.e. California Bay-Delta Authority Science Program and the Association of Bay Area Governments] claim is unrealistic. Realistic upper bounds to pumping from any of the aquifers represented in the model need to be developed and implemented. (Close et al 2003: 26-27)

The Department and the Bureau responded that CalSIM II does explicitly model the "impact on groundwater storage of each sub-basin." They state that CalSIM II runs that result in groundwater pumping over and above the natural and artificial recharge and which causes depletion of the basin will cause CalSIM II to no longer run. They also state, however, that CalSIM II "does not include local ground water inventories" but instead relies on a historically-modeled calibration of approximated inventories. They state further that "no groundwater is exported from the overlying watershed (except in the form of surface water return flow or tailwater that results from irrigation using groundwater)." (California Department of Water Resources and US Bureau of Reclamation 2004: A-1) Thus, CalSIM II assumes that groundwater "backstops" surface water rights holders and their needs for supplies, when in reality groundwater now backstops river flows (and all associated beneficial uses associated with those flows). It is small comfort that CalSIM II ceases to work when a basin is depleted from the program's operations; more to the point, it fails to assume, let alone build in a rational groundwater management strategy of sustained yield.

CalSIM II's reliance on groundwater to meet overall water demand when surface supplies must not be the de facto water supply development strategy for the state of California when supplies run low. When supplies run low—as they are forecasted to as climate change affects the American West—the state and its responsible and lead agencies must increase other means of stretching water supplies. This can be done through water recycling, reuse, conservation, and a range of urban, industrial, and agricultural efficiency measures.



**Water Availability Analysis**  
**Workshop 3 Testimony, Bay Delta Plan**  
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**Water Availability Analysis**  
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**Water Availability Analysis**  
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## Appendix A

## Appendix A River Flow Regulation to the Bay-Delta Estuary

In 1992, the Board proposed in a draft Bay-Delta water right decision regulating flows to the Delta from the San Joaquin River Basin by apportioning responsibility for Delta inflows according to the size of major reservoirs on the Basin's major tributary streams. This draft decision was withdrawn by order of then-governor Pete Wilson. While the Board considers regulating inflows from the San Joaquin River tributaries once again, many years of delay have elapsed: This section recounts and evaluates the Board's record regulating inflows to the Delta from the San Joaquin River Basin.

After backing away from its "global" approach to regulating inflow to the Delta from the San Joaquin River in 1993, the State Water Resources Control Board instead chose to continue regulating Delta conditions in part by regulating flow and water quality at Vernalis. In Water Rights Decision 1641 (D-1641), the Board assigned responsibility for meeting the Vernalis water quality standards to the California Department of Water Resources and the US Bureau of Reclamation and added interior Delta salinity objective monitoring sites to evaluate compliance by the Department and the Bureau. The Department has no regulating reservoirs of its own on San Joaquin River Basin rivers, so it fell to the Bureau to provide most of the flows to Vernalis from the Basin to meet the Board's objectives there. The bulk of the flows the Bureau has available for this purpose come from its New Melones Dam and Reservoir facility on the Stanislaus River. This strategy has been largely unsuccessful for the Bureau, the Department and the Board. Migratory fish populations and open water fish populations endemic to the Delta have crashed over the last decade since D-1641 was implemented. An experiment to provide helpful spring flows for migratory salmon, called the Vernalis Adaptive Management Plan, has achieved only limited results (Review Panel, 2010).

Table 13 summarizes the State Water Resources Control Board's present river flow objectives set for compliance at Vernalis and Rio Vista. These flow criteria were adopted as part of its Water Right Decision 1641 (D-1641) in 2000. Under D-1641, the Board currently regulates flows on the San Joaquin River at Vernalis during two main periods of the year: February 1 through June 30, and throughout the month of October. Within the February to June period, there are two regimes as well. One flow regime is in place from February 1 through April 14 and then again from May 16 through the end of June. The second flow regime occurs generally from April 15 to May 15, a 31-day period in which spring pulse flows are required to increase over the early and late spring periods. The spring pulse flow is intended to aid young salmon smolts migrating to the ocean by improving their chances of survival as they pass through the Delta. Minimum flow criteria in this spring regime vary depending on the water year type, and the water year type is generally finally forecasted by May 1. Note that these flow rates are a monthly average, which allows for great variability as long as the average is maintained throughout the 30-day running average during these flow regimes.

October minimum flows must be 1,000 cubic feet per second or greater using a 30-day running average. This is a period of time when adult fall-run Chinook salmon return from the ocean to migrate upstream and spawn in their natal streams. Again, as with the February through June regime, the use of a 30-day running average allows upstream water right holders wide latitude in providing flows that meet the Vernalis flow standard for October as long as the 30 day running average during October is not less than 1,000 cubic feet per second of flow.

Instead of implementing D-1641 San Joaquin River flow objectives to benefit fish and wildlife, the State Water Resources Control Board approved the San Joaquin River Agreement under which the major water right holders of the San Joaquin River Basin agreed to provide spring pulse flows

Appendix A

Table 13 State Water Resources Control Board D-1641 Flow Regulations at Vernalis			
Compliance Location	Water Year Type	Time Period	Minimum Monthly Average Flow Rate (cfs)
Sacramento River at Rio Vista	All	September	3,000
	W, AN, BN, D	October	4,000
	Critically Dry	October	3,000
	W, AN, BN, D	Nov-Dec	4,500
	Critically Dry	Nov-Dec	3,500
San Joaquin River at Airport Way Bridge, Vernalis	W, AN	Feb-Apr 14 and May 16-Jun	2,130 or 3,420
	BN, D		1,420 or 2,280
	C		710 or 1,140
	W		7,330 or 8,620
	AN		5,730 or 7,020
	BN	Apr 15 to May 15	4,620 or 5,480
	D		4,020 or 4,880
	C		3,110 or 3,540
All	October	1,000	
Source: State Water Resources Control Board, 2000. Key to Water Year Types: W = Wet; AN = Above Normal; BN = Below Normal; D = Dry; C = Critically Dry.			

intended to benefit outmigrating salmon smolts.<sup>1</sup> The Board agreed to its provisions as a voluntary approach to achieve the objectives. In exchange for providing these spring pulse flows totaling up to 110,000 acre-feet, the Agreement called upon the state and federal pumps in the south Delta to limit their export rates to certain specified levels. The Agreement further called upon the state, federal and San Joaquin River Group Authority member agencies to participate in an annual experimental study of the effects of these pulse flows on salmon smolt survival and other ecological indicators in the San Joaquin River in the Vernalis area. That study was called the Vernalis Adaptive Management Plan (VAMP).

The State Water Resources Control Board hoped that by using VAMP to implement its D-1641 flow criteria for the San Joaquin River at Vernalis, the scientific study would find salmon smolt survival is closely related to the humanly manageable actions of river flow, export limits at the pumps, and maintaining a barrier at the head of Old River to direct smolts toward

Suisun Bay and the Pacific Ocean via the most direct and safest route. The Board also hoped that increased smolt survival would contribute to increased salmon escapement (that is, fish leaving the ocean in late summer and early fall to spawn in the fall).

<sup>1</sup> The parties to the agreement included California Departments of Water Resources and Fish and Game; United States Department of the Interior agencies Reclamation and Fish and Wildlife; and member agencies of the San Joaquin River Group Authority: South San Joaquin and Oakdale irrigation districts on the Stanislaus River; Modesto and Turlock irrigation districts on the Tuolumne; Merced Irrigation District on the Merced River; and Central California Irrigation District, Firebaugh Canal Water District, Columbia Canal Company, and San Luis Canal Company on the upper San Joaquin River. Other parties included state and federal water contractors south of the Delta export pumps, and two environmental community parties: the Natural Heritage Institute and the Bay Institute of San Francisco.

## Appendix A

The VAMP seeks to test the hypothesis that increasing San Joaquin River flows, sharply limiting Delta export pumping during the spring pulse flow period, and blocking fish access to Old River (which leads to the state and federal export pumps) will increase survival rates of young salmon juveniles and smolts migrating through the Delta to the Pacific Ocean (San Joaquin River Group Authority, 2000: Section 2.5).

The 110,000 acre-feet of water from these agencies was intended for use in reaching “target flows” under VAMP at Vernalis that increased flow in the San Joaquin at Vernalis over defined

Existing Flow (cfs)	Single Step Target Flow (cfs)	Double-Step Target Flow (cfs)
0 to 1,999	2,000	3,200
2,000 to 3,199	3,200	4,450
3,200 to 4,449	4,450	5,700
4,450 to 5,699	5,700	7,000
5,700 to 6,999	7,000	Existing Flow
7,000 or greater	Existing flow	Existing flow

Source: San Joaquin River Agreement, 2000, Articles 5.5 and 5.6.

Year	VAMP Target Flow Period	Target flow Condition	VAMP Target Flow	Actual Mean Flow	Existing Flow	VAMP Supplementing Flows (AF)	Delta Export Target	Actual Delta Exports
2000	4/15-5/15	Double-step	5,700	5,869	4,800	77,680	2,250	2,155
2001	4/20-5/20	Single-step	4,450	4,224	2,909	78,650	1,500	1,420
2002	4/15-5/15	Single-step	3,200	3,301	2,757	33,430	1,500	1,430
2003	4/15-5/15	Single-step	3,200	3,235	2,290	58,065	1,500	1,446
2004	4/15-5/15	Single-step	3,200	3,155	2,088	65,591	1,500	1,331
2005	5/1-5/31	na[a]	>7,000	10,390	10,390	0	2,250	2,986[b]
2006	5/1-5/31	na[a]	>7,000	26,220 to 24,262 [c]	26,020	0	1,500 to 6,000	1,599 to 5,748[c]
2007	4/22-5/22	Single-step	3,200	3,263	2,721	33,330	1,500	1,486
2008	4/22-5/22	Single-step	3,200	3,163	1,939	75,250	1,500	1,520
2009	4/19-5/19	Off-ramp	na	2,260	2,260	0	na	1,990
2010	4/25-5/25	Single-step	4,450	5,140	4,830	23,980	1,500	1,515
<b>Average VAMP Supplementing Flows</b>						<b>40,543</b>	<b>Acre-feet</b>	

Source: San Joaquin River Group Authority 2011: Table 2-8; California Water Impact Network. Notes: [a] Existing flow greater than maximum VAMP Target Flow of 7,000 cfs; [b] May 1 through 25 average was 2,260 cfs; exports were increased starting May 26 in conjunction with increasing existing flow; May 26 through 31 average was 6,012 cfs; [c] “First fish release-recapture period”/“Second fish release-recapture period”; “na” means not available or not applicable.

## Appendix A

“existing flows” that would occur in the River in the absence of the VAMP flows. The VAMP flows were intended to be released during the spring pulse flow period coinciding with the State Water Resources Control Board’s flow criteria period of April 15 through May 15 (or a reasonable 31-day period thereabouts based on the presence or absence of migrating salmon). The Agreement employs the State Board’s water year classification scheme as an indicator for determining target flows. Wet years would have an indicator of 5, decreasing by one to Critical years having an indicator of 1. Double step target flows could be invoked under VAMP in situations where the sum of present plus current water year indicators added to 7 or greater. When that occurred, a “double step” target flow, showed in Table 14, would become the new target flow.

The Agreement also limits Central Valley Project and State Water Project export pumping during this same mid-April to mid-May period. Combined export rates for the pumps would be limited to no more than 1,500 cubic feet per second when Vernalis target flows are between 2,000 and 4,450 cubic feet per second. When the target flow reach 5,700 cubic feet per second, combined export rates are limited to no more than 2,250 cubic feet per second. And when target flows reach 7,000 cubic feet per second, the pumping plants are limited either to 1,500 or 3,000 cubic feet per second (San Joaquin River Group Authority, 2000: Article 6.4). The rationale for this “either/or” export rate at the high VAMP target flow is explained in Appendix A of the Agreement as a matter of safety and operational capacity of installing the barrier at the head of Old River and minimum pumping capacity of the export pumps, as well as the intent of the US Fish and Wildlife biological opinion that export rates in this period be less than 50 percent of the required Vernalis standard. Hence, the export pumping rate at a target flow of 7,000 cubic feet per second would be able to go as high as 3,000 cfs (San Joaquin River Group Authority, 2000, Appendix A, p. 3).

At present, VAMP is a 12-year study. Through 2010, double step target flows have been invoked once (San Joaquin River Group Authority [SJRGA], 2011: Table 2-8). Table 15 below summarizes VAMP flow activity from 2000 to 2010 (SJRGA, 2011). This table shows that over the course of the VAMP experiments through 2010, average supplemental VAMP flow contributions have averaged just 40,543 acre-feet per year, about 37 percent of the maximum annual commitment by SJRGA agencies of 110,000 acre-feet for VAMP.

Previous studies have shown that salmon smolt survival could be enhanced if increased flows were directed primarily down the mainstem of the San Joaquin River below Vernalis past Stockton (Review Panel, 2010). To facilitate fish using that route, the San Joaquin River Agreement called upon the Department of Water Resources to install a fish barrier at the head of Old River (which is a direct route for San Joaquin River water to the state and federal export pumps near Old River at the export pumps where fish can be all too easily entrained and killed).

In the event that more water than the 110,000 acre-feet was needed to meet target flows, the US Bureau of Reclamation and the California Department of Water Resources could approach the agencies making up the San Joaquin River Group Authority as willing sellers of additional water. As Table 15 reveals, neither the Bureau nor the Department needed to purchase additional water for VAMP flows, since no VAMP flows exceeded 110,000 acre-feet.

VAMP results have largely been inconclusive because there have been only a narrow range of flows subject to VAMP researchers. The State Water Resources Control Board permitted the VAMP experiment to proceed in D-1641 for over a decade. Table 16 compares spring pulse flow range criteria set by the State Board in D-1641 with mean (average) VAMP flows. For years with VAMP results (of which there were only 8 of 11 total), only four years yielded VAMP results that actually complied with D-1641 flow criteria at Vernalis (2000, 2001, 2007, and 2008). Four other VAMP flow years were *beneath* the D-1641 flow criteria, and did not comply with the Board’s adopted objective. It appears that VAMP as a regulatory experiment performs adequately only half the time when it can be invoked. Of the three years with no VAMP flow results, two were wet years (2005 and 2006) where high flows on the San Joaquin overwhelmed the need to regulate or experiment. The



## Appendix A

remaining year (2009) was considered an “off-ramp” year (that is, a dry year following two critically dry years). VAMP and Agreement requirements were in part short-circuited by prolonged dry weather in order to protect upstream water supply reliability. It appears from these results that VAMP and the San Joaquin River Agreement have failed to “provide the environmental benefits in the lower San Joaquin River and Delta at a level of protection equivalent to the San Joaquin River portion of the 1995 WQCP for the duration of this Agreement (SJRGA, 2000: Section 2.5.3).” In effect, protective flows for Delta public trust resources such as Chinook salmon populations have been delayed for the sake of seeking greater scientific certainty.

Year	San Joaquin River Basin Water Year Type	Spring Pulse Flow Range Criteria, D-1641 (cubic feet per second)	Mean Actual VAMP Flows (cubic feet per second)
2000	Above Normal	5,730 or 7,020	5,869
2001	Dry	4,020 or 4,880	4,224
<b>2002</b>	<b>Dry</b>	<b>4,020 or 4,880</b>	<b>3,301</b>
<b>2003</b>	<b>Below Normal</b>	<b>4,620 or 5,480</b>	<b>3,235</b>
<b>2004</b>	<b>Dry</b>	<b>4,020 or 4,880</b>	<b>3,155</b>
2007	Critically Dry	3,110 or 3,540	3,263
2008	Critically Dry	3,110 or 3,540	3,163
<b>2010</b>	<b>Above Normal</b>	<b>5,730 or 7,020</b>	<b>5,140</b>

Source: SJRGA, 2011; State Water Resources Control Board, 2000; California Water Impact Network. **Years in bold did not comply with minimum D-1641 flow criteria.**

## **Appendix B**

### **Omission of the Upper San Joaquin River from the Bay-Delta Plan**

The Board proposes different flow objectives for the Sacramento and San Joaquin Rivers. C-WIN and CSPA applaud the State Water Resources Control Board's decision to include the major tributaries of the San Joaquin River Basin (specifically, the Stanislaus, the Tuolumne, and Merced rivers) and of the Sacramento River Basin (the Trinity [via Central Valley Project facilities], Pit, Feather, Yuba, Bear, and American) in its proposed analysis of San Joaquin River flow requirements and the scope of the Bay-Delta Plan. The Upper San Joaquin River (above its confluence with the Merced River) is excluded from the Plan by the Board. The Board has not provided adequate rationale to justify excluding the Upper San Joaquin River from the "project area" for purposes of environmental evaluation of proposed San Joaquin River flow criteria. The State Water Resources Control Board wants to use the criterion of "salmon-bearing tributaries" to justify excluding the upper San Joaquin River. The Board then states in a footnote:

Currently, the San Joaquin River does not support salmon runs upstream of the Merced River confluence (upper San Joaquin River). However, pursuant to the San Joaquin River Restoration Program (SJRRP), spring-run Chinook salmon are planned to be reintroduced to the upper San Joaquin River no later than December 31, 2012. Flows needed to support this reintroduction are being determined and provided through the SJRRP. During the next review of the Bay-Delta Plan, the State Water Board will consider information made available through the SJRRP process, and any other pertinent sources of information, in evaluating the need for any additional flows from the upper San Joaquin River Basin to contribute to the narrative San Joaquin River flow objective. State Water Resources Control Board 2011a: Map on page 1 and narrative on page 3 of Attachment 2)

In essence, if it adheres to this reasoning during this process, the State Water Resources Control Board would allow the SJRRP to determine what those flows are to be, and would allow the SJRRP to dictate the Board's time schedule for Basin-wide flow objective-setting and implementation. This provides incentive to minimize the upper San Joaquin River's contribution to overall basin flows to benefit the Delta. It will put greater pressure on the water right holders on the tributaries of the San Joaquin to provide additional flows. In its Water Rights Orders 2010-0029 and 2009-0058-DWR, the Board authorized interim schedules for "experimental flows" sought by the parties to the San Joaquin River Restoration Program and settlement agreement. At minimum, these interim flows should be incorporated into the project description, so that it is clear that upper San Joaquin River flows will contribute to solving flow and water quality problems in the Delta. In addition, there needs to be a basic description in the Substitute Environmental Document of how future contributions from the upper San Joaquin River will contribute to improving the health of the Bay-Delta estuary. This can be expressed in the form of project alternatives, but it must not be deferred.

Appendix C

## Appendix C Definitions and Terminology

This report relies on several definitions and terminology that readers should grasp as they read. Here too is the method C-WIN employs to describe water rights in the San Joaquin River Basin.

The geographic scope of the “San Joaquin River Basin” used in this report is that portion of the basin that extends from the measurement of flows on the San Joaquin River near Vernalis all the way upstream on both sides of the river to the headwaters of the river and its tributary creeks and streams in the Coast Range and Sierra Nevada; and including the “major tributaries” of the San Joaquin: the Stanislaus River, the Tuolumne River, and the Merced River all the way to their headwaters in the Sierra Nevada. See Figure C-1.

The geographic scope of the “Sacramento River Basin” used in this report is that portion of the basin that extends from that portion of the basin that extends from the measurement of flows on the San Joaquin River at Rio Vista all the way upstream on both sides of the river to the headwaters of the river and its tributary creeks and streams in the southern Cascade range, up the McCloud River, the Pit River to their headwaters, and including east creeks (such as Deer, Butte, Battle, and others), the west creeks (such as Cottonwood, Clear, Putah, Stony, Cache and others), and the major tributary rivers including the Feather, Yuba, Bear, and American rivers all the way to their headwaters in the Coast Range (for the east and west creeks) and the Sierra Nevada. See Figure C-2.



Figure C-1: Location of San Joaquin River Basin in the San Joaquin Valley, and the major rivers in the Basin. Green shading denotes the outline of the Valley floor. Source: Gronberg et al 1998.

## Appendix C

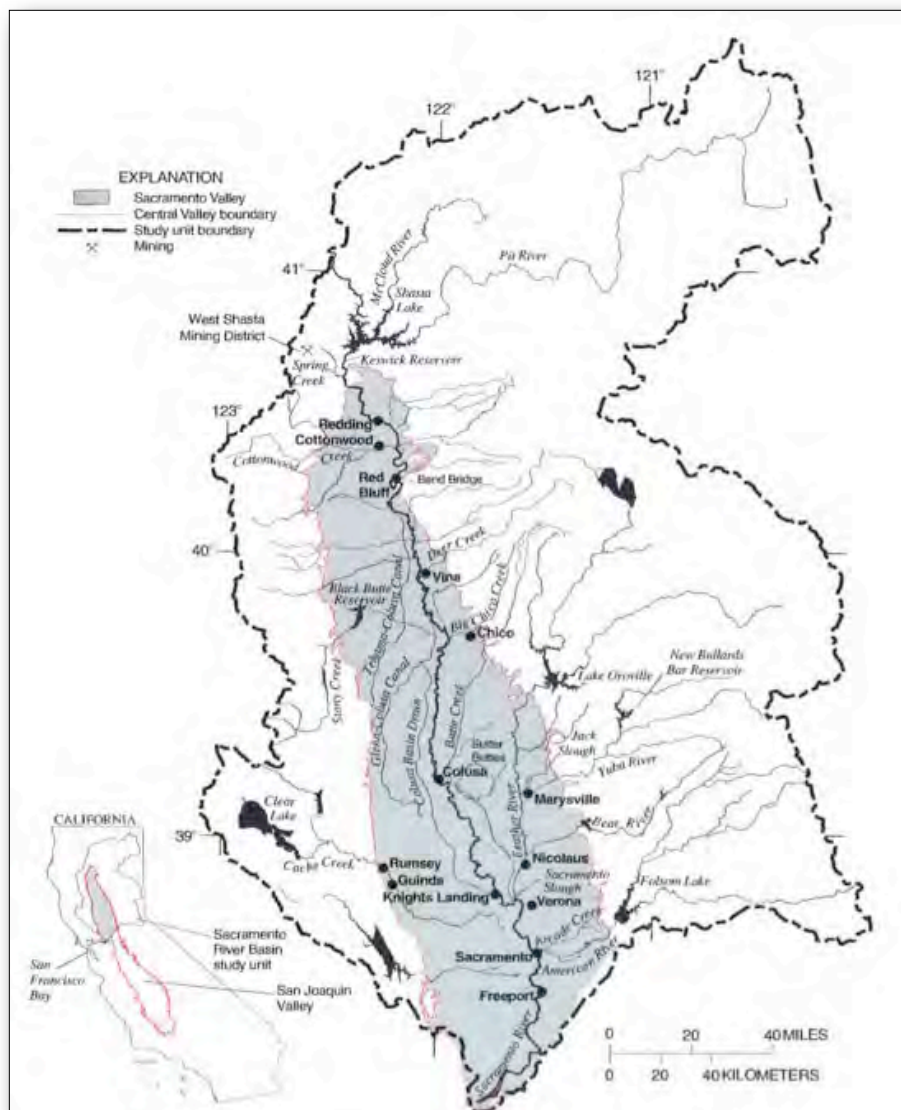


Figure C-2: Location of Sacramento Valley floor in the Sacramento River Basin.

Source: Domagalski et al 1998.

Two common measures of water amounts are “acre-feet (AF)” and “cubic feet per second (cfs).” An acre-foot is 325,851 gallons of water, and is a measure of the *volume* of water, or about the amount of water that two families of four in California consume in a year. (There are 7.48052 gallons to a cubic foot, and 43,560 cubic feet in an acre-foot.) Cubic feet per second measures the *rate of flow* of a volume of water: a cubic foot of water that flows past a given point within a second of time passing. Since there are 43,560 square feet to an acre, 3600 seconds in an hour and 24 hours in a day and 365.25 days in an average year, one cubic foot per second flowing yields about 1.98 acre-feet per day in volume, or about 724.46 acre-feet in a year’s time. For perspective, the San Joaquin River Basin’s “unimpaired flow” has been estimated by the California Department of Water Resources to average *about* 6.18

million acre-feet per year. The average annual natural or unimpaired flow of the Upper San Joaquin River (above its confluence with the Merced River) is about 1.8 million acre-feet.

“Unimpaired flow” is one of several phrases (such as “full natural flow”, “natural flow”, and “natural runoff”) used by the California Department of Water Resources to approximate “what would have occurred” on California streams “had man not altered the flow of water in the basin.” (California Department of Water Resources, 2006: 5). Estimation of unimpaired flow by the Department typically assumes the current configuration of contemporary altered rivers, dams, levees, and the absence of former wetlands, floodplains and other features of rivers that may no longer exist. In some instances, it is possible that “natural flow,” other things being equal might be less than “unimpaired flow” in a situation where wetlands and floodplains were reconstructed. These features of rivers tend to absorb water or at a minimum slow the rate of flow. For this report, unimpaired flows are used for the description and analysis of natural Basin hydrology, but the reader should keep in mind that, other things being equal, restoration of more natural conditions in the Basin might yield flows somewhat lower than those characterized by unimpaired conditions.

## Appendix C

The State Water Resources Control Board employs a measure of water rights it calls “face amount” or “face value” that it applies to the rights it administers. Typically, descriptions of water rights have three basic components that describe the quantity of the right:

- “Direct diversion rates” (usually measured in cubic feet per second, or older rights may be stated in “miners inches”)
- “Collection to storage” or “contribution to storage” which is the amount of water that may be cumulated in a reservoir.
- “Season” during which the diversions and collections are permitted to occur under the water right. For a season that is “January 1 to December 31 inclusive”

To estimate the face amount, the direct diversion rate is converted to cubic feet per day (that is, 3600 seconds in an hour multiplied by 24 hours in a day), then multiplied by the number of days contained in the diversion season to derive a maximum volume (in cubic feet) for the entire diversion season. That amount is divided by 43,560 square feet per acre, to arrive at the acre-footage volume for the diversion season. If a storage amount (in acre-feet) is included in the water right, it is either substituted because it represents a cap on the entire collection to storage for the year, or is added to the diversion volume to arrive at the total face amount. The water right terms and conditions in state-issued permits and licenses usually say whether the collection to storage is capped or not.

Additional geographic components of water rights are used to pinpoint both where the diversion and/or storage occur and where the water so diverted/stored is to be used. These are the “point of diversion” and the “place of use.” This information is presented frequently in terms of the American “township and range system.” The base map meridian in the San Joaquin River Basin is always the Mount Diablo Base and Meridian (“MDB&M”). For some rights, a familiar water facility is stated.

Finally, the water rights also state what the “purpose of use” for the water is intended: most often in the San Joaquin River Basin the purposes of use are for “irrigation” or “power generation” (meaning the generation of hydroelectricity by running water through power plant turbines). Other uses may include fish and wildlife, recreation, municipal, and industrial uses.

## Water Rights and Water Law in California

The use of water is first and foremost a matter of owning rights to its *use*. In our capitalist economy, this means use of water is a form of property right. This kind of property right is known as a *usufruct*. *Black’s Law Dictionary* defines a usufruct as:

“a right for a certain period to use and enjoy the fruits of another’s property without damaging or diminishing it, but allowing for any natural deterioration in the property over time.” (Garner 2010)

A usufruct, according to the Oxford English Dictionary, “is a right to use another’s property short of the destruction or waste of its substance.” (Pearsall 1999) As water lawyers Arthur Littleworth and Eric Garner wrote, “Water rights are usufructuary, a right to the use of water, not a right to own it.” (Littleworth and Garner 2007: 27) The 20<sup>th</sup> century California water law authority, Wells Hutchins, wrote: “Water flowing in a natural stream is not the subject of private ownership,” and cites the California Supreme Court’s earliest water rights decision which stated in part, “the right of property in water is *usufructuary*, and consists not so much of the fluid itself as the advantage of its use. (Hutchins 1956: 36; *Eddy v. Simpson* 3 Calif 249 (1853), 252)”

## Appendix C

The history of water rights in California has long been contentious. The state legislature beginning at statehood never passed a law that established California's water rights system. Instead, it was cobbled together by the court system on a case-by-case basis. In all cases, water rights in California give their owner a right to use, but not to hoard or otherwise possess water; all uses must be reasonable. The question, of course, is "what is reasonable?"

### Riparian Rights

Prior to statehood, California's territorial legislature adopted the English Common Law for its legal code. This action implied that landowners had riparian rights to water, consistent with the common law, when they owned property abutting a stream. **Riparian rights** are predominant in California and are held by those who own parcels of land that abut a flowing stream or spring. (Analogously, land owners may possess "overlying rights" to pump water from the ground for use on their property.) Riparian water rights are "part and parcel of the land" and are held in common with other riparian land owners along the same stream. A map of the streams of California gives an impression of the large number of potential riparian water right holders there are in California (Figure C-3). Riparian water rights are not quantified. But right holders along a stream share the river in common. They may make explicit agreement with neighbors divert water subject to reasonable use. Riparian water right holders may irrigate their lands immediately adjacent to the river, and their drainage must be returned to the river. They may have small ponds, under California state law, for purposes of managing their irrigation efforts, watering livestock, and incidental domestic uses. Riparian rights are the predominant water right in California and riparian diverters have priority to divert for use before prior appropriators do. Unlike appropriative water rights (see below), riparian water rights cannot



Figure C-3  
Source: U.S. Geological Survey.

## Appendix C

be lost to the right holder from disuse. However, in specific circumstances such rights may be severed from land, usually having to do with land subdivision.

### Appropriative Water Rights

**Appropriative water rights** are the other major form of water rights in California. Under the doctrine of prior appropriation, right holders gain the right to use a specific quantity of water from a stream, and no more. They may move that water out of the watershed. In California, this right arose in the Sierra Nevada mining districts in the 1850s, though the right's doctrine was known in the humid eastern United States where it facilitated American accommodation of mill-wheel technology to water law (Steinberg 1991; Horwitz 1977: 34-40). It follows the logic of mining claims: the miner who was first in time had the prior right not only to the mining claim but to the water in the adjacent stream needed to work the claim. "First in time, first in right," is the familiar adage for this right. Appropriators may divert their supplies only in order of the dates of their claims. The earlier the claim in time, the more senior the right. In dry years such a right has a more reliable water supply than rights with later dates of claim. Rights later in time are considered to be more junior, and have lower reliability of actual supply in dry years.

Appropriative rights have another important aspect: the water right must be *diligently exercised* year-in and year-out. The water must be applied to beneficial use under the right or else the right can be lost. "Use it or lose it," is another familiar adage for appropriative water rights. Once someone obtains the right, they must develop the facilities to divert, transport and store the water in a diligent manner, and once those facilities are completed, the water must be demonstrably used to the extent the right allows, or the right to use may be reduced or lost. Generally, long-distance canals, dams, and hydropower plants are the subjects of appropriative water rights. But it is also true that small ditches to parcels non-riparian in their location may rely on appropriative water rights to divert water to a ditch that irrigates some acreage, provides private domestic use, facilitates a mining claim, or runs a small hydroelectric generator.

### Prescriptive Rights

**Prescriptive rights** come into play when one water user uses water adversely to the rights of another. They may divert water for years without discovery or objection by a neighboring user. In California, if that usage continues for five years or longer, that use may be demonstrated in court to have ripened into a legitimate right through the prescripitor's adverse use against the other existing right holder(s). This right has come into play in some instances in the San Joaquin River Basin, most notably involving rights held by San Francisco, and rights that came to be acquired by the US Bureau of Reclamation on the upper San Joaquin River .

### State Water Rights Regulation

There are other water rights in California besides these. Groundwater is the subject of overlying rights. These rights are analogous to riparian rights because land owners may drill wells to pump groundwater for use on their properties. And like riparian rights, their overlying rights are held in correlation to the rights of neighbors over the same underground reservoir (or "aquifer") of water. In other words, both riparian and overlying rights holders use water from their sources in common with those of other adjacent land owners. Their rights are not quantified, but receive a percent share of the yield of the river or aquifer. Groundwater rights are not described in this report, but are very important to the history and use of water throughout the San Joaquin Valley. Groundwater has never been formally regulated by a state-level administrative agency. But some groundwater basins are regulated under supervision of court-appointed watermasters.

## Appendix C

Until 1914, California water rights were obtained either by purchasing riparian land or by posting a noticed claim at the site of the intended river diversion or dam site, and then recording that claim within a specified time at the local County Recorder's office. Beginning December 19, 1914, the start date for California's formal administrative system of water rights regulation approved by referendum, appropriative water rights may only be obtained by filing an application with the state water rights board. Today, that regulatory authority is vested in the Division of Water Rights of the State Water Resources Control Board. Applications are prioritized by the date on which they are filed with the Division, and have been since December 19, 1914.

However, the Water Commission Act only committed California to regulate appropriative water rights moving forward from December 19, 1914. Riparian and appropriative rights (now known as "pre-1914" water rights) created before this date are unregulated from the new water rights administration. While unregulated, the State Water Resources is empowered to investigate these prior water rights (both riparian and pre-1914). There is disagreement about how far the Board's authority reaches in adjusting rights that might, for example, come into conflict with post-1914 water rights.

Legally speaking, stream flows are first available to riparian diverters, and any surplus determined by the State Water Resources Control Board is then available for appropriation by other water rights applicants. In deciding whether to permit a new water right on a stream, the State Water Resources Control Board performs a water availability analysis that determines whether such a surplus is available for new appropriations.

### **Exceptional Water Rights: The State Filings**

Before taking up analysis of "paper water" in the San Joaquin River Basin in detail, it is necessary to present background and context for where the tremendous quantities of federal Bureau of Reclamation water rights originated.

California, on one hand, has a rather complex water rights system, what some scholars and attorneys call the "California Doctrine" (e.g., Holsinger 1936). Riparian right holders (owners of riparian lands) generally have paramount (but unquantified) claim to a correlative (i.e., "pro rata" fair share) of waters of a stream or lake, followed by appropriators who made their claims prior to 1914 and who perfect their quantified flow and storage rights by diligent completion of their facilities and diversion for use. The next class of water right holders are those who applied for rights to appropriate and use water through California's permit system that began in December 1914. These right holders are regulated by the State Water Resources Control Board today. Riparian and pre-1914 right holders are exempt from the Board's permit process.

Because of the California Doctrine and the state's water rights permit and license system, priority of application of water to use has long been the established system for determining whose rights get served and whose don't during droughts. One of the more difficult problems for state water policy, in the 1920s, became how the state could acquire water rights for a project of statewide scope when claims, permits, and licenses for water rights (especially the system for *acquiring* water rights) cumulated as the state's economy developed through time. How could the state gather the rights it needed to move forward with statewide coordinated water development? The state was clearly a late-comer to obtain water rights for a state-sponsored system, and its rights were likely to face larger cutbacks during droughts than those with more senior rights on the same river systems.

When the Water Code was adopted by the State Legislature in 1914, it included (and still includes) Sections 104 and 105, which state:



## Appendix C

**Section 104.** It is hereby declared that the people of the State have a paramount interest in the use of all the water of the State and that the State shall determine what water of the State, surface and underground, can be converted to public use or controlled for public protection.

**Section 105.** It is hereby declared that the protection of the public interest in the development of the water resources of the State is of vital concern to the people of the State and that the State shall determine in what way the water of the State, both surface and underground, should be developed for the greatest public benefit.

These provisions provide a policy rationale, if not the tools, for the State to intervene in the cumulating claims of water rights (essentially private rights) on behalf of the public interest in coordinated water development. Provoked by growing perceptions of shortage around the fast-developing state, which were aggravated by drought and litigation in the early 1920s<sup>1</sup>, the State of California came up with its first statewide plan to develop and reallocate water to meet the state's water problems. In 1925, state planners realized they had to address how water rights could be obtained without injury to vested rights. The California Water Project Authority describes the problem this way in 1951:

With respect to the protection of water rights and water requirements in carrying out such a plan of coordinated development, [a 1925 report to the Legislature on California's water resources] contains the following statement...:

The whole discussion of the diversion of surplus waters from the Sacramento River into the San Joaquin Valley, must be predicated upon the institution of a coordinated development in both valleys that gives full protection against present or future loss to the owners of vested rights and to present users of water as well as to those potential users whose lands lie tributary to streams from which exportations of water are proposed. (California Water Project Authority, 1951: 21-23)

A 1926 California Supreme Court decision once again upholding riparian over appropriative rights made the water rights issue for statewide development even more immediate. In 1927, a Legislative committee studying the "coordinated plan of development" recommended the legislature "*at once* take the necessary steps, either through its proper officials or by legislation, to file on or withdraw from filing by private parties the water rights to be utilized and required for the consummation of the coordinated plan. (California Water Project Authority, 1951: 23; italics added)"

The Legislature passed the Feigenbaum Act, Chapter 286, Statutes of 1927<sup>2</sup> to authorize the California Department of Finance to file applications for water rights "for any water which in its judgment is or may be required in the development and completion of the whole or any part of a general or coordinated plan looking toward the development, utilization, or conservation of the water resources of the State."<sup>3</sup> The Act gave the State the power to literally but fictitiously *stop time* for the purpose of filing applications for water rights on behalf of the state water plan:

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<sup>1</sup> The case of *Town of Antioch v. Williams Irrigation District*, the first Delta water case that attempted to address low Delta inflows and tidal salinity intrusion, was filed during dry conditions in 1920, and decided by the California Supreme Court in 1922.

<sup>2</sup> Today, portions of its provisions live on in Water Code sections 10500 and 10504, while other sections of the Feigenbaum Act were subsequently repealed in 1953. The Feigenbaum Act is also mentioned in Jackson and Mikesell, (1979: 29).

<sup>3</sup> Water Code §10500, quoted in California Water Project Authority (1951: 28).

## Appendix C

Section 10501. Any application filed by the Department of Finance within nine months after July 29, 1927, has priority as of that date and such priority shall be retained over any application made by others subsequent application made by others subsequent to that date in conflict therewith, regardless of any requirements or provisions for water or the use thereof, until October 1, 1955.

Section 10502. Any priority under this part may be maintained and extended by further legislative enactment.<sup>4</sup>

The Feigenbaum Act further empowered the Department of Finance to “release from priority or assign any portion of any appropriation filed by it under this part when the the release or assignment is for the purpose of development not in conflict with such general or coordinated plan.” While benefiting from a special state-filed priority date under the Act, assignees would still be obligated to proceed with their water development plans with due diligence. Assignees of these applications could include state agencies, commissions, and departments, as well as the United States of America or any of its departments or agencies.<sup>5</sup>

Subsequent legislation also enables counties and watersheds of origin to benefit from such state filing assignments. State filings provide the State of California with the water rights-equivalent of a “wild card” (within some limits) that can reserve, withdraw or otherwise control the waters of any California river or stream so that they may be incorporated into either the State Water Project or the Central Valley Project, either for export or to benefit areas of origin—until or unless that state filing right is revoked by the State Water Resources Control Board.

### State Filings for San Joaquin River Basin Water Rights

According to State Water Resources Control Board records, there have been 26 state filings on rivers and creeks of the San Joaquin River Basin since enactment of the Feigenbaum Act in 1927.<sup>6</sup> They are listed in Appendix J. The filings include claims for creeks and tributaries of the Stanislaus, Merced, and San Joaquin Rivers. No state filings appear to exist for the Tuolumne River.

In the San Joaquin River Basin, state filings were assigned to the US Bureau of Reclamation to develop Friant Dam, its associated Madera and Friant-Kern Canals, and New Melones Dam and Reservoir on the Stanislaus River. State filing Application 5638 was assigned to the Bureau to supplement earlier, insufficient water rights applications for the Friant Dam site filed in 1916 and 1919.

The rest of the state filings are as yet unassigned and therefore technically (if not politically) still in play with regard to coordinated statewide water development and/or area of origin claims. For example, Application 5949 (priority date of July 30, 1927) on the south fork of the Stanislaus River has been the subject of requests for assignment by Pacific Gas & Electric Company (beginning in 1951) and by Tuolumne Regional Water District (1980s). Neither request for assignment was acted on by the State, deferring action until some sort of coordinated plan of development was further

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<sup>4</sup> These sections were repealed in 1953.

<sup>5</sup> Water Code § 10504, quoted in California Water Project Authority (1951). This provision remains in effect today.

<sup>6</sup> According to eWRIMS, the State Water Board’s online water rights application database, there are 185 active state filings. San Joaquin River Basin state filings amount to about 14 percent of all state filings at this time. Excel file accessed and downloaded 12 November 2010 and updated in July 2011. They may be found by searching on both California Department of Finance and State Water Resources Control Board.

## Appendix C

along. Meanwhile, 184 other state filings throughout California have similar status as Application 5649.

Additional file research at the State Water Resources Control Board Records Room would be necessary to determine the current status of these and other state filing applications.

### Reasonable Use of Water

Even before Californians amended their constitution in 1928, legal precedents set by California courts required that water use among riparians had to be reasonable, and water use between appropriators had to be reasonable. Appropriators also were accountable to riparians for reasonable use. Major political conflict arose about water rights though because California law contained no requirement that the water use of riparians with respect to appropriators had to be reasonable. Then, in 1928, California voters approved an amendment to the California Constitution that required all water use in California by any water right holder (riparians included) had to be reasonable and not wasteful.<sup>7</sup> The California Constitution stresses that “the right to water...does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.” Where riparian rights were once entitled to the “full natural flow” of the stream to which the rights attached, the California Constitution now limits attachment of the riparian right to “no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses” without “depriving any riparian owner of the reasonable use of water of the stream...or as depriving any appropriator of water to which the appropriator is lawfully entitled.”

The question remains under this doctrine: what uses, methods of use, and methods of diversion represent are reasonable, and how does that translate into more efficient allocation and use of water so that waste of water and significant environmental impacts of water development are avoided or at least mitigated? In case law, the answer is a matter of the facts involved.

The new Delta Watermaster, Craig M. Wilson, whose office was created by the water reform legislation of 2009, calls the Reasonable Use Doctrine “the cornerstone of California’s complex water rights laws. All water use must be reasonable and beneficial regardless of the type of underlying water right. No one has an enforceable property interest in the unreasonable use of water. (Wilson, 2011: 3)”

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<sup>7</sup> [Article X, Section 2 of the California Constitution.](#)

## **Appendix D**

### **Supporting Data and Analyses**

#### **Contents**

- D.1 Water Availability Analysis Spreadsheet Models**
- D.2 Unimpaired Flow Hydrology**
- D.3 Adjudication Decree Quantification**
- D.4 Consumptive Statements of Diversion and Use**
- D.5 Other Pre-1914 Consumptive Water Rights**
- D.6 Post-1914 Consumptive Water Rights**
- D.7 Sacramento River Post-1914 Water Rights Priorities**

## **Appendix D**

### **Section D.1 Water Availability Analysis Spreadsheet Models**

Trinity River Water Rights Yield Analysis

Tributary Inflow Criteria  
 Diversion Cap  
 75% 25% of unimpaired flow  
 60% 40% of unimpaired flow  
 50% 50% of unimpaired flow  
 40% 60% of unimpaired flow  
 94% average regulated period share of flow during water year

75% Inflow Criterion Scenario	Water Year Flow Percentile										
	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>Total Annual Unimpaired Flow (TAF)</b>	679	789	824	866	1,025	1,133	1,424	1,582	1,611	1,683	2,035
<b>November through June Unimpaired Flow (TAF)</b>	624	743	785	838	968	1,064	1,341	1,455	1,529	1,599	1,930
<b>Delta Inflow Criterion (75% of UF, TAF)</b>	468	557	589	629	726	798	1,006	1,091	1,147	1,199	1,448
<b>Diversion Cap (TAF)</b>	156	186	196	210	242	266	335	364	382	400	483
Riparian and Pre-1914 Claimants (134.1 TAF)	126	126	126	126	126	126	126	126	126	126	126
USBR 1927 Trinity Claim (3,349.9 TAF)	30	60	70	84	116	140	209	238	256	274	357
USBR 1959 Trinity Claim (3,030.8 TAF)	0	0	0	0	0	0	0	0	0	0	0
USBR 2002 Trinity Claim (2,203.1 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flows, July-October</b>	55	46	39	27	57	69	82	127	82	85	105
Riparian and Pre-1914 Claimants (134.1 TAF)	8	8	8	8	8	8	8	8	8	8	8
USBR 1927 Trinity Claim (3,349.9 TAF)	47	37	31	19	49	61	74	119	74	77	97
USBR 1959 Trinity Claim (3,030.8 TAF)	0	0	0	0	0	0	0	0	0	0	0
USBR 2002 Trinity Claim (2,203.1 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total Riparian and Pre-1914 Claimants	134	134	134	134	134	134	134	134	134	134	134
Total USBR Trinity Claims	77	97	101	103	165	201	284	357	330	350	454

Feather River Water Rights Yield Analysis

Tributary Inflow Criteria  
 Diversion Cap  
 75% 25% of unimpaired flow  
 60% 40% of unimpaired flow  
 50% 50% of unimpaired flow  
 40% 60% of unimpaired flow  
 90% average regulated period share of flow during water year

	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>75% Inflow Criterion</b>											
<b>Total Annual Unimpaired Flow (TAF)</b>	2,007	2,511	2,638	2,932	3,251	3,854	4,596	5,673	5,767	6,268	7,095
<b>November through June Unimpaired Flow (TAF)</b>	1,705	2,150	2,270	2,562	2,893	3,466	4,201	5,160	5,260	5,583	6,470
<b>Delta Inflow Criterion (75% of UF, TAF)</b>	1,278	1,613	1,703	1,921	2,170	2,600	3,151	3,870	3,945	4,187	4,852
<b>Diversion Cap (TAF)</b>	426	538	568	640	723	867	1,050	1,290	1,315	1,396	1,617
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (Total 3,493 TAF)	426	538	568	640	723	867	1,050	1,290	1,315	1,396	1,617
South Feather WPA and Thermalito Water & Sewer 1920s Rights (331.8 TAF)	0	0	0	0	0	0	0	0	0	0	0
DWR 1927, 1951, and 1956 Rights (10,447.2 TAF)	0	0	0	0	0	0	0	0	0	0	0
North Yuba Water District 1958 Rights (624 TAF)	0	0	0	0	0	0	0	0	0	0	0
DWR 1967 Right (83 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flow July-October (TAF)</b>	303	360	368	371	359	388	395	513	507	685	625
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (Total 3,493 TAF)	303	355	355	355	355	355	355	355	355	355	355
South Feather WPA and Thermalito Water & Sewer 1920s Rights (331.8 TAF)	0	6	13	16	4	33	34	34	34	34	34
DWR 1927, 1951, and 1956 Rights (10,447.2 TAF)	0	0	0	0	0	0	7	124	118	297	236
North Yuba Water District 1958 Rights (624 TAF)	0	0	0	0	0	0	0	0	0	0	0
DWR 1967 Right (83 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total Riparian and Pre-1914	729	892	922	995	1,078	1,221	1,405	1,645	1,670	1,750	1,972
Total South Feather & Thermalito	0	6	13	16	4	33	34	34	34	34	34
Total DWR	0	0	0	0	0	0	7	124	118	297	236
Total North Yuba Water District	0	0	0	0	0	0	0	0	0	0	0

Yuba River Water Rights Yield Analysis

Tributary Inflow Criteria	Diversion Cap		94% average regulated period share of flow during water year														
	75%	60%	25% of unimpaired flow	40% of unimpaired flow	50% of unimpaired flow	60% of unimpaired flow	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>75% Inflow Criterion</b>																	
<b>Total Annual Unimpaired Flow (TAF)</b>	921	1,231	1,363	1,521	1,826	2,123	2,428	2,949	3,164	3,284	3,765						
<b>November through June Unimpaired Flow (TAF)</b>	884	1,151	1,268	1,438	1,746	2,006	2,280	2,780	2,993	3,079	3,681						
<b>Delta Inflow Criterion (75% of UF, TAF)</b>	663	863	951	1,078	1,310	1,505	1,710	2,085	2,245	2,310	2,761						
<b>Diversion Cap (TAF)</b>	221	288	317	359	437	502	570	695	748	770	920						
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (1,497 TAF)	221	288	317	359	437	502	570	695	748	770	920						
Nevada ID and Yuba County Water District 1920s Rights (212.6 TAF)	-	-	-	-	-	-	-	-	-	-	-						
Yuba County Water Agency 1927 Right (1,159 TAF)	-	-	-	-	-	-	-	-	-	-	-						
Nevada ID 1930s Rights (212.8 TAF)	-	-	-	-	-	-	-	-	-	-	-						
North Yuba Water District 1958 Rights (145.1 TAF)	-	-	-	-	-	-	-	-	-	-	-						
Nevada ID 1961 Right (101.2 TAF)	-	-	-	-	-	-	-	-	-	-	-						
Yuba County Water Agency 1966 Rights (760 TAF)	-	-	-	-	-	-	-	-	-	-	-						
<b>Remaining Flow July-October (TAF)</b>	37	80	95	83	80	117	148	169	171	204	84						
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (1,497 TAF)	37	80	85	83	80	85	85	85	85	85	84						
Nevada ID and Yuba County Water District 1920s Rights (212.6 TAF)	-	-	10	-	-	12	12	12	12	12	-						
Yuba County Water Agency 1927 Right (1,159 TAF)	-	-	-	-	-	20	51	66	66	66	-						
Nevada ID 1930s Rights (212.8 TAF)	-	-	-	-	-	-	-	6	8	12	-						
North Yuba Water District 1958 Rights (145.1 TAF)	-	-	-	-	-	-	-	-	-	8	-						
Nevada ID 1961 Right (101.2 TAF)	-	-	-	-	-	-	-	-	-	6	-						
Yuba County Water Agency 1966 Rights (760 TAF)	-	-	-	-	-	-	-	-	-	15	-						
<b>Total Riparian &amp; Pre-1914</b>	258	368	402	442	516	587	655	780	833	855	1,004						
<b>Total Nevada ID and YCWD Yields</b>	0	0	10	0	0	12	12	12	12	12	0						
<b>Total Yuba County Water Agency Yields</b>	0	0	0	0	0	20	51	66	66	81	0						
<b>Total North Yuba Water District Yield</b>	0	0	0	0	0	0	0	0	0	8	0						
<b>Total Nevada ID Yield</b>	0	0	0	0	0	0	0	0	0	6	0						



Bear River Water Rights Yield Analysis

Tributary Inflow Criteria  
 Diversion Cap  
 75% 25% of unimpaired flow  
 60% 40% of unimpaired flow  
 50% 50% of unimpaired flow  
 40% 60% of unimpaired flow  
 97% average regulated period share of flow during water year

	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>75% Inflow Criterion</b>											
<b>Total Unimpaired Flow (TAF)</b>	102	137	171	181	247	290	384	434	462	489	567
<b>November through June Unimpaired Flow (TAF)</b>	102	130	165	177	239	278	365	410	453	482	553
<b>Delta Inflow Criterion (75% of UF, TAF)</b>	76	98	124	132	179	209	274	308	340	361	415
<b>Diversion Cap (TAF)</b>	25	33	41	44	60	70	91	103	113	120	138
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (92.1 TAF)	25	33	41	44	60	70	89	89	89	89	89
Camp Far West 1918 Right (4.8 TAF)	0	0	0	0	0	0	2	5	5	5	5
Nevada ID 1921 Rights (77.5 TAF)	0	0	0	0	0	0	0	9	20	27	45
Camp Far West 1922 and 1924 Rights (8.6 TAF)	0	0	0	0	0	0	0	0	0	0	0
Nevada ID 1929 Right (50.9 TAF)	0	0	0	0	0	0	0	0	0	0	0
Camp Far West 1941 Right (5 TAF)	0	0	0	0	0	0	0	0	0	0	0
South Sutter Water District 1952 Right (139.5 TAF)	0	0	0	0	0	0	0	0	0	0	0
Lake of the Pines 1966 Right (4.2 TAF)	0	0	0	0	0	0	0	0	0	0	0
South Sutter Water District 1981 Right (130.7 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flow July-October (TAF)</b>	1	7	6	4	8	12	18	24	9	7	14
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (92.1 TAF)	1	3	3	3	3	3	3	3	3	3	3
Camp Far West 1918 Right (4.8 TAF)	0	0	0	0	0	0	0	0	0	0	0
Nevada ID 1921 Rights (77.5 TAF)	0	3	2	1	3	3	3	3	3	3	3
Camp Far West 1922 and 1924 Rights (8.6 TAF)	0	0	0	0	0	0	0	0	0	0	0
Nevada ID 1929 Right (50.9 TAF)	0	0	0	0	2	2	2	2	2	0	2
Camp Far West 1941 Right (5 TAF)	0	0	0	0	0	0	0	0	0	0	0
South Sutter Water District 1952 Right (139.5 TAF)	0	0	0	0	0	4	5	5	1	0	5
Lake of the Pines 1966 Right (4.2 TAF)	0	0	0	0	0	0	0	0	0	0	0
South Sutter Water District 1981 Right (130.7 TAF)	0	0	0	0	0	0	5	5	0	0	1
Total Riparian & Pre-1914 Yield	26	36	44	47	63	73	92	92	92	92	92
Total Camp Far West Yield	0	0	0	0	1	1	3	5	5	5	5
Total Nevada ID Yield	0	3	2	1	4	4	4	13	24	30	49
Total South Sutter Water District Yield	0	0	0	0	0	4	9	9	1	0	6
Total Lake of the Pines Yield	0	0	0	0	0	0	0	0	0	0	0

American River Water Rights Yield Analysis

Tributary Inflow Criteria  
 Diversion Cap  
 75% 25% of unimpaired flow  
 60% 40% of unimpaired flow  
 50% 50% of unimpaired flow  
 40% 60% of unimpaired flow

95% average regulated period share of flow during water year

	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>75% Instream Flow Criterion</b>											
<b>Total Annual Unimpaired Flow (TAF)</b>	1,041	1,252	1,416	1,613	2,023	2,521	2,844	3,300	3,554	3,886	4,525
<b>November through June Unimpaired Flow (TAF)</b>	984	1,188	1,363	1,556	1,983	2,422	2,731	3,140	3,311	3,687	4,340
<b>Delta Inflow Criterion (75% of UF, TAF)</b>	738	891	1,022	1,167	1,487	1,817	2,048	2,355	2,483	2,766	3,255
<b>Diversion Cap (TAF)</b>	246	297	341	389	496	606	683	785	828	922	1,085
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (286 TAF)	246	273	273	273	273	273	273	273	273	273	273
Nevada ID 1930s Rights (5.0 TAF)	0	5	5	5	5	5	5	5	5	5	5
City of Sacramento 1940s Rights (715.2 TAF)	0	19	63	111	218	328	405	507	550	644	683
Georgetown Divide 1955 Rights (20.4 TAF)	0	0	0	0	0	0	0	0	0	0	19
Placer County Water Agency 1958 Rights (1,291 TAF)	0	0	0	0	0	0	0	0	0	0	105
USBR 1958 Rights (5,347.8 TAF)	0	0	0	0	0	0	0	0	0	0	0
City of Sacramento 1958 Rights (95.1 TAF)	0	0	0	0	0	0	0	0	0	0	0
Foresthill PUD 1964 Rights (24.1 TAF)	0	0	0	0	0	0	0	0	0	0	0
El Dorado ID 1992 Rights (47.9 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flow July-October (TAF)</b>	57	64	53	57	40	99	113	160	243	198	185
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (286 TAF)	13	13	13	13	13	13	13	13	13	13	13
Nevada ID 1930s Rights (5.0 TAF)	0	0	0	0	0	0	0	0	0	0	0
City of Sacramento 1940s Rights (715.2 TAF)	32	32	32	32	26	32	32	32	32	32	32
Georgetown Divide 1955 Rights (20.4 TAF)	1	1	1	1	0	1	1	1	1	1	1
Placer County Water Agency 1958 Rights (1,291 TAF)	11	18	7	11	0	53	58	58	58	58	58
USBR 1958 Rights (5,347.8 TAF)	0	0	0	0	0	0	9	55	139	94	80
City of Sacramento 1958 Rights (95.1 TAF)	0	0	0	0	0	0	0	0	0	0	0
Foresthill PUD 1964 Rights (24.1 TAF)	0	0	0	0	0	0	0	0	0	0	0
El Dorado ID 1992 Rights (47.9 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total Riparian & Pre-1914 Yield	259	286	286	286	286	286	286	286	286	286	286
Total Nevada ID Yield	0	5	5	5	5	5	5	5	5	5	5
Total City of Sacramento Yield	32	51	95	143	244	360	437	539	582	676	715
Total Georgetown Divide PUD Yield	1	1	1	1	0	1	1	1	1	1	20
Total Placer County Water Agency Yield	11	18	7	11	0	53	58	58	58	58	163
Total USBR Yield	0	0	0	0	0	0	9	55	139	94	80
Total Foresthill PUD Yield	0	0	0	0	0	0	0	0	0	0	0
Total El Dorado ID Yield	0	0	0	0	0	0	0	0	0	0	0

Sacramento River at Feather River Confluence Water Rights Yield Analysis

Tributary Inflow Criteria  
 75%  
 60%  
 50%  
 40%

Diversion Cap  
 25% of unimpaired flow  
 40% of unimpaired flow  
 50% of unimpaired flow  
 60% of unimpaired flow  
 87% average regulated period share of flow during water year

	Water Year Flow Percentile										
	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>75% Inflow Criterion Scenario</b>											
<b>Total Annual Unimpaired Flow (TAF)</b>	5,572	6,984	7,371	7,877	8,860	10,162	13,046	14,151	14,945	15,697	19,369
<b>November through June Unimpaired Flow (TAF)</b>	4,638	5,876	6,170	6,806	7,721	9,163	11,451	12,658	13,688	14,434	17,849
<b>Delta Inflow Criterion (75% of UF, TAF)</b>	3,479	4,407	4,627	5,104	5,791	6,872	8,588	9,494	10,266	10,826	13,386
<b>Diversion Cap (TAF)</b>	1,160	1,469	1,542	1,701	1,930	2,291	2,863	3,165	3,422	3,609	4,462
Paramount Riparian and Prior Pre-1914 Water Right Holders (42,261.8 TAF)	1,160	1,469	1,542	1,701	1,930	2,291	2,863	3,165	3,422	3,609	4,462
Water Right Holders with Priorities 1915 to Early 1927 (1,352.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
Early CVP Sacramento River State Filings, Other Claimants, 1927-1936 (11,263.6 TAF)	0	0	0	0	0	0	0	0	0	0	0
1938 CVP and Post-War Claimants through June 1951 (8,145.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
1951 Feather River Project, CVP State Filings, Other Claimants through 1961 (18,901.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flows, July-October (TAF)</b>	934	1,107	1,201	1,071	1,139	999	1,595	1,493	1,257	1,263	1,520
Paramount Riparian and Prior Pre-1914 Water Right Holders (42,261.8 TAF)	934	1,107	1,201	1,071	1,139	999	1,595	1,493	1,257	1,263	1,520
Water Right Holders with Priorities 1915 to Early 1927 (1,352.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
Early CVP Sacramento River State Filings, Other Claimants, 1927-1936 (11,263.6 TAF)	0	0	0	0	0	0	0	0	0	0	0
1938 CVP and Post-War Claimants through June 1951 (8,145.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
1951 Feather River Project, CVP State Filings, Other Claimants through 1961 (18,901.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (1,433.7 TAF)	2,094	2,576	2,743	2,773	3,069	3,290	4,458	4,657	4,679	4,872	5,983
Total, 1915-Early 1927 Claimants (up to 1,352.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total 1927-1936 Claimants (14,613.5 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total 1938-June 1951 Claimants (8,145.4 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total 1951 through 1961 Claimants (18,901.4 TAF)	0	0	0	0	0	0	0	0	0	0	0

Stanislaus River Water Rights Yield Analysis

	Tributary Inflow Criteria		Diversion Cap								
	60%	50%	40%	30%	85% Average of Regulated Period to Total Flow during Water Year						
	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>60% Instream Flow Criterion</b>											
<b>Total Annual Unimpaired Flow (TAF)</b>	457	592	637	680	894	1,107	1,265	1,359	1,460	1,559	1,912
<b>Feb-June Unimpaired Flow Level (TAF)</b>	382	500	551	566	740	822	994	1,077	1,127	1,180	1,459
<b>Delta Inflow Criterion (60% of UF, TAF)</b>	229	300	330	340	444	493	596	646	676	708	875
<b>Diversion Cap (TAF)</b>	153	200	220	226	296	329	398	431	451	472	583
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (29.4 TAF)	25	25	25	25	25	25	25	25	25	25	25
Pre-1914 Oakdale ID Claims (1,371.4 TAF)	128	175	195	201	271	304	372	406	425	447	558
Total USBR Post-1914 Claims (3,400 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flows, July through January</b>	75	92	87	114	154	285	271	282	333	380	454
Paramount Riparian and Possibly Prior Pre-1914 Water Right Holders (29.4 TAF)	4	4	4	4	4	4	4	4	4	4	4
Pre-1914 Oakdale ID Claims (1,371.4 TAF)	70	88	82	110	150	199	199	199	199	199	199
Total USBR Post-1914 Claims (3,400 TAF)	0	0	0	0	0	81	67	79	129	176	250
Total Riparian and Pre-1914 Yield	29	29	29	29	29	29	29	29	29	29	29
Total Oakdale ID Claims	198	262	277	311	421	503	572	605	625	646	758
Total USBR Claims	0	0	0	0	0	81	67	79	129	176	250

Tuolumne River Water Rights Yield Analysis

	Tributary Inflow Criteria		Diversion Cap								
	60%	50%	40%	30%	76% Average of Regulated Period to Total Flow during Water Year						
	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>60% Instream Flow Criterion</b>											
<b>Total Annual Unimpaired Flow (TAF)</b>	836	1,053	1,107	1,183	1,416	1,786	2,030	2,181	2,363	2,483	3,093
<b>Feb-June Unimpaired Flow Level (TAF)</b>	675	898	961	984	1,189	1,299	1,578	1,704	1,755	1,852	2,188
<b>Delta Inflow Criterion (60% of UF, TAF)</b>	405	539	577	591	713	779	947	1,023	1,053	1,111	1,313
<b>Diversion Cap (TAF)</b>	270	359	384	394	475	520	631	682	702	741	875
Gallo Riparian and Tuolumne Utilities District Pre-1914 Claims (22.6 TAF)	17	17	17	17	17	17	17	17	17	17	17
Turlock ID/Modesto ID 1855 and 1871 Claims (3,382.1 TAF)	253	342	367	376	458	502	614	665	685	724	858
San Francisco 1901, 1902, and 1908 Claims (1,840.1 TAF)	0	0	0	0	0	0	0	0	0	0	0
Modesto ID 1908 Claim (40 TAF)	0	0	0	0	0	0	0	0	0	0	0
San Francisco 1908 through 1911 Claims (4,114.9 TAF)	0	0	0	0	0	0	0	0	0	0	0
Turlock ID 1911 Claim (100 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flow, July-January</b>	161	154	146	199	228	487	451	477	609	631	904
Gallo Riparian and Tuolumne Utilities District Pre-1914 Claims (22.6 TAF)	5	5	5	5	5	5	5	5	5	5	5
Turlock ID/Modesto ID 1855 and 1871 Claims (3,382.1 TAF)	155	149	141	193	222	482	446	471	603	626	804
San Francisco 1901, 1902, and 1908 Claims (1,840.1 TAF)	0	0	0	0	0	0	0	0	0	0	95
Modesto ID 1908 Claim (40 TAF)	0	0	0	0	0	0	0	0	0	0	0
San Francisco 1908 through 1911 Claims (4,114.9 TAF)	0	0	0	0	0	0	0	0	0	0	0
Turlock ID 1911 Claim (100 TAF)	0	0	0	0	0	0	0	0	0	0	0
Total Riparian and Senior Pre-1914 Claims	23	23	23	23	23	23	23	23	23	23	23
Total Turlock ID/Modesto ID Claims	408	491	508	570	680	984	1,060	1,136	1,288	1,349	1,662
Total San Francisco Claims	0	0	0	0	0	0	0	0	0	0	95

Merced River Water Rights Yield Analysis

	Tributary Inflow Criteria		Diversion Cap								
	60%	50%	40%	30%	81% Average of Regulated Period to Total Flow during Water Year						
	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>60% Instream Flow Criterion</b>											
<b>Total Annual Unimpaired Flow (TAF)</b>	409	492	527	562	669	906	1,077	1,160	1,220	1,389	1,708
<b>Jan-June Unimpaired Flow Level (TAF)</b>	326	432	459	471	568	648	805	924	977	1,030	1,223
<b>Delta Inflow Criterion (60% of UF, TAF)</b>	196	259	275	283	341	389	483	554	586	618	734
<b>Diversion Cap (TAF)</b>	130	173	183	189	227	259	322	370	391	412	489
Decreases + Riparian Claims (282.7 TAF)	130	173	183	189	227	228	228	228	228	228	228
Merced ID Pre-1914 Claims + SDUs (4,193.3 TAF)	0	0	0	0	0	31	94	142	163	184	261
<b>Remaining Flow, July-January</b>	82	60	69	91	101	258	272	236	243	359	485
Decreases + Riparian Claims (282.7 TAF)	55	55	55	55	55	55	55	55	55	55	55
Merced ID Pre-1914 Claims + SDUs (4,193.3 TAF)	27	5	14	36	46	203	217	181	188	304	430
Total Riparian and Pre-1914 Yield	185	228	238	244	282	283	283	283	283	283	283
Total Merced ID Pre-1914 Yield	27	5	14	36	46	235	311	323	351	489	692

San Joaquin River Water Rights Yield Analysis

	Tributary Inflow Criteria		Diversion Cap								
	60%	50%	40%	30%	77% Average of Regulated Period to Total Flow during Water Year						
	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
<b>60% Instream Flow Criterion</b>											
<b>Total Annual Unimpaired Flow (TAF)</b>	813	928	1,052	1,128	1,257	1,449	1,854	2,047	2,195	2,322	3,018
<b>Feb-June Unimpaired Flow Level (TAF)</b>	656	749	839	881	1,007	1,137	1,458	1,572	1,623	1,779	2,075
<b>Delta Inflow Criterion (60% of UF, TAF)</b>	394	450	503	529	604	682	875	943	974	1,068	1,245
<b>Diversion Cap (TAF)</b>	262	300	335	353	403	455	583	629	649	712	830
Paramount Riparian Claims (171.7 TAF)	131	131	131	131	131	131	131	131	131	131	131
Pre-1914 San Joaquin River Exchange Contractors Claims (816.6 TAF)	131	168	204	221	271	323	452	497	518	580	625
Pre-1914 Chowchilla, Tranquillity & James Claims (111.1 TAF)	0	0	0	0	0	0	0	0	0	0	74
Patterson ID 1910 Claims (60.2 TAF)	0	0	0	0	0	0	0	0	0	0	0
Post-1914 USBR Claims (623.2 TAF)	0	0	0	0	0	0	0	0	0	0	0
<b>Remaining Flow, July-December</b>	157	179	214	246	250	312	396	475	572	542	942
Paramount Riparian Claims (171.7 TAF)	40	40	40	40	40	40	40	40	40	40	40
Pre-1914 San Joaquin River Exchange Contractors Claims (816.6 TAF)	117	139	173	191	191	191	191	191	191	191	191
Pre-1914 Chowchilla, Tranquillity & James Claims (111.1 TAF)	0	0	0	15	19	26	26	26	26	26	26
Patterson ID 1910 Claims (60.2 TAF)	0	0	0	0	0	14	14	14	14	14	14
Post-1914 USBR Claims (623.2 TAF)	0	0	0	0	0	40	124	146	146	146	146
Total Riparian Claims Yield	172	172	172	172	172	172	172	172	172	172	172
Total SJREC Claims Yield	248	307	377	413	463	515	643	689	709	772	817
Total Chowchilla, et al, Yield	0	0	0	15	19	26	26	26	26	26	100
Total Patterson ID Yield	0	0	0	0	0	14	14	14	14	14	14
Total USBR Yield	0	0	0	0	0	40	124	146	146	146	146

## **Appendix D**

### **Section D.2 Unimpaired Flow Hydrology**



Unimpaired Flow Hydrology for Trinity, Sacramento, and San Joaquin River Basins  
(Thousands of Acre-Feet)

Indicator	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	Regulated Period Total	Regulated Period as % of Total Flow
<b>Trinity River at Lewiston</b>															
Minimum Flow	0	4	7	10	14	19	37	27	7	2	0	0	200	176	85.9%
Maximum Flow	134	413	544	552	648	515	380	662	514	248	77	35	2,990	2,587	98.9%
Average Flow	17	52	102	130	153	181	209	249	129	40	13	8	1,283	1,205	94.0%
10th Percentile	3	10	18	26	46	80	111	111	42	11	4	1	679	624	90.7%
20th Percentile	7	13	24	34	59	100	141	150	59	17	6	3	789	743	92.4%
25th Percentile	8	15	28	43	76	114	147	160	63	19	7	4	824	785	92.9%
30th Percentile	9	17	36	47	83	134	160	178	77	20	7	4	866	838	93.3%
40th Percentile	10	22	43	69	111	147	185	201	86	24	9	6	1,025	968	93.9%
Median Flow	12	33	59	93	130	165	207	223	97	27	10	7	1,133	1,064	94.5%
60th Percentile	14	42	86	120	153	179	234	262	110	35	12	8	1,424	1,341	94.9%
70th Percentile	16	54	119	149	167	199	252	282	156	42	15	10	1,582	1,455	95.3%
75th Percentile	17	66	149	173	195	214	260	307	178	48	16	10	1,611	1,529	95.6%
80th Percentile	19	76	163	209	234	230	270	339	204	55	18	12	1,683	1,599	95.8%
90th Percentile	29	128	240	295	286	312	316	411	254	73	23	16	2,035	1,930	96.7%
<b>Sacramento River to Feather Confluence (including Pit River,</b>															
Minimum Flow	201	223	259	284	321	352	290	284	238	203	177	184	3,825	2,633	68.8%
Maximum Flow	1,377	2,897	4,792	6,915	6,817	7,171	3,556	2,481	1,851	771	477	442	25,936	23,892	93.3%
Average Flow	356	594	1,210	1,778	1,944	1,838	1,380	955	564	363	302	299	11,583	10,263	86.9%
10th Percentile	243	265	322	449	554	728	610	459	327	265	220	219	5,572	4,638	81.4%
20th Percentile	258	313	421	576	758	983	786	578	386	283	241	242	6,984	5,876	83.3%
25th Percentile	271	324	480	653	911	1,079	808	605	403	295	254	250	7,371	6,170	84.3%
30th Percentile	287	341	509	693	1,017	1,186	835	646	418	302	266	266	7,877	6,806	85.3%
40th Percentile	308	379	624	931	1,221	1,360	985	752	456	319	280	274	8,860	7,721	86.5%
Median Flow	325	430	876	1,321	1,589	1,518	1,123	812	481	334	296	300	10,162	9,163	87.8%
60th Percentile	351	486	1,039	1,645	2,044	1,714	1,326	955	546	375	318	320	13,046	11,451	88.8%
70th Percentile	381	622	1,274	2,156	2,351	2,134	1,656	1,121	612	400	341	335	14,151	12,658	89.9%
75th Percentile	405	651	1,474	2,445	2,585	2,293	1,830	1,255	661	408	352	340	14,945	13,688	90.6%
80th Percentile	420	758	2,062	2,858	2,795	2,456	2,073	1,343	706	431	358	346	15,697	14,434	91.1%
90th Percentile	451	1,132	2,690	3,890	3,921	3,292	2,531	1,568	917	493	378	376	19,369	17,849	92.1%

Unimpaired Flow Hydrology for Trinity, Sacramento, and San Joaquin River Basins  
(Thousands of Acre-Feet)

Indicator	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	Regulated Period Total	Regulated Period as % of Total Flow
<b>Feather River</b>															
														<b>November Through June</b>	
Minimum Flow	53	57	62	69	89	92	100	101	64	63	58	46	995	733	73.7%
Maximum Flow	855	1,240	1,997	2,539	2,678	2,283	1,830	1,700	1,122	370	197	154	9,418	8,608	91.4%
Average Flow	106	191	376	497	555	663	682	638	324	151	100	87	4,370	3,926	89.8%
10th Percentile	63	73	96	132	181	279	307	216	109	86	67	59	2,007	1,705	84.9%
20th Percentile	70	92	119	155	220	369	379	316	159	98	74	65	2,511	2,150	85.6%
25th Percentile	73	100	126	160	247	396	416	361	176	106	81	72	2,638	2,270	86.1%
30th Percentile	77	107	139	184	303	415	471	402	186	113	84	73	2,932	2,562	87.4%
40th Percentile	82	121	168	263	366	465	528	444	220	119	91	78	3,251	2,893	89.0%
Median Flow	93	132	205	320	467	540	611	537	241	134	96	86	3,854	3,466	89.9%
60th Percentile	103	144	270	402	565	646	686	631	294	142	103	89	4,596	4,201	91.4%
70th Percentile	110	178	349	554	674	743	837	784	342	164	108	97	5,673	5,160	91.0%
75th Percentile	114	194	405	668	748	782	885	838	401	173	112	99	5,767	5,260	91.2%
80th Percentile	120	219	550	724	781	870	932	939	453	198	118	104	6,268	5,583	89.1%
90th Percentile	143	337	859	1,131	1,103	1,216	1,134	1,168	662	253	143	120	7,095	6,470	91.2%
<b>Yuba River</b>															
														<b>November Through June</b>	
Minimum Flow	0	13	17	20	29	35	58	78	17	6	0	0	370	324	87.6%
Maximum Flow	451	677	1,341	1,482	1,351	993	885	929	713	275	66	45	4,925	4,729	96.0%
Average Flow	32	90	200	266	293	330	362	411	206	56	23	19	2,287	2,157	94.3%
10th Percentile	13	21	33	47	84	148	189	161	44	15	9	10	921	884	96.0%
20th Percentile	17	29	43	63	127	199	231	229	75	21	12	13	1,231	1,151	93.5%
25th Percentile	17	31	48	82	143	213	249	265	89	25	13	13	1,363	1,268	93.0%
30th Percentile	19	35	57	100	155	218	263	282	107	27	14	15	1,521	1,438	94.5%
40th Percentile	22	39	74	133	186	244	307	330	127	34	18	17	1,826	1,746	95.6%
Median Flow	25	48	108	156	240	281	336	397	162	38	19	19	2,123	2,006	94.5%
60th Percentile	29	59	134	224	292	320	403	461	203	46	24	20	2,428	2,280	93.9%
70th Percentile	33	72	189	309	344	373	429	506	246	63	27	22	2,949	2,780	94.3%
75th Percentile	34	91	248	354	411	394	454	539	284	67	29	23	3,164	2,993	94.6%
80th Percentile	36	107	286	400	452	421	491	564	309	84	32	25	3,284	3,079	93.8%
90th Percentile	43	174	414	573	566	578	539	708	428	108	42	30	3,765	3,681	97.8%

Unimpaired Flow Hydrology for Trinity, Sacramento, and San Joaquin River Basins  
(Thousands of Acre-Feet)

Indicator	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	Regulated Period Total	Regulated Period as % of Total Flow
<b>November Through June</b>															
<b>Bear River</b>															
Minimum Flow	0	0	0	0	2	1	0	0	0	0	0	0	13	9	69.2%
Maximum Flow	85	108	225	244	313	208	175	60	52	36	33	18	740	736	99.5%
Average Flow	4	14	41	62	69	61	38	17	7	3	2	2	320	309	96.6%
10th Percentile	0	1	6	9	14	16	7	4	0	0	0	0	102	102	99.2%
20th Percentile	0	3	10	13	21	26	13	6	2	0	0	0	137	130	95.2%
25th Percentile	1	4	12	15	25	31	14	8	3	0	0	0	171	165	96.8%
30th Percentile	1	5	14	19	27	35	18	10	3	1	0	0	181	177	97.7%
40th Percentile	2	6	18	30	35	41	22	12	4	2	0	1	247	239	96.7%
Median Flow	3	8	23	43	52	50	25	15	5	2	1	1	290	278	95.9%
60th Percentile	4	10	31	52	67	61	34	18	7	3	1	2	384	365	95.3%
70th Percentile	5	14	38	70	88	71	49	20	8	3	2	2	434	410	94.5%
75th Percentile	5	16	54	93	104	76	56	22	10	4	2	3	462	453	98.1%
80th Percentile	6	18	65	111	113	88	62	25	11	5	3	3	489	482	98.6%
90th Percentile	7	32	112	152	146	121	74	40	14	7	3	4	567	553	97.5%
<b>November Through June</b>															
<b>American River</b>															
Minimum Flow	0	6	3	11	24	42	75	92	17	0	0	0	349	334	95.7%
Maximum Flow	335	985	1,509	1,988	1,866	1,172	1,254	1,136	942	382	90	61	6,380	5,842	91.6%
Average Flow	25	85	200	298	325	387	441	501	265	66	16	12	2,621	2,503	95.5%
10th Percentile	9	15	25	44	95	153	212	180	48	5	0	2	1,041	984	94.5%
20th Percentile	11	21	35	58	119	212	264	260	86	13	3	4	1,252	1,188	94.9%
25th Percentile	12	26	42	70	138	228	292	283	107	16	4	5	1,416	1,363	96.3%
30th Percentile	13	30	48	98	153	239	309	326	131	20	6	6	1,613	1,556	96.5%
40th Percentile	15	34	81	124	205	293	372	401	169	33	10	8	2,023	1,983	98.0%
Median Flow	17	44	99	159	257	341	417	487	222	42	13	10	2,521	2,422	96.1%
60th Percentile	19	53	128	255	317	382	462	553	282	62	17	12	2,844	2,731	96.0%
70th Percentile	22	63	164	353	361	440	528	627	352	84	19	14	3,300	3,140	95.2%
75th Percentile	26	77	184	421	425	449	554	653	375	88	21	15	3,554	3,311	93.2%
80th Percentile	29	90	276	486	513	528	589	692	422	96	25	17	3,886	3,687	94.9%
90th Percentile	36	161	458	635	696	665	657	901	516	134	34	21	4,525	4,340	95.9%

Unimpaired Flow Hydrology for Trinity, Sacramento, and San Joaquin River Basins  
(Thousands of Acre-Feet)

Indicator	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	Regulated Period Total	Regulated Period as % of Total Flow
<b>Sacramento Valley Total</b>															
Minimum Flow	302	324	353	386	482	548	527	582	398	287	244	259	5,584	4,065	72.8%
Maximum Flow	3,185	5,129	9,730	12,592	13,050	11,922	7,687	5,762	4,257	1,701	794	670	48,368	44,187	91.4%
Average Flow	527	998	2,076	3,013	3,299	3,343	2,939	2,526	1,387	646	444	420	21,619	19,581	90.6%
10th Percentile	344	399	487	682	972	1,409	1,326	1,072	526	389	303	305	10,049	8,779	87.4%
20th Percentile	373	453	636	870	1,350	1,848	1,716	1,415	756	431	345	336	12,363	10,624	85.9%
25th Percentile	390	504	710	979	1,620	2,019	1,783	1,558	870	460	368	345	13,599	11,909	87.6%
30th Percentile	403	521	791	1,076	1,691	2,154	1,989	1,686	886	484	380	366	14,670	13,051	89.0%
40th Percentile	419	585	1,014	1,571	2,074	2,503	2,281	2,092	1,018	517	400	388	16,461	14,710	89.4%
Median Flow	462	660	1,303	2,094	2,705	2,639	2,737	2,258	1,143	569	419	414	19,436	17,687	91.0%
60th Percentile	510	820	1,609	2,722	3,387	3,163	3,000	2,550	1,312	610	463	442	23,670	21,209	89.6%
70th Percentile	539	954	2,059	3,671	3,882	3,796	3,397	2,986	1,471	715	488	475	27,725	25,397	91.6%
75th Percentile	573	1,052	2,456	4,160	4,512	4,069	3,653	3,287	1,776	750	508	485	28,202	26,048	92.4%
80th Percentile	594	1,236	3,492	4,803	5,008	4,442	4,216	3,640	1,921	798	552	510	30,108	27,965	92.9%
90th Percentile	681	1,977	4,271	6,604	6,460	5,715	5,008	4,537	2,519	1,025	590	534	35,614	33,016	92.7%
<b>Stanislaus River</b>															
Minimum Flow	0	2	3	3	1	13	35	44	11	0	0	0	155	107	69.0%
Maximum Flow	88	366	412	659	532	415	433	595	632	286	77	38	2,950	3,266	110.7%
Average Flow	10	28	53	82	96	128	192	283	176	53	13	7	1,120	957	85.5%
10th Percentile	3	6	9	13	23	51	100	101	41	7	2	1	457	382	83.7%
20th Percentile	4	7	12	18	33	71	123	163	59	13	4	2	592	500	84.4%
25th Percentile	5	8	13	23	40	78	136	175	71	16	5	3	637	551	86.4%
30th Percentile	6	9	14	25	45	82	152	188	96	20	6	3	680	566	83.3%
40th Percentile	7	10	19	34	55	97	173	238	127	27	7	4	894	740	82.7%
Median Flow	8	14	25	42	72	105	192	281	167	36	9	5	1,107	822	74.3%
60th Percentile	10	17	32	59	98	124	207	322	193	51	11	5	1,265	994	78.6%
70th Percentile	11	23	45	88	108	143	227	355	223	63	14	7	1,359	1,077	79.2%
75th Percentile	12	27	50	104	115	154	246	375	240	72	17	8	1,460	1,127	77.2%
80th Percentile	12	31	58	117	130	161	254	390	248	83	19	10	1,559	1,180	75.7%
90th Percentile	16	48	124	179	195	233	275	439	331	111	26	13	1,912	1,459	76.3%

Unimpaired Flow Hydrology for Trinity, Sacramento, and San Joaquin River Basins  
(Thousands of Acre-Feet)

Indicator	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	Regulated Period Total	Regulated Period as % of Total Flow	
														<b>February Through June</b>		
<b>Tuolumne River</b>																
Minimum Flow	0	1	4	5	8	23	79	106	17	10	0	0	384	330	85.9%	
Maximum Flow	153	522	650	1,033	616	579	660	960	1,016	652	205	104	4,632	2,904	62.7%	
Average Flow	17	48	88	125	147	191	274	446	353	123	26	12	1,851	1,411	76.2%	
10th Percentile	4	8	13	22	42	86	162	214	90	17	3	1	836	675	80.8%	
20th Percentile	5	9	20	33	60	117	186	294	137	22	6	3	1,053	898	85.3%	
25th Percentile	6	12	24	40	64	125	195	326	158	28	8	3	1,107	961	86.8%	
30th Percentile	7	14	27	43	70	129	221	347	222	36	10	4	1,183	984	83.2%	
40th Percentile	9	17	35	56	88	146	248	380	291	57	14	5	1,416	1,189	83.9%	
Median Flow	11	24	48	78	119	160	266	449	336	70	18	7	1,786	1,299	72.7%	
60th Percentile	12	35	58	107	145	178	290	495	401	109	21	10	2,030	1,578	77.8%	
70th Percentile	16	48	81	133	166	216	319	537	451	142	27	13	2,181	1,704	78.1%	
75th Percentile	18	55	93	150	193	232	328	551	476	161	30	16	2,363	1,755	74.2%	
80th Percentile	21	68	106	178	231	255	344	574	529	189	34	18	2,483	1,852	74.6%	
90th Percentile	39	96	218	258	308	338	385	658	598	302	55	22	3,093	2,188	70.8%	
														<b>February Through June</b>		
<b>Merced River</b>																
Minimum Flow	0	1	1	3	3	8	31	39	13	4	0	0	151	128	44.5%	
Maximum Flow	51	259	373	634	362	370	429	565	656	352	97	47	2,786	1,837	93.6%	
Average Flow	7	20	43	66	85	101	147	241	171	56	13	6	956	746	80.6%	
10th Percentile	1	4	5	10	19	37	80	102	43	8	2	0	409	326	79.8%	
20th Percentile	2	5	8	13	26	52	93	135	53	11	3	0	492	432	87.8%	
25th Percentile	2	6	10	16	30	56	101	163	69	15	4	1	527	459	87.0%	
30th Percentile	3	6	10	20	34	60	113	175	83	18	4	1	562	471	83.8%	
40th Percentile	4	8	16	23	47	69	129	205	114	26	6	2	669	568	84.9%	
Median Flow	5	9	22	37	55	82	142	246	147	33	8	4	906	648	71.5%	
60th Percentile	6	14	28	48	73	96	158	268	171	45	11	5	1,077	805	74.8%	
70th Percentile	7	18	34	66	104	115	171	290	208	52	13	6	1,160	924	79.7%	
75th Percentile	9	21	42	82	118	131	181	309	227	62	15	7	1,220	977	80.1%	
80th Percentile	11	22	52	95	148	152	192	321	261	79	17	8	1,389	1,030	74.1%	
90th Percentile	16	41	100	159	201	167	216	387	335	122	31	12	1,708	1,223	71.6%	

Unimpaired Flow Hydrology for Trinity, Sacramento, and San Joaquin River Basins  
(Thousands of Acre-Feet)

Indicator	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	Regulated Period Total	Regulated Period as % of Total Flow
<b>San Joaquin River</b>															
Minimum Flow	5	6	7	10	11	19	57	75	35	16	9	4	361	277	54.7%
Maximum Flow	126	247	461	735	472	485	613	1,096	1,166	752	280	170	4,642	2,896	88.3%
Average Flow	19	33	59	83	103	144	236	432	374	168	52	24	1,728	1,289	76.6%
10th Percentile	7	10	15	18	30	67	127	209	121	41	14	8	813	656	80.7%
20th Percentile	10	13	16	24	42	83	155	240	148	46	18	10	928	749	80.7%
25th Percentile	10	15	19	28	49	89	166	273	172	51	21	11	1,052	839	79.7%
30th Percentile	11	16	21	33	55	95	173	314	212	58	23	12	1,128	881	78.2%
40th Percentile	13	17	31	40	63	108	203	372	278	91	28	14	1,257	1,007	80.1%
Median Flow	16	22	36	48	76	119	234	419	325	115	34	15	1,449	1,137	78.5%
60th Percentile	19	26	43	67	99	134	249	464	373	145	42	18	1,854	1,458	78.7%
70th Percentile	21	33	54	82	113	162	279	509	476	181	51	22	2,047	1,572	76.8%
75th Percentile	24	37	62	95	134	174	289	543	500	213	63	27	2,195	1,623	73.9%
80th Percentile	25	42	73	112	163	201	308	594	581	266	73	33	2,322	1,779	76.6%
90th Percentile	34	66	114	168	208	232	350	704	642	364	125	42	3,018	2,075	68.8%
<b>San Joaquin Valley Total</b>															
Minimum Flow	9	13	17	23	25	65	204	266	76	36	11	7	1,061	879	45.8%
Maximum Flow	426	1,535	2,213	3,813	2,315	2,603	2,578	3,563	3,792	2,151	731	346	18,977	12,250	90.8%
Average Flow	55	140	280	425	529	668	929	1,467	1,117	413	107	50	6,181	4,711	78.7%
10th Percentile	16	29	47	67	124	266	501	629	304	78	24	13	2,535	2,033	80.2%
20th Percentile	25	40	60	101	180	366	559	836	401	95	34	18	3,273	2,732	83.5%
25th Percentile	28	43	67	124	200	381	631	982	475	107	40	20	3,381	2,921	86.4%
30th Percentile	30	48	75	134	226	403	685	1,044	612	135	43	21	3,626	2,966	81.8%
40th Percentile	35	52	105	174	281	448	785	1,225	839	213	52	27	4,385	3,623	82.6%
Median Flow	39	69	140	222	370	520	901	1,404	970	251	68	31	5,896	4,187	71.0%
60th Percentile	47	98	198	357	488	625	954	1,639	1,157	346	92	38	6,559	5,069	77.3%
70th Percentile	56	130	244	419	614	726	1,084	1,732	1,394	447	106	44	7,393	5,752	77.8%
75th Percentile	63	147	268	481	763	826	1,135	1,880	1,496	489	121	58	7,934	5,947	74.9%
80th Percentile	72	187	330	616	875	971	1,154	1,925	1,653	623	132	67	8,667	6,347	73.2%
90th Percentile	95	271	615	977	1,224	1,147	1,462	2,451	2,070	948	243	84	11,004	7,891	71.7%

## **Appendix D**

### **Section D.3 Adjudication Decree Quantifications**

**Butte Creek Decree  
Butte County Decree No. 18917  
Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total, cfs	Total, AF	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)			
<b>Schedule 3, Foreign Water Rediversion Group</b>														
Dayton Mutual Water Company	1,796.30	50	Parrott Ditch and Crouch Lateral	3.33	2,414.63								3.33	2,414.63
M & T Incorporated	3,620.00	50	Parrott Ditch and Edgar Slough	3.33	2,414.63	50.00	36,223.14						53.33	38,637.78
Parrott Investment Company	17,427.00	50	Parrott Ditch and Edgar Slough	3.33	2,414.63	50.00	36,223.14						53.33	38,637.78
<b>Subtotal, Schedule 3, Foreign Water Rediversion Group</b>	<b>22,843.30</b>			<b>10.00</b>	<b>7,243.90</b>	<b>100.00</b>	<b>72,446.28</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>110.00</b>	<b>79,690.18</b>
<b>Schedule 4, Nonconsumptive Claimants on Butte Creek and Tributaries</b>														
Harold B Rathwell	Power	27	Unnamed Spring	0.20	144.89								0.20	144.89
Almon E Smith	Mining	26	Ethel	1.90	1,376.48								1.90	1,376.48
David S Webb and Mary D Webb	Mining	13	Webb	0.15	108.67								0.15	108.67
Herbert W Whitten, Marjorie C Whitten, Olive M Young, George Mead, Anna Mead, T H Polk, and Lucia V Polk	Mining	26A, 26B, 28A	Eureka Middle, Eureka Pump, Eureka Little	3.45	2,499.40								3.45	2,499.40
Jack L Post	Mining	28	La Monte	12.90	9,345.57								12.90	9,345.57
Jack L Post	Mining	28B	Post Pump	0.85	615.79								0.85	615.79
W J McGann and Elizabeth T Cussick	Potable Domestic	36	Davis	0.50	362.23								0.50	362.23
Grace D Taylor	Potable Domestic	37	Thomas	0.50	362.23								0.50	362.23
L H McLain and C J McLain	Mining	45A, 45B	Butte Bell, McLain Sluice	0.90	652.02								0.90	652.02
Margaret A Smith	Mining	46	Smith	2.50	1,811.16								2.50	1,811.16
Pacific Gas & Electric Company	Power	45	Butte Creek	88.50	64,114.96								88.50	64,114.96
Pacific Gas & Electric Company	Power	47	Centerville Canal	179.50	130,041.07								179.50	130,041.07
Electric Mining Company	Power	49	Electric Mining Co	305.00	220,961.16								305.00	220,961.16
<b>Subtotal, Schedule 4, Nonconsumptive Claimants on Butte Creek and Tributaries</b>				<b>596.85</b>	<b>432,395.63</b>								<b>596.85</b>	<b>432,395.63</b>
<b>Schedule 5, Little Butte Creek and Tributaries Claimants Group</b>														
David S Webb and Mary D Webb	Domestic	13	Webb	0.10	72.45								0.10	72.45
Anna Spangler	1.00	13A	Spangler Pipe	0.20	144.89								0.20	144.89
Estate of Ernest Duensing	11.80	14	Duensing	0.25	181.12	0.25	98.18						0.50	279.30
Vandegrift Trust	87.00	20, 20A	Richardson, Richardson	3.00	2,173.39								3.00	2,173.39



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Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total, cfs	Total, AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)		
Paradise Irrigation District	11,100.00	22, 23	Paradise ID, Nickerson		0.00	8.00	3,141.82					8.00	3,141.82
Harold B Rathwell	Domestic	27	Ripley Spring	0.20	144.89							0.20	144.89
S A Vandegrift	Domestic	23A	Vandegrift	0.50	362.23							0.50	362.23
Jack L Post	Domestic	28, 28B	La Monte, Post Pump	0.15	108.67							0.15	108.67
D A Hook, W S Hook, and Lillian M Hook	3.00	24A	Hook	0.10	72.45	0.10	39.27					0.20	111.72
S A Vandegrift	Domestic	24B	Hook	1.00	724.46							1.00	724.46
S A Vandegrift	Domestic	24D	Hook	1.00	724.46							1.00	724.46
Almon E Smith	Domestic	26	Ethel	0.10	72.45							0.10	72.45
Herbert W Whitten, Marjorie C Whitten, Olive M Young, George Mead, Anna Mead, T H Polk, and Lucia V Polk	Domestic	26A, 26B, 28A	Eureka Middle, Eureka Pump, Eureka Little	0.05	36.22							0.05	36.22
Ella G Evers	13.60	30	Todd (Evers)	1.00	724.46	1.00	392.73					2.00	1,117.19
H W Skillin and Alice Skillin	9.40	31	Burke		0.00	0.67	263.13	0.66	259.20			1.33	522.33
H D March and Henrietta March	14.40	31	Burke		0.00	0.67	263.13	0.66	259.20			1.33	522.33
Thurman and Wright	6.00	31	Burke		0.00	0.67	263.13	0.66	259.20			1.33	522.33
George E McLain and C J McLain	17.10	32	McLain	0.10	72.45	0.50	196.36			2.50	981.82	3.10	1,250.63
<b>Subtotal, Schedule 5, Little Butte Creek and Tributaries Group</b>	<b>11,263.30</b>			<b>7.75</b>	<b>5,614.59</b>	<b>11.86</b>	<b>4,657.75</b>	<b>1.98</b>	<b>777.60</b>	<b>2.50</b>	<b>981.82</b>	<b>24.09</b>	<b>12,031.75</b>
<b>Schedule 6, Upper Butte Creek and Tributaries Claimants (above Little Butte Creek)</b>													
John J Mahan and Wm J Doyle	21.30	6	Cirby Stephenson	0.20	144.89	0.30	117.82					0.50	262.71
E L Franks and Ida May Franks	103.40	7, 8	Upper, Stephenson	0.20	144.89	1.80	706.91					2.00	851.80
L B Stephenson	25.00	8A, 8B, 8C	Lower Abietene	0.50	362.23	0.50	196.36					1.00	558.60
USDA Lassen Nat'l Forest	10.20	1, 3	Jonesville Bl 1 Pipes, Jones	0.25	181.12	0.25	98.18					0.50	279.30
F K Mickey and J H Minderman	112.00	3, 4	Jones, Mickey-Minderman	1.50	1,086.69	1.50	589.09					3.00	1,675.79
Edwin B Copeland	33.00	3	Jones	0.50	362.23	0.50	196.36					1.00	558.60
J H Lucas and Estate of Wm Johnson	38.30	5	Lucas-Jones	0.20	144.89	0.50	196.36					0.70	341.26
J H Lucas and Estate of Wm Johnson	150.00	5B	Colby Creek	0.50	362.23	1.50	589.09					2.00	951.32
J H Lucas and Estate of Wm Johnson	70.00	5A	Willow Creek	0.25	181.12	0.35	137.45					0.60	318.57
Anne Kennedy Anderson, Donald Mathewson, and Winifred M Kennedy	10.00	5A	Willow Creek	0.05	36.22	0.20	78.55					0.25	114.77
W J McGann and Elizabeth T Cussick	57.90	9A	McGann Springs, Davis	0.20	144.89	0.80	314.18					1.00	459.07

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**Allotments**

Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)	Total, cfs	Total, AF
W J McGann and Elizabeth T Cussick	200.00	36	Davis	0.25	181.12	0.10	39.27					0.35	220.39
J H Lucas, G W Lucas, and C F Lucas	32.90	9, 9A	Lucas Springs, McGann Springs	0.20	144.89	0.60	235.64					0.80	380.53
J H Lucas, G W Lucas, and C F Lucas	30.00	36A	Lucas	0.20	144.89	0.50	196.36					0.70	341.26
Grace D Taylor	5.00	37	Thomas	0.25	181.12	0.25	98.18					0.50	279.30
Eleanor Propfe Welch	Domestic	39	Welch Pipe Butte	0.01	7.24							0.01	7.24
USDA Lassen Nat'l Forest	Domestic	44	Meadows Pipes	0.10	72.45							0.10	72.45
Pacific Gas & Electric Company	Public Service	45	Butte Creek Canal	1.18	851.24							1.18	851.24
Pacific Gas & Electric Company	Domestic	45	Butte Creek Canal	0.33	235.45							0.33	235.45
Pacific Gas & Electric Company	Domestic	47	Centerville Canal	0.50	362.23							0.50	362.23
L H McLain and C J McLain	Domestic	45A, 45B	Butte Bell, McLain Sluice	0.10	72.45							0.10	72.45
Marqaret A Smith	Domestic	46	Smith	0.03	21.73							0.03	21.73
Electric Mining Company	Domestic	49	Electric Mining Co	0.10	72.45							0.10	72.45
<b>Subtotal Schedule 6, Upper Butte Creek and Tributaries Group</b>	<b>899.00</b>			<b>7.59</b>	<b>5,498.67</b>	<b>9.65</b>	<b>3,789.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.24</b>	<b>9,288.49</b>

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Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments									Total, cfs	Total, AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)			
Schedule 7, Lower Butte Creek and Tributaries Claimants (Below Little Butte Creek)				First Priority, All Year (cfs)	First Priority, All Year (AF)	First Priority, Apr 1 - Oct 15 (cfs)	First Priority, Apr 1 - Oct 15 (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)			
Dayton Mutual Water Company		50	Parrott and Crouch Lateral	4.80	3,477.42	11.20	4,398.55					16.00	7,875.97	
Donald Hale and Alice Hilby Hale	160.20	51	Hale	0.90	652.02	2.10	824.73					3.00	1,476.74	
USDA Bureau of Plant Industry	154.50	53	Plant Garden Pump	0.60	434.68	1.40	549.82					2.00	984.50	
Clarence S Entler	81.00	54	Compton-Entler	0.33	239.07	0.78	306.33					1.11	545.40	
Mary E Roth	75.00	54	Compton-Entler	0.17	123.16	0.39	153.16					0.56	276.32	
Bee P Compton	689.00	54	Compton-Entler	0.50	362.23	1.17	457.53					1.67	819.76	
Bee P Compton	241.00	54	Compton-Entler	0.50	362.23	1.17	457.53					1.67	819.76	
A F Lieurance and Lenore E Lieurance	527.10	55	Marybill	1.20	869.36	3.80	1,492.36					5.00	2,361.72	
Parrott Investment Company	211.00	56	Colony Upper	0.60	434.68	1.40	549.82					2.00	984.50	
Edwin A Carlson and Gladys Carlson	36.70	56	Colony Upper	0.14	101.42	0.34	133.53					0.48	234.95	
D A Hook, W S Hook	30.00	56	Colony Upper	0.12	86.94	0.27	106.04					0.39	192.97	
Elmo Jacks and Louise Jacks	24.90	56	Colony Upper	0.09	65.20	0.22	86.40					0.31	151.60	
Samuel A Atkins and Barbara Ina Atkins	30.00	56	Colony Upper	0.11	79.69	0.26	102.11					0.37	181.80	
Samuel A Atkins and Barbara Ina Atkins	34.00	58	Wakefield Pump	0.13	94.18	0.30	117.82					0.43	212.00	
Durham Mutual Water Company, Ltd.	3,566.20	56, 59	Colony Upper, Colony Lower	12.00	8,693.55	32.70	12,842.18					44.70	21,535.74	
The Federal Land Bank of Berkeley	156.50	57	Ollinger Pump	0.60	434.68	1.40	549.82					2.00	984.50	
Varney F Wakefield	14.00	58	Wakefield Pump	0.05	36.22	0.13	51.05					0.18	87.28	
Ralph J Baxter, C W Baxter, and F T Woell, and M B Woell	178.00	56	Colony Upper	0.60	434.68	1.40	549.82					2.00	984.50	
Stephen Vernoga	47.30	56	Colony Upper	0.30	217.34	0.70	274.91					1.00	492.25	
Corporation of America	20.00	56	Colony Upper	0.12	86.94	0.28	109.96					0.40	196.90	
George Setka, Anna Setka, Joe Bebich, Same Bebich, and Steve Vlatkovich	96.70	56	Colony Upper	0.40	289.79	0.94	369.16					1.34	658.95	
L E Wheelock and Nellie Wheelock	13.00	56	Colony Upper	0.08	57.96	0.18	70.69					0.26	128.65	
George Brandt and Edna May Brandt	50.00	59B	Brandt Pump	0.12	86.94	0.27	106.04					0.39	192.97	
Roy White	53.00	60A	Roy White Pump	0.20	144.89	0.46	180.65					0.66	325.55	
E L Adams and Lou R Adams	1,191.20	56	Colony Upper					1.48	1,072.20			1.48	1,072.20	
E L Adams and Lou R Adams	2,533.20	60	Adams					4.52	3,274.57			4.52	3,274.57	
Ralph C Gorrill	2,282.00	61	Gorrill							1.00	724.46	1.00	724.46	

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				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)			
Herbert W Whitten and Marjorie C Whitten	665.30	56, 60	Colony Upper, Adams								0.75	543.35	0.75	543.35
E E White	541.60	62	White Pumps								1.00	724.46	1.00	724.46
<b>Subtotal, Schedule 7, Lower Butte Creek and Tributaries Claimants Group</b>	<b>13,702.40</b>			<b>24.66</b>	<b>17,865.25</b>	<b>63.25</b>	<b>24,840.00</b>	<b>6.00</b>	<b>4,346.78</b>	<b>2.75</b>	<b>1,992.27</b>	<b>96.66</b>	<b>49,044.30</b>	
<b>Additional Continuous Year-Round Usage Claimants - Special Class</b>														
Lovie L Downs	Domestic, Stockwater, Irrigation	17	Downs Spring	0.03	21.73									
Frances B Mahilton, A C Musselman, George P Morse	Domestic, Stockwater, Irrigation	16A, 18	Hamilton Ditches	0.50	362.23									
Joe A Sagi	Domestic, Stockwater, Irrigation	24	Sagi Pipelines	0.15	108.67									
Merritt Musselman and Florence V Musselman	Domestic, Stockwater, Irrigation	18A	Musselman Springs Pipe Line	0.10	72.45									
Elsie Hume Mann	Domestic, Stockwater, Irrigation	35	Mann Spring Pipeline	0.02	14.49									
Fannie M McEnespy	Domestic, Stockwater, Irrigation	33, 34	McEnespy North, McEnespy Main Ditches	1.00	724.46									
Fannie M McEnespy	Domestic, Stockwater, Irrigation	34A	McEnespy Pipe Line and McEnespy Spring Channel	0.10	72.45									
S A Vandegrift	Domestic, Stockwater, Irrigation	240	Vandegrift Spring Ditch	0.50	362.23									
S A Vandegrift	Domestic, Stockwater, Irrigation	24E	Michaels Ditch	0.15	108.67									
Anna Spangler	Domestic, Stockwater	13A	Spangler Pipe	0.05	36.22									
Estate of Ernest Duensing	Domestic, Stockwater, Irrigation	14A	Duensing Spring Ditch	0.15	108.67									
Vandegrift Trust	Domestic, Stockwater, Irrigation	21	Meadowbrook Ditch	1.00	724.46									
F E Whitlock	Domestic, Stockwater	24F, 25	Hupp Canal	0.20	144.89									

**Butte Creek Decree  
Butte County Decree No. 18917  
Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

**Allotments**

Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)	Total, cfs	Total, AF
Roy L Pearson, Orval Pearson, Eunice A Cartwright, and Mildred Laughlin	Domestic, Stockwater	24F, 25	Hupp Canal	0.05	36.22								
A P Kundert	Domestic, Stockwater	24F, 25	Hupp Canal	0.05	36.22								
<b>Subtotal, Additional Continuous Usage Claimants</b>				<b>4.05</b>	<b>2,934.07</b>								
<b>Additional Irrigation Season Usage Claimants - Special Class</b>													
F E Whitlock	Irrigation	24F, 25	Hupp Canal	0.40	289.79								
Roy L Pearson, Orval Pearson, Eunice A Cartwright, and Mildred Laughlin	Irrigation	24F, 26	Hupp Canal	0.05	36.22								
A P Kundert	Irrigation	24F, 27	Hupp Canal	0.05	36.22								
The Diamond Match Company	Domestic, Stockwater, Industrial	10, 10A, 10B, 10C	Diamond Match System	2.00	1,448.93	Continuous							
Richard A Colgan Jr	Domestic, Commercial	40	Colgan Pipe Line	0.14	101.42	Continuous							
F K Mickey and J H Minderman	Domestic, Stockwater	2	Mickey-Minderman Pipe Line	0.07	50.71	Continuous							
Edwin B Copeland	Domestic, Stockwater	Riparian		0.20	144.89	Continuous							
J H Lucas	Domestic, Stockwater, Irrigation	Riparian		0.40	289.79	Continuous							
Carl Nelson Swartz and Esther M Swartz	Domestic, Stockwater, Irrigation	Riparian		0.15	108.67	Continuous							
E L Adams and Lou R Adams	Domestic, Stockwater	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	0.82	594.06	Continuous	Riparian						
E L Adams and Lou R Adams	Irrigation	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	3.00	916.36	May 1 - Oct 1							
E L Adams and Lou R Adams	Domestic, Stockwater	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	1.00	724.46	Continuous	Riparian						

**Butte Creek Decree  
Butte County Decree No. 18917  
Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total, cfs	Total, AF	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)			
E L Adams and Lou R Adams	Irrigation	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	3.58	1,093.53	May 1 - Oct 1								
Herbert W Whitten and Marjorie C Whitten	Domestic	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	0.60	434.68	Continuous	Riparian							
Herbert W Whitten and Marjorie C Whitten	Irrigation	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	3.00	916.36	May 1 - Oct 1								
Ralph C Gorrill	Domestic, Stockwater	66	Gorrill-Hamlin Ditch	1.00	724.46	Continuous	Riparian							
Ralph C Gorrill	Irrigation	66	Gorrill-Hamlin Ditch	14.00	2,138.18	Apr 15 - Jun 30								
E L Adams and Lou R Adams	Irrigation	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	3.22	1,168.78	Apr 1 - Sep 30								
Herbert W Whitten and Marjorie C Whitten	Irrigation	64, 65	Adams Hamlin Slough Ditch, Adams Hamlin Pump	1.38	459.85	Apr 1 - Sep 15								
Ralph C Gorrill	Irrigation	66	Gorrill-Hamlin Ditch	6.70	1,209.32	Apr 1 - Jun 30								
Ralph C Gorrill	Irrig	66	Gorrill-Hamlin Ditch	21.70	3,314.18	Jul 1 - Sep 15								
<b>Subtotal, Additional Irrigation Season Usage Claimants</b>				<b>63.46</b>	<b>16,200.87</b>									
<b>Surplus Class Rights Claimants</b>														
Paradise Irrigation District	Irrigation	22	Magalia Reservoir	Little Butte Creek	9,500.00	Subject to completion of Permit 271								
Paradise Irrigation District	Domestic, Stockwater	22	Magalia Reservoir	Little Butte Creek	0.00	Continuous								
Ralph C Gorrill	Irrigation	61	Gorrill Ditch	14.00	2,526.94	Jul 1 - Sep 30								
E L Adams and Lou R Adams	Irrigation	56, 60	Colony Upper, Adams	9.80	3,557.16	Apr 1 - Sep 30								
Herbert W Whitten and Marjorie C Whitten	Irrigation	56, 60	Colony Upper, Adams	3.45	1,252.26	Apr 1 - Sep 30								

**Butte Creek Decree  
Butte County Decree No. 18917  
Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

**Allotments**

Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)	Total, cfs	Total, AF
E L Adams and Lou R Adams	Irrigation	56, 60	Colony Upper, Adams	4.60	693.42	Apr 1 - Jun 15							
E L Adams and Lou R Adams	Irrigation	56, 60	Colony Upper, Adams	1.00	150.74	Apr 1 - Jun 15							
Herbert W Whitten and Marjorie C Whitten	Irrigation	56, 60	Colony Upper, Adams	2.40	361.79	Apr 1 - Jun 15							
Ralph C Gorrill	Irrigation	61	Gorrill Ditch	15.00	5,444.63	Apr 1 - Sep 30							
Ralph C Gorrill	Irrigation	61	Gorrill Ditch	6.70	2,431.93	Jul 1 - Sep 30							
E E White	Irrig	62	White Pumps	9.50	3,448.26	Apr 1 - Sep 30							
Parrott Investment Company	Domestic	50	Parrott Ditch	5.00	1,668.60	Oct 16 - Mar 31							
M & T Incorporated	Domestic	50	Parrott Ditch	5.00	1,668.60	Oct 16 - Mar 31							
Parrott Investment Company	Domestic, Stockwater, Irrigation	50	Parrott Ditch	25.00	9,818.18	Apr 1 - Oct 15							
M & T Incorporated	Domestic, Stockwater, Irrigation	50	Parrott Ditch	25.00	9,818.18	Apr 1 - Oct 15							
California Lands, Inc			Butte Creek	2.50	1,811.16	Continuous							
Yuba Consolidated Gold Fields			Butte Creek	2.50	1,811.16	Continuous							
Western Canal Company	Irrigation	63	Western Canal	33.33	5,024.29	Apr 1 - Jun 15							
<b>Subtotal, Additional Surplus Class Claimants</b>				<b>164.78</b>	<b>60,987.30</b>								

**Butte Creek Decree  
Butte County Decree No. 18917  
Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

Claimants	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total, cfs	Total, AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)		
<b>Summary</b>	<b>Total, cfs</b>	<b>Total, AF</b>											
Schedule 3, Foreign Water Rediversion Group	110.00	79,690.18											
Schedule 4, Nonconsumptive Claimants on Butte Creek and Tributaries	596.85	432,395.63											
Schedule 5, Little Butte Creek and Tributaries Claimants Group	24.09	12,031.75											
Schedule 6, Upper Butte Creek and Tributaries Claimants (above Little Butte Creek)	17.24	9,288.49											
Schedule 7, Lower Butte Creek and Tributaries Claimants (Below Little Butte Creek)	96.66	49,044.30											
Additional Continuous Year-Round Usage Claimants - Special Class	4.05	2,934.07											
Additional Irrigation Season Usage Claimants - Special Class	63.46	16,200.87											
<b>Subtotal, Consumptive Use Claimants in Butte Creek System</b>	<b>315.50</b>	<b>169,189.68</b>											
<b>Subtotal, Basic Claimants to Butte Creek System Flows</b>	<b>912.35</b>	<b>601,585.30</b>											
Subtotal, Additional Surplus Class Claimants	164.78	60,987.30											
<b>Total, All Consumptive Use Claimants to Butte Creek System</b>	<b>480.28</b>	<b>230,176.97</b>											
<b>Total, All Claimants to Butte Creek System</b>	<b>1,077.13</b>	<b>662,572.60</b>											



## Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Allotments Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Total Allotments, Face Value (AF)
<b>Schedule 3, Claimants from Wolf Creek and its Tributaries</b>										
David J. Anderson	16.40	130C	Haun Creek Camp	0.30	217.34				0.00	217.34
David J. Anderson	24.00	130D	Haun Creek Springs	0.40	289.79				0.00	289.79
Setzer Forest Products, Inc.	Domestic	59A	Setzer Camp Pipeline	0.05	36.22					36.22
Bidwell Water Company	Municipal	64	Round Valley Reservoir	2.00	1,448.93					1,448.93
Bidwell Water Company	7.10	65	Kauffman	0.10	72.45	0.10	48.60			121.04
Alford S. Calais & Nellie E. Calais	10.00	66	Short and Morel	0.07	50.71	0.11	53.45			104.17
John Rilea	4.00	66	Short and Morel	0.03	21.73	0.04	19.44			41.17
H.A. Morel & Mabel Francis Morel	24.50	66	Short and Morel	0.10	72.45	0.15	72.89			145.34
Albert E. McKeen & Randall H Smith	30.30	76	Pecks Valley	0.50	362.23					362.23
Reese L Jones	1.50	76A	Jones	0.15	108.67					108.67
Delfina Taddei	12.60	77	Taddei	0.25	181.12					181.12
A P Pedretti	12.60	77	Taddei	0.25	181.12					181.12
Wolf Creek Timber Co., Inc.	Industrial	61	Cedar Mill Lower Pump	0.10	72.45					72.45
Setzer Forest Products, Inc.	Industrial	62	Clark Setzer	0.28	136.07					136.07
Setzer Forest Products, Inc.	Industrial	63	Standby Pump Setzer							0.00
Setzer Forest Products, Inc.	15.00	63A	Standby Pump							0.00
Helen J. Shiell	145.50	62	Clark	0.70	340.17					340.17
E T Kunzler & Edna M Kunzler	125.40	62	Clark	0.70	507.12					507.12
E T Kunzler & Edna M Kunzler		78	Williams Creek	0.50	362.23	0.20	97.19			459.42
H G McCune	82.70	67, 79	Schieser Gott Williams Creek	0.10	72.45	0.75	364.46			436.91
A.O. Lewis	249.00	67	Schieser	0.45	326.01	2.25	1,093.39			1,419.40
Wesley T Wheeler & Idell C Wheeler	94.30	67	Schieser	0.10	72.45	0.45	218.68	0.50	242.98	534.10
United States of America	66.60	67	Schieser	0.05	36.22	0.30	145.79	0.35	170.08	352.09
C G Frederickson & Helen V Frederickson	193.60	68	Frederickson & Forgay Hamblin Spring	0.38	271.67	1.88	911.16			1,182.83
Dan Guidici and James Guidici	334.00	68	Frederickson & Forgay	0.38	271.67	1.88	911.16			1,182.83
Dan Guidici and James Guidici		70, 72	Forgay	0.20	144.89	1.40	680.33			825.22
R Avery Sheehan and Sarah Sheehan	167.10	69, 71	McIntosh	0.15	108.67	0.87	422.78	0.73	354.74	886.19

## Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Allotments Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Total Allotments, Face Value (AF)
L E Wheelock & C H Wheelock	95.60	69, 73	McIntosh, Wheelock	0.05	36.22	0.53	257.55	0.42	204.10	497.88
W B Ferry R L Perry, Ivy Mae Heald and Susie Perry (Rogers)	126.90	69, 73, 74	McIntosh, Wheelock, Perry	0.05	36.22			1.35	656.03	692.26
<b>Subtotals, Schedule 3 - Wolf Creek Group</b>	<b>1,838.70</b>			<b>8.38</b>	<b>5,837.26</b>	<b>10.90</b>	<b>5,296.86</b>	<b>3.35</b>	<b>1,627.93</b>	<b>12,762.05</b>
<b>Schedule 4: Claimants from Lights Creek and Its Tributaries</b>										
United States of America	3.00	85B	Morton Creek	0.15	108.67					108.67
William M Hosken	219.00	80, 80A	Hosken Cooks Creek; Proposed Hosken Pump		0.00	1.50	728.93			728.93
Fred Ratcliffe-Smith & Mildred Ratcliffe-Smith	62.00	81	Smiths Cooks Creek	0.50	362.23	0.50	242.98			605.21
Martin A Maier & Cleo B Maier	35.00	82	Burns Cooks Creek	0.20	144.89	0.25	121.49			266.38
W S Quigley & Icie A Quigley	20.90	83	Quigley Pasture	0.20	144.89	0.10	48.60			193.49
W S Quigley & Icie A Quigley	37.00	84	Quigley Meadow		0.00	0.45	218.68			218.68
Walter E Cliff & Ruth M Cliff	66.60	85	Cliff Cooks Creek	0.10	72.45	0.38	182.23			254.68
J B Peter	157.70	96	Peter Creek	1.00	724.46	1.00	485.95			1,210.41
J B Peter		97	Peter Creek Barn							0.00
J B Peter		98	Peter Creek Upper Field							0.00
J B Peter		99	Peter Creek Lower Field							0.00
Arthur Peter and Emma A Peter	14.30	100	A. Peter			0.20	97.19			97.19
Dora Johnson	69.10	103	Road Dam Downey Upper, Downey Lower	0.10	72.45	0.75	364.46			436.91
A J Downey and D W Downey	Power	86, 87		1.50	1,086.69					1,086.69
California-Engles Mining Company	Domestic & Industrial	87A	Engels	0.10	72.45		0.00			72.45
Hattie Potts	10.00	87B	Potts	0.10	72.45	0.10	48.60			121.04
James T Freeman & Elma L Freeman	87.70	88	Freeman & Bates	0.40	289.79	1.05	510.25			800.03
E B Bates and Minnie Bates	87.80	88	Freeman & Bates	0.40	289.79	1.05	510.25			800.03
Ralph Defanti & Elvezia Defanti	195.40	89	Defanti & Smith	0.60	434.68	1.58	765.37	0.68	328.02	1,528.07

## Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Allotments		Third Priority Class (cfs)	Third Priority Face Value (AF)	Total Allotments, Face Value (AF)
							Second Priority Face Value (AF)	Third Priority Face Value (AF)			
Fred Ratcliffe-Smith & Mildred Ratcliffe-Smith	65.00	89	Defanti & Smith	0.20	144.89	0.53	255.12	0.23	109.34	509.36	
Martin A Maier & Cleo B Maier	93.00	90	Burns	0.20	144.89	1.00	485.95			630.84	
W S Quigley & Icie A Quigley	247.40	91	Quigley Upper	0.20	144.89	2.90	1,409.26			1,554.15	
W S Quigley & Icie A Quigley	152.20	92	Quigley Middle	0.20	144.89	1.70	826.12			971.01	
J B Peter	44.30	93	Peter Upper	0.10	72.45	0.45	218.68			291.12	
Arthur Peter and Emma A Peter	100.00	93	Peter Upper	0.10	72.45	1.25	607.44			679.88	
Arthur Peter and Emma A Peter	126.90	95	Peter Lower	0.10	72.45	0.75	364.46	0.33	157.93	594.84	
W S Quigley & Icie A Quigley	69.00	94	Quigley & Cliff	0.10	72.45	0.75	364.46			436.91	
Walter E Cliff & Ruth M Cliff	168.40	94	Quigley & Cliff	0.10	72.45	0.75	364.46	0.63	303.72	740.63	
S S Openshaw, Gerald Openshaw, & Gene Openshaw	Stockwater	95A	Lights Creek	0.05	36.22					36.22	
C H Taresch & H W Awbrey Lumber Company	Industrial	104	Taresch Mill	0.20	144.89					144.89	
<b>Subtotals, Schedule 4 - Lights Creek Group</b>	<b>2,131.70</b>			<b>6.90</b>	<b>4,998.79</b>	<b>18.98</b>	<b>9,220.91</b>	<b>1.85</b>	<b>899.01</b>	<b>15,118.71</b>	
<b>Schedule 5: Claimants from Streams in Upper Tributary Area</b>											
Clover Valley Lumber Company	40.00	2A	Lowe	0.20	144.89	0.25	106.12			251.01	
Clover Valley Lumber Company	50.00	2B	Hallet	0.20	144.89	0.30	127.34			272.23	
United States of America	12.00	2	Boulder Creek	0.20	144.89	0.05	21.22			166.12	
Clover Valley Lumber Company	42.60	3, 4	Antelope North, Antelope East	0.10	72.45	0.35	148.56			221.01	
F W Flux and Alma A Flux	45.70	5	Flux Antelope	0.10	72.45	0.28	116.73			189.17	
W S Quigley & Icie A Quigley	39.60	6, 7	Quigley Upper Antelope, Quigley Antelope Springs Humphrey	0.10	72.45	0.28	116.73			189.17	
Jack W Humphrey	32.80	8, 9	West, Humphrey East	0.10	72.45	0.18	74.28			146.73	
Claude Harwood and LaViena Harwood	43.70	7E	Fitch Canyon	0.10	72.45	0.30	127.34			199.79	
Elbert R Spraker & Roy E Harwood	8.60	7A	S & H Cabin	0.10	72.45	0.05	21.22			93.67	
Elbert R Spraker & Roy E Harwood	35.60	7B	Thompson Creek	0.10	72.45	0.20	84.89			157.34	
Clover Valley Lumber Company	13.50	7C	Doyle Upper	0.10	72.45	0.05	21.22			93.67	
Clover Valley Lumber Company	13.70	7D	Doyle Lower	0.10	72.45	0.05	21.22			93.67	

## Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Allotments Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Total Allotments, Face Value (AF)
Clover Valley Lumber Company	63.40	9B	Doyle Last Chance	0.20	144.89	0.35	148.56			293.45
Howard Bass, Warren Bass, Dudley Bass, Claude Bass, deceased	26.50	9C	Bass	0.10	72.45	0.15	63.67			136.12
Howard Bass, Warren Bass, Dudley Bass, Claude Bass, deceased	9.80	9D	Bass Cabin	0.10	72.45	0.05	21.22			93.67
Howard Bass, Warren Bass, Dudley Bass, Claude Bass, deceased	11.00	9E	Upper Poison	0.10	72.45	0.05	21.22			93.67
Howard Bass, Warren Bass, Dudley Bass, Claude Bass, deceased	24.50	9F	Lower Poison	0.10	72.45	0.15	63.67			136.12
Clark C Rowland	38.60	10, 10A	Rowland Dixie Creek, Rowland Power	0.20	144.89	0.18	74.28			219.17
Westover Company	617.00	11, 12, 13, 14, and 15	Dixie Upper West, Dixie upper East, Dixie Upper Meadow Dam, Dixie Middle Mdw Dam	0.50	362.23	4.25	1,803.97			2,166.20
Westover Company	58.50	28	Clover Overflow	0.30	217.34	0.25	106.12			323.45
Westover Company	24.50	105	Clover Valley Ranch Spring	0.20	144.89					144.89
George Humphrey	560.00	17 through 27	Upper Dotta Neck, North Spring Clover Upper, Clover Middle, Clover North Meadow, Clover South Meadow, Clover Lower, Spring Ch Upper Spring Ch Lower, Crocker Creek Crocker Old Channel	1.00	724.46	3.50	1,485.62			2,210.08
R H Conklin	270.00	16, 29	Guidici Dixie, Guidici Clover	0.50	362.23	2.00	848.93			1,211.16

## Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

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Clover Valley Lumber Company	Industrial	-	Upper Tributary of Stream System	1.00	724.46					724.46
<b>Subtotals, Schedule 5 - Upper Tributary Area Group</b>	<b>2,081.60</b>			<b>5.80</b>	<b>4,201.88</b>	<b>13.25</b>	<b>5,624.13</b>	<b>0.00</b>	<b>0.00</b>	<b>9,826.02</b>
<b>Schedule 6, Indian Creek in Genesee and Indian Valleys Group</b>										
J LaRue Robinson & Elizabeth Evans Robinson	362.90	36	Robinson	0.78	565.08	4.50	2,186.78			2,751.86
P R Evans	14.10	36, 37	Robinson, Evans	0.02	14.49	0.20	97.19			111.68
Joseph C Kaitner	8.80	30, 31, 32	Pratt Upper, Pratt Lower, Pratt House Curnow	0.10	72.45	0.20	97.19			169.64
Department of Veteran Affairs & Edward D Riehl & Helen Riehl	116.60	33, 34, 35	Upper, Curnow Pasture, Curnow	0.50	362.23	1.35	656.03			1,018.26
J W Goodhue	Domestic & Power	38	Goodhue	0.50	362.23	9.50	4,616.53			4,978.76
John B Sobrero & Lena M Sobrero	0.50	38A, 38B	Sobrero Field, Sobrero House	0.10	72.45					72.45
Mary Sobrero, Heirs	5.30	39, 40	Sobrero East, Sobrero West	0.10	72.45	0.20	97.19			169.64
Willoughby T Grace and Helen M Grace	291.70	41, 42, 43, 44	Ward Upper West, Ward Middle West, Ward East, Ward Pipeline	1.00	724.46	4.50	2,186.78			2,911.24
Plumas Land Company	Mining	46, 47	Walker Flume, Walker Pipe	2.00	1,448.93					1,448.93
Willoughby T Grace and Helen M Grace	96.80	48, 49	Grizzly Upper, Grizzly Lower	1.00	724.46	1.40	680.33			1,404.79
Willoughby T Grace and Helen M Grace	46.80	45	Hosselkus	0.45	326.01					326.01
W J Beacom	18.00	50	Beacom	0.40	289.79	0.35	170.08			459.87
W J Beacom	Fish Culture	50	Beacom	0.50	362.23					
William F Masters	66.30	51, 52	Barnes East, Barnes West	0.50	362.23	0.83	403.34			765.57

## Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Allotments Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Total Allotments, Face Value (AF)
James G Young, William G Young, George W Young, and Hazel Dolphin	Municipal	53	Taylorville	1.00	724.46					724.46
Claude E Young & Ivy M Young	28.10	54	Mill Race	0.50	362.23	1.00	485.95			848.18
W H Dolphin	153.40	54	Mill Race	0.73	528.86	1.47	714.35			1,243.20
H C Neer and Eva M Neer	110.00	54	Mill Race	1.00	724.46	0.60	291.57			1,016.03
Lloyd E Hardgrave & John A Hardgrave	233.70	54	Mill Race	1.52	1,101.18	1.03	500.53			1,601.71
Lloyd E Hardgrave & John A Hardgrave	24.30	54	Mill Race	0.15	108.67	0.30	145.79			254.45
Colburn J Smith and Wilma T Smith	167.90	54	Mill Race	0.75	543.35	1.65	801.82			1,345.17
Samuel F Brown, Hazel Brown and Fletcher L Brown	298.10	54	Mill Race	1.00	724.46	2.70	1,312.07			2,036.53
Lee G Johnson	370.80	54	Mill Race	1.00	724.46	3.60	1,749.42			2,473.88
S S Openshaw, Gerald Openshaw and Gene Openshaw	693.40	54	Mill Race	1.00	724.46	7.60	3,693.22			4,417.69
Paul Sobrero & Helen Sobrero	144.50	54	Mill Race	0.67	485.39	1.13	549.12			1,034.51
Samuel F Brown and Hazel Brown	230.60	54	Mill Race	0.50	362.23	2.40	1,166.28			1,528.51
Samuel F Brown and Hazel Brown	249.20	54	Mill Race	1.00	724.46	2.10	1,020.50			1,744.96
T L Hannon & H S Hannon	78.80	54	Mill Race	0.32	231.83	0.70	340.17			571.99
George F Osmeyer & Jane Osmeyer	6.20	54	Mill Race	0.01	7.24	0.07	34.02			41.26
L E Wheelock & Nellie Wheelock	123.50	54	Mill Race	0.50	362.23	1.00	485.95			848.18
Albert A Toscani, Ernest J Toscani, Chester M Toscani, and Arthur F Toscani	345.60	54	Mill Race	1.00	724.46	2.70	1,312.07	0.60	291.57	2,328.10
A J Sheehan & C J Sheehan	68.70	54	Mill Race			0.20	144.89	0.65	315.87	460.76
David R Strong	57.40	54	Mill Race			0.20	144.89	0.55	267.27	412.17
B B Gregory & Estella E Gregory	32.40	54	Mill Race			0.20	144.89	0.20	97.19	242.08
J E Cardoza & Marion Cardoza	72.40	54	Mill Race					2.15	1,044.79	1,044.79
S S Openshaw, Gerald Openshaw and Gene Openshaw	238.50	55	Snyder			0.40	289.79	3.00	1,457.85	1,747.64
H C Neer and F C Neer	200.00	57A	Neer Pump					2.50	1,811.16	1,811.16
Mrs. A L Gorbet	46.50	58A	Gorbet Pump					0.60	434.68	434.68
A J Sheehan & C J Sheehan	32.00	58B	Sheehan Pump					0.40	289.79	289.79
<b>Subtotal, Schedule 6 - Indian Creek in Genesee and Indian Valleys Group</b>	<b>5,033.80</b>			<b>20.60</b>	<b>14,923.93</b>	<b>54.08</b>	<b>26,518.71</b>	<b>10.65</b>	<b>6,010.17</b>	<b>47,452.81</b>
<b>Schedule 7, "Special Class" Rights on Indian Creek Stream System</b>										
Marian A Flood Norma A Flood	Domestic and resort	125	Hamblin Springs	0.06	43.47					43.47
Fred Prasun & Medie Prasun	6.00	125A	Hamblin Springs Collecting	0.15	108.67					108.67
Alford S Calais & Nellie A Calais	See Schedule 3	127	Short Spring	0.10	72.45					72.45
Bidwell Water Company	Municipal	129	Buckeye Ravine Pipeline	Entire Flow						0.00
Forest Lodge Resort	Domestic and resort	130	Clark Ravine	0.50	362.23					362.23

## Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Allotments Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Total Allotments, Face Value (AF)
Wolf Creek Timber Company, Inc.	Domestic	130A, 130B	Western Pacific Pipeline	0.08	54.33					54.33
A O Lewis	Domestic	131	Schieser Spring Pipeline	0.02	14.49					14.49
Wesley T Wheeler & Idella C Wheeler	Domestic	131	Schieser Spring Pipeline	0.01	7.24					7.24
W B Perry, R L Perry, Ivy Mae Heald, and Susie Perry	48.80	132	Perry Springs	0.55	398.45					398.45
L E Wheelock & Eva Neer	5.40	132	Perry Springs	0.05	36.22					36.22
United States of America in Trust	20.00	133	Hickerson West Springs	0.65	470.90					470.90
T L Hannon & H S Hannon	58.40	134, 134A	Hickerson East Springs, Hickerson Lower Spring	0.95	688.24					688.24
W B Perry, R L Perry, Ivy Mae Heald, and Susie Perry	Domestic	133	Hickerson West Springs	0.05	36.22					36.22
United States of America in Trust	22.30	135	Chico Springs	0.62	449.17					449.17
John F Davidson & Lena Davidson	12.90	136	Leggett Springs	0.10	72.45					72.45
James T Freeman & Elma L Freeman	Domestic	139A	Remick Pipeline	0.02	14.49					14.49
J B Peter	Domestic	96A	Peter Pipeline	Entire Flow						0.00
J LaRue Robinson & Elizabeth Evans Robinson	Domestic	143	School Spring Pipeline	0.001	0.72					0.72
John Davis & Evelyn Cunningham	2.00	106	Davis Spring	0.15	108.67					108.67
Willoughby T Grace & Helen M Grace	Domestic	48A	Hosselkus Spring Pipeline	Entire Flow						0.00
S S Openshaw, Gerald Openshaw, and Gene Openshaw	66.70	137	Snyder Spring	0.45	326.01					326.01
United States of America	Domestic	107A	Taylorville Suppression Camp Pipeline	0.01	7.24					7.24
Burr J Sherick & Edith R Sherick	0.90	108	Hotel Pipe	0.025	18.11					18.11
G R Clark	Domestic	109	Clark Pipe	0.02	14.49					14.49
Mabel Taresh	0.20	109	Clark Pipe	0.02	14.49					14.49

Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

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A E Viacava	34.60	110, 111, 112	Viacava Upper, Viacava Middle, Viacava Lower	0.50	362.23					362.23
United States of America in Trust	6.00	112A	Smith & Jenkins	0.23	166.63					166.63
S S Openshaw, Gerald Openshaw, and Gene Openshaw	269.70	113, 114	Hough Creek Upper, Hough Creek Lower	3.40	2,463.17					2,463.17
Plumas Unified School District	Domestic	108	Hotel Pipe	0.025	18.11					18.11
J E Cardoza and Marion Cardoza	42.50	114A, 114B	Cardoza	0.55	398.45					398.45
J E Cardoza and Marion Cardoza	99.10	115 & 115A	Cardoza Springs	1.00	724.46					724.46
August C Frohlich	8.90	123	Crescent	0.15	108.67					108.67
H C Neer	1.00	123	Crescent	0.02	14.49					14.49
Sorsoli Water Company	Municipal	123	Crescent Domestic	0.13	94.18					94.18
B B Gregory & Estella E Gregory	2.00	123A	Spring Pipeline	0.05	36.22					36.22
Margaret Frizzie, Frances Frizzie, and Theresa Frizzie	Domestic & Industrial	118	Frizzie	1.50	1,086.69					1,086.69
Dawn Institute of Science & Art	Domestic	119	Indian Falls	0.01	8.69					8.69
<b>Subtotal, Schedule 7 - "Special Class" Rights Group</b>	<b>707.40</b>			<b>12.148</b>	<b>8,800.77</b>					<b>8,800.77</b>
<b>Schedule 8, "Surplus Class" Rights on Indian Creek Stream System</b>										
Jack W Humphrey	90.00	9A	Humphrey Last Chance Clover Lower, Spring Channel					0.65	275.90	275.90
George Humphrey	245.00	23, 25, 26, 27	Lower, Crocker Creek, Crocker Old Channel					1.75	742.81	742.81
Westover Company	320.00	11, 12, 27 1/2	Dixie Upper West, Dixie Upper East, Crocker Lower					2.30	976.26	976.26
R H Conklin	398.00	16, 29	Guidici Dixie, Guidici Clover					3.00	1,273.39	1,273.39



Indian Creek Decree - Plumas County Case No. 4185, December 19, 1950

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W E Cooper, Ed Cooper & J A Ritchy	Mining	85C	Proposed Cooper					0.50	212.23	212.23
S S Openshaw, Gerald Openshaw, and Gene Openshaw	15.60	95A	Proposed Lights Creek					0.125	53.06	53.06
C H Taresh and H W Awbrey Lumber Company	17.00	104	Taresh Mill Pump					0.125	53.06	53.06
William F Masters	76.20	51, 52A	Barnes East, Proposed Barnes Pump					0.76	322.59	322.59
E T Kunzler & Edna M Kunzler	36.00	--	Proposed					0.24	101.87	101.87
Almanor Lumber Company	8.40	--	Proposed					0.06	25.47	25.47
<b>Subtotal, Schedule 8 - "Surplus Class" Rights</b>	<b>1,206.20</b>							<b>9.51</b>	<b>4,036.64</b>	<b>4,036.64</b>
<b>Special Class Claimants</b>										
Bidwell Water Company	Municipal	64	Round Valley Reservoir		4,800.00					Winter season
K R Doyle and Murray Doyle	Domestic, Stockwater, Irrigation	7F	Doyle Reservoir		45.00					Winter Season
<b>Subtotal, Special Class Claimants</b>					<b>4,845.00</b>					
<b>Surplus Class Claimants</b>										
J LaRue Robinson & Elizabeth Evans Robinson	Domestic, Stockwater	1	Taylor Lake		200.00					
Charles H Bryson Sr and Estate of Kathryn Bryson	Domestic, Resort	117	Avrit Pipe Line	0.02	11.59					Continuous, Year-long
Dawn Institute of Science & Art	Domestic, Resort	120	Jackson Springs Pipe Line	1.25	905.58					Continuous, Year-long
<b>Subtotal, Surplus Class Claimants</b>				<b>1.27</b>	<b>1,117.17</b>					
<b>Summary of Indian Creek Adjudication</b>										
	<b>Acreage to be supplied</b>	<b>First Priority Class (cfs)</b>	<b>First Priority Face Value (AF)</b>	<b>Second Priority Class (cfs)</b>	<b>Second Priority Face Value (AF)</b>	<b>Third Priority Class (cfs)</b>	<b>Third Priority Face Value (AF)</b>	<b>Total Allotments, Face Value (AF)</b>		
<b>Schedule 3 - Wolf Creek Group</b>	1,838.70	8.38	5,837.26	10.90	5,296.86	3.35	1,627.93	12,762.05		
<b>Schedule 4 - Lights Creek Group</b>	2,131.70	6.90	4,998.79	18.98	9,220.91	1.85	899.01	15,118.71		
<b>Schedule 5 - Upper Tributaries Group</b>	2,081.60	5.80	4,201.88	13.25	5,624.13	0.00	0.00	9,826.02		
<b>Schedule 6 - Indian Creek in Genesee &amp; Indian Valleys Group</b>	5,033.80	20.60	14,923.93	54.08	26,518.71	10.65	6,010.17	47,452.81		
<b>Schedule 7 - Special Class Group</b>	707.40	12.148	8,800.774	0.000	0.000	0.000	0.000	8,800.774		
<b>Schedule 8 - Surplus Class Group</b>	1,206.20	0.00	0.00	0.00	0.00	9.51	4,036.64	4,036.64		
<b>Subtotal, Special Class Claimants</b>								4,845.00		
<b>Subtotal, Surplus Class Claimants</b>								1,117.17		
<b>Total Face Value (AF), Indian Creek Decree</b>	<b>12,999.40</b>	<b>53.83</b>	<b>38,762.64</b>	<b>97.21</b>	<b>46,660.61</b>	<b>25.36</b>	<b>12,573.75</b>	<b>103,959.17</b>		

**Middle Fork Feather River (and Its Tributaries Above Beckwith) Decree County of Plumas, Case No. 3095**

**Seasons of Use**

Continuous, regardless of season	365.25	days
March 1 through October 31	245.00	days
March 15 through September 30	200.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments					Total Allotments, Face Value (AF)	Check, total CFS	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)			Third Priority Face Value (AF)
<b>Schedule 3, Claimants from Last Chance Creek and Its Tributaries above Adams Neck</b>											
C C Rowland & Ida May Rowland	180.40	1, 2, 3	Rowland Upper North and South, Rowland Lower South, Rowland Lower North	2.30	912.40					912.40	2.30
C C Rowland & Ida May Rowland	57.70	4	Rowland South Creek	0.70	277.69					277.69	0.70
Alessio Ramelli & Adelina Ramelli	151.40	5, 6, 7	Ramelli, Hall & Ramelli, Ramelli Spring Channel	1.90	753.72					753.72	1.90
Marietta Hall	15.40	6, 7	Hall & Ramelli, Ramelli Spring Channel	0.25	99.17					99.17	0.25
Elsie Herz Golden	16.00	8	Trosi Last Chance	0.28	111.07					111.07	0.28
Elsie Herz Golden	7.00	8A	Trosi Dooley Canyon	0.12	47.60					47.60	0.12
Elsie Herz Golden	11.50	9	Trosi Dixie Creek	0.20	79.34					79.34	0.20
Elsie Herz Golden	57.60	11, 11A	Trosi Grigsby Creek, Trosi Cabin	0.45	178.51	0.50	198.35			376.86	0.95
Charles A Galeppi, Fred E Galeppi, Leo B Galeppi, and Rosa Galeppi	257.80	10, 12	Galeppi Upper Last Chance, Galeppi Lower Last Chance	3.25	1,289.26					1,289.26	3.25
Charles A Galeppi, Fred E Galeppi, Leo B Galeppi, and Rosa Galeppi	78.70	11A, 248, 249	Galeppi Grigsby Creek & Trosi Cabin, Galeppi North Springs, Galeppi South Springs	1.00	396.69					396.69	1.00
Elsie Herz Golden	111.10	13, 18	Trosi Camp, Trosi Spring Creek	1.60	634.71					634.71	1.60
Elsie Herz Golden	41.00	20	Trosi Frenchman Creek	0.70	277.69					277.69	0.70
Fred P Giudici and Myrtle W Giudici	103.30	14, 15	Giudici Upper Spring Creek, Giudici Lower Spring Creek	1.30	515.70					515.70	1.30
Charles A Galeppi, Fred E Galeppi, Leo B Galeppi, and Rosa Galeppi	161.10	15, 17	Galeppi Spring Creek, Galeppi Creek	2.00	793.39					793.39	2.00
Emilio Ramelli	76.20	19	Ramelli and Dotta Frenchman Creek	1.00	396.69					396.69	1.00

**Middle Fork Feather River (and Its Tributaries Above Beckwith) Decree County of Plumas, Case No. 3095**

**Seasons of Use**

Continuous, regardless of season	365.25	days
March 1 through October 31	245.00	days
March 15 through September 30	200.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Total Allotments, Face Value (AF)	Check, total CFS	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)			
Frank Dotta	64.90	19	Ramelli and Dotta Frenchman Creek	0.80	317.36										317.36	0.80
Frank Dotta	10.00	250, 251	Dotta Frenchman Creek Spring, Galeppi and Dotta Spring	0.15	59.50										59.50	0.15
<b>Subtotal, Schedule 3 - Last Chance Creek Group</b>	<b>1,401.10</b>			<b>18.00</b>	<b>7,140.50</b>	<b>0.50</b>	<b>198.35</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7,338.84</b>	<b>18.50</b>
<b>Schedule 4, Claimants from Last Chance Creek and Its Tributaries below Frenchman Creek</b>																
Fred P Giudici and Myrtle W Giudici	285.40	21, 22	F P Giudici Upper, F P Giudici Lower	4.80	1,904.13		0.00		0.00				0.00	1,904.13	4.80	
Mauricilio Giudici & Julie Giudici	62.30	21,22	F P Giudici Upper, F P Giudici Lower	0.95	376.86							0.60		376.86	1.55	
Alex E Giudici	180.00	23	A E Giudici Dams	2.00	793.39	1.00	396.69							1,190.08	3.00	
Guy Sobrio & Carmelina Sobrio	187.10	24, 25	Sobrio Upper Dam, Sobrio Lower Dam	1.00	396.69	1.40	555.37					0.60		952.07	3.00	
Elsie Herz Golden	146.80	23, 26, 27, 28	A E Giudici Dams, Troisi Upper, Troisi Middle, Troisi Lower			1.70	674.38	0.15	59.50					733.88	1.85	
Frank Dotta	370.00	28, 29, 30, 31	Troisi Lower, F V Dotta Upper, F V Dotta Middle, F V Dotta Lower			2.70	1,071.07			0.85	337.19	0.85		1,408.26	4.40	
Emilio Ramelli	81.20	31, 32	F V Dotta Lower, Ramelli North Channel			1.05	416.53							416.53	1.05	
Emilio Ramelli	21.50	32, 57	Ramelli North Channel, M B Humphrey West Side			0.25	99.17							99.17	0.25	
Philip E Ede & Sophia L Ede	220.20	31, 33, 34	F V Dotta Lower, Ede Schoolhouse, Ede Lower Goble Upper					2.75	1,090.91					1,090.91	2.75	
Edmond J Goble & Ida C Goble	251.00	35, 36, 37	Channel, Goble Middle North Channel, Goble Lower North Channel					2.65	1,051.24	0.50	198.35			1,249.59	3.15	
Daniel M Scott & Gemma Solari Scott	126.60	37, 38	Goble Lower North Channel, Solari North Channel					1.65	654.55					654.55	1.65	
C D Laffranchini & Marie C Laffranchini	132.70	39	Laffranchini North Channel					0.60	238.02	1.20	476.03			714.05	1.80	

**Middle Fork Feather River (and Its Tributaries Above Beckwith) Decree County of Plumas, Case No. 3095**

**Seasons of Use**

Continuous, regardless of season	365.25	days
March 1 through October 31	245.00	days
March 15 through September 30	200.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Check, total CFS	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)		Total Allotments, Face Value (AF)
Jennie F Huntley	410.90	39, 40, 41, 42	Laffranchini North Channel, Huntley Upper North Channel, Huntley Middle North Channel, Huntley Lower North Channel							3.05	1,209.92	1.80	714.05	1,923.97	4.85
Josephine Roberti	200.90	43, 44, 45	Wherity North, Wherity South, Wherity Upper Dam							1.65	654.55	0.35	138.84	793.39	2.00
C D Laffranchini & L A Laffranchini	259.70	43, 44, 46	Wherity North, Wherity South, Wherity Lower Dam							1.65	654.55	0.95	376.86	1,031.40	2.60
J A Bonta & S A Bonta	260.10	47, 48, 49	Bonta North, Bonta South, Bonta Meadow							1.00	396.69	1.60	634.71	1,031.40	2.60
C D Laffranchini & L A Laffranchini	171.00	50, 51	Dedmon North, Dedmon South									1.70	674.38	674.38	1.70
L D Maddalena	70.90	52, 53	Maddalena South, Maddalena North									0.70	277.69	277.69	0.70
M B Humphrey	68.40	56, 57	M B Humphrey East Side, M B Humphrey West Side			4.60	1,824.79	0.40	158.68			0.85	337.19	2,320.66	5.85
Emilio Ramelli	72.30	58	Vinton Ramelli			1.10	436.36					0.05	19.83	456.20	1.15
Emilio Ramelli	42.00	59, 60	Railroad Dam, Ramelli Lower Dam					0.45	178.51			0.10	39.67	218.18	0.55
Alessio Ramelli & Adelina Ramelli	166.40	57, 58	M B Humphrey West Side, Ramelli Vinton					1.70	674.38			0.40	158.68	833.06	2.10
Alessio Ramelli & Adelina Ramelli	142.50	59, 60	Ramelli Railroad Dam, Ramelli Lower Dam					1.80	714.05					714.05	1.80
Edmond J Goble & Ida C Goble	21.00	57, 58	M B Humphrey West Side, Ramelli Vinton					0.25	99.17					99.17	0.25

**Middle Fork Feather River (and Its Tributaries Above Beckwith) Decree County of Plumas, Case No. 3095**

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Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Check, total CFS	
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Daniel M Scott & Gemma Solari Scott	188.10	61, 62, 63	Solari Upper East Channel, Solari Middle East Channel, Solari Lower East Channel					1.85	733.88			0.50	198.35	932.23	2.35
C D Laffranchini & Marie C Laffranchini	305.00	64, 65, 66	Laffranchini Upper East Channel, Laffranchini Middle East Channel, Laffranchini East Channel Division					1.35	535.54	1.95	773.55	0.50	198.35	1,507.44	3.80
Jennie F Huntley	288.80	65, 66, 68, 71, 72	Laffranchini Middle East Channel, Laffranchini East Channel Division, Roberti Upper, Huntley Upper East Channel, Huntley Lower East Channel							2.55	1,011.57	1.10	436.36	1,447.93	3.65
M B Humphrey	288.30	67, 70, 72	Dicen Division, Roberti Lower Channel, Huntley Lower East Channel							2.50	991.74	1.10	436.36	1,428.10	3.60
Josephine Roberti	311.70	67, 68, 69, 70	Dicen Division, Roberti Upper, Roberti Lower, Roberti Lower Channel							2.90	1,150.41	1.00	396.69	1,547.11	3.90
Bernard E Giudici & Rudolph E Giudici	141.30	73, 98	Dicen Dam, Giudici East Dam									2.35	932.23	932.23	2.35
<b>Subtotal, Last Chance Creek below Frenchman Creek Group Schedule 5, Claimants from Last Chance Creek Below Adams Neck</b>	<b>5,474.10</b>			<b>8.75</b>	<b>3,471.07</b>	<b>13.80</b>	<b>5,474.38</b>	<b>15.60</b>	<b>6,188.43</b>	<b>19.80</b>	<b>7,854.55</b>	<b>17.10</b>	<b>5,970.25</b>	<b>28,958.68</b>	75.05
Philip E Ede & Sophia L Ede	212.00	31, 33	F V Dotta Lower, Ede Schoolhouse			0.45	178.51	0.45	178.51					357.02	0.90
Edmond J Goble & Ida C Goble	650.70	35	Goble Upper North Channel			0.70	277.69	1.40	555.37					833.06	2.10
Daniel M Scott & Gemma Solari Scott	120.30	38	Solari North Channel			0.50	198.35							198.35	0.50

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C D Laffranchini & Marie C Laffranchini	447.90	39, 64, 67	Laffranchini North Channel, Laffranchini Upper East Channel, Dicen Division Laffranchini North Channel			0.35	138.84		1.20	476.03						614.88	1.55
Jennie F Huntley	123.50	39, 65	Laffranchini Middle East Channel			0.45	178.51									178.51	0.45
J A Bonta & S A Bonta	203.30	47, 48, 49	Bonta North, Bonta South, Bonta Meadow	1.75	694.21	0.10	39.67									733.88	1.85
C D Laffranchini & L A Laffranchini	60.00	50, 51	Dedmon North, Dedmon South	0.60	238.02											238.02	0.60
L D Maddalena	69.00	52, 53	Maddalena South, Maddalena North	0.40	158.68	0.10	39.67									198.35	0.50
Westover Company	45.00	54, 55	Noble North, Noble South	0.45	178.51											178.51	0.45
Alessio Ramelli & Adelina Ramelli	31.50	60	Ramelli Lower Dam					0.15	59.50							59.50	0.15
M B Humphrey	380.00	67, 70, 72	Dicen Division, Roberti Lower Channel, Huntley Lower East Channel			1.60	634.71									634.71	1.60
Smithneck Creek**		67, 73	Dicen Division, Dicen Dam					3.50								0.00	3.50
Antone E Dotta	45.10	67, 108	Dicen Division, A E Dotta East Channel			0.20	79.34									79.34	0.20
Amelia Ramelli	135.80	70	Roberti Lower Channel			0.55	218.18									218.18	0.55
Louisa Scolari, Ida A Scolari, Celia D Fallon, P R Scolari, R A Scolari, Olivia R Roberti, Lydia H Westover	51.50	70	Roberti Lower Channel			0.20	79.34									79.34	0.20
James L Humphrey	16.40	70	Roberti Lower Channel			0.10	39.67									39.67	0.10
Josephine Roberti	11.00	70	Roberti Lower Channel			0.05	19.83									19.83	0.05
Bernard E Giudici & Rudolph E Giudici	113.00	73	Dicen Dam			0.35	138.84	0.25	99.17							238.02	0.60
<b>Subtotal, Last Chance Creek Group Below Adams Neck</b>	<b>2,716.00</b>			<b>3.20</b>	<b>1,269.42</b>	<b>5.70</b>	<b>2,261.16</b>	<b>6.95</b>	<b>1,368.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4,899.17</b>	<b>15.85</b>	
<b>Schedule 6, Claimants from Smithneck Creek and Tributaries</b>																	
Eddie John Troisi & Dolly Conratt	73.00	77A	Troisi Mountain Mountain Ranch West Side	1.20	869.36											869.36	1.20
Clover Valley Lumber Company	70.30	77, 78	Mountain Mountain Ranch East Side	1.20	869.36											869.36	1.20

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Clover Valley Lumber Company	180.70	88, 89	Cobb, Mill Pond Dam	1.40	1,014.25							0.25	99.17	1,113.42	1.65
Mary C Laffranchini	46.40	79, 80	Lombardi West, Lombardi East	0.70	507.12									507.12	0.70
Mary C Laffranchini	154.70	84, 85, 252	Turner South, Turner North, Lombardi Canyon	2.20	1,593.82									1,593.82	2.20
Caesar P Lombardi	Domestic	81	Upper Concrete Dam	0.04	28.98									28.98	0.04
Clover Valley Lumber Company	164.70	81, 82, 83	Upper Concrete Dam, Middle East, Turner Channel	1.30	941.80	1.00	724.46			0.45	178.51			1,844.78	2.75
First National Bank of Nevada	151.80	82, 87	Middle East, Lewis Bros. East	0.20	144.89	1.05	760.69					0.35	138.84	1,044.42	1.60
J S Rees	30.40	86, 253	Lewis Bros. West, Loyalton Pipe	0.50	362.23									362.23	0.50
J S Rees	182.20	87, 89	Lewis Bros. East, Mill Pond Dam	1.30	941.80	0.40	158.68					0.45	178.51	1,278.99	2.15
J S Rees	Municipal	253	Loyalton Pipe	0.60	434.68									434.68	0.60
Max Dory & May Dory	60.40	90, 91	Division Dams, Dory East Channel			0.95	376.86							376.86	0.95
Max Dory & May Dory	46.90	110	Dory West	0.30	217.34	0.15	59.50							276.84	0.45
Ode Grandi	18.00	90	Division Dams									0.10	39.67	39.67	0.10
Louis S Lombardi	34.70	110	Dory West									0.20	79.34	79.34	0.20
Sierra Valley Bank	58.20	110	Dory West									0.25	99.17	99.17	0.25
Alice Giudici, Frances Giudici, & Stephen Giudici	83.30	92	Giudici East Channel			1.05	760.69							760.69	1.05
Leon F Dotta	87.80	92	Giudici East Channel			0.50	362.23	0.60	238.02					600.25	1.10
Raffaele Dotta	120.00	92	Giudici East Channel			0.65	470.90	0.70	277.69					748.59	1.35
Raffaele Dotta	118.00	94, 95	R Dotta Main Dam			1.30	515.70							515.70	1.30
May Dory & Cora V Keyes	66.00	93	Keyes East			0.85	337.19							337.19	0.85
Albert C Dotta & Caesar Dotta	160.00	94, 95	R Dotta West, R Dotta main Dam			1.80	714.05							714.05	1.80
Albert C Dotta & Caesar Dotta	299.80	96, 97	A & C Dotta East, A & C Dotta East Dam			3.40	1,348.76							1,348.76	3.40
Bernard E Giudici & Rudolph E Giudici	140.30	98,99,106	Giudici East Dam, Junction Dam, Lower Middle Channel			1.60	634.71							634.71	1.60
Alice Giudici, Frances Giudici, & Stephen Giudici	62.00	100	Giudici Middle			0.85	337.19							337.19	0.85
May Dory & Cora V Keyes	94.00	100, 101	Giudici Middle, Keyes Middle			1.15	456.20							456.20	1.15

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Julio Genasci & Angie Genasci	410.60	102, 103	upper Dotta Genasci, Lower Dotta Genasci		3.70	1,467.77	0.60	238.02				0.15	59.50	1,765.29	4.45
Albert C Dotta & Caesar Dotta	345.50	102, 103, 104, 105	upper Dotta Genasci, Lower Dotta Genasci, A & C Dotta Middle, A & C Dotta Home Ranch Junction		3.25	1,289.26	1.05	416.53						1,705.79	4.30
Bernard E Giudici & Rudolph E Giudici	86.40	99, 106	Dam, Lower Middle Channel Genasci		0.75	297.52	0.25	99.17						396.69	1.00
Attilio R Genasci & Louis Genasci	298.60	111, 112	Upper Field, Genasci		2.95	2,137.17	0.80	317.36						2,454.52	3.75
Perpetum Genasci	60.00	110	Lower Field Dory West Genasci								0.24	95.21	95.21	0.24	
Perpetum Genasci	5.10	111	Upper Field Dory West, Ramelli		0.06	43.47								43.47	0.06
Amelia D Ramelli	579.30	110, 113, 114	Flood, Ramelli Division		2.85	1,130.58	1.30	515.70			0.65	257.85	1,904.13	4.80	
Albert C Dotta & Caesar Dotta	254.50	115	A & C Dotta West Channel A & C Dotta West		2.05	813.22	0.80	317.36						1,130.58	2.85
Antone E Dotta	78.70	115, 116	Channel, A E Dotta Upper West Channel Ramelli		0.80	317.36								317.36	0.80
The Federal Land Bank of Berkeley	198.20	114, 116, 117	Division, A E Dotta pper West Channel, A E Dotta Lower Channel				2.20	872.73						872.73	2.20
Albert C Dotta & Caesar Dotta	85.90	104	Last Chance Dam				1.05	416.53						416.53	1.05
Antone E Dotta	59.60	108	A E Dotta East Channel				0.70	277.69						277.69	0.70
Charles W Ede	38.00	108	A E Dotta East Channel				0.45	178.51						178.51	0.45
The Federal Land Bank of Berkeley	74.00	108, 109	A E Dotta East Channel, A E Dotta Lower Ramelli				0.80	317.36						317.36	0.80
M B Humphrey	94.20	114	Division Ede Lake A E Dotta				0.30	119.01			0.25	99.17	218.18	0.55	
M B Humphrey	355.00	118	Ede Lake A E Dotta East Channel, Ede Lake				1.60	634.71	2.40	952.07				4.00	
Charles W Ede	157.90	108, 118	East Channel, Ede Lake						1.75	694.21				694.21	1.75
Francis A Bradley, Jr.	130.60	119	Ede Lake Cut						1.50	595.04				595.04	1.50
Antone E Dotta	70.90	119	Ede Lake Cut						0.90	357.02				357.02	0.90
<b>Subtotal, Claimants from Smithneck Creek and Its Tributaries Group</b>	<b>5,886.60</b>			<b>10.94</b>	<b>7,925.62</b>	<b>33.11</b>	<b>15,514.15</b>	<b>13.20</b>	<b>5,236.36</b>	<b>7.00</b>	<b>2,776.86</b>	<b>2.89</b>	<b>1,146.45</b>	<b>31,012.66</b>	<b>67.14</b>



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Henry Dotta	431.80	158, 159, 161, 162, 261	H Dotta Upper South, H Dotta Lower South, H Dotta North Channel, H Dotta South Channel, H Dotta Springs	2.00	1,448.93	3.05	1,209.92	0.90	357.02	0.20	79.34	3,095.21	6.15	
A E Strang	555.60	160, 161, 163, 164	H Dotta Old Power, H Dotta North Channel, Strang Upper, Strang Lower	1.00	724.46	4.60	1,824.79	1.20	476.03	0.20	79.34	3,104.63	7.00	
Delia R Martinetti	29.60	165	Martinetti & Miller			0.40	158.68					158.68	0.40	
Delia R Martinetti	238.00	165, 166	Martinetti & Miller, Miller Hamlin	0.10	72.45	0.90	357.02	0.75	297.52	0.85	337.19	1,064.18	2.60	
A E Strang	86.50	167	Miller - Strang	0.40	289.79	0.80	317.36					726.99	2.60	
A E Strang	24.00	170, 167	Miller - Strang, Strang & Martinetti			0.35	138.84					138.84	0.35	
Delia R Martinetti	60.00	167	Lower Field Miller - Strang			0.80	317.36					317.36	0.80	
Delia R Martinetti	274.10	168, 169, 170	Martinetti Upper East Channel, Martinetti Middle East Channel, Strang & Martinetti	0.50	362.23	3.00	1,190.08					1,552.31	3.50	
Delia R Martinetti	74.40	171, 173	Lower Field Martinetti Upper West Channel, Martinetti Middle West Channel			0.95	376.86					376.86	0.95	
Delia R Martinetti	20.00	174	Martinetti Lower West Channel					0.25	99.17			99.17	0.25	
Delia R Martinetti	199.20	172	Cavitt Miller Creek	0.30	217.34	2.20	872.73					1,090.07	2.50	
B F Myers and C B Myers	20.00	174	Lower West Channel					0.25	99.17			99.17	0.25	
B F Myers and C B Myers	147.20	202	Turner Mounds	0.10	72.45	0.40	289.79	1.35	535.54			897.77	1.85	
Kate L Devine	74.90	174, 175	Martinetti Lower West Channel	0.10	72.45			0.40	158.68			231.12	0.50	
Albert B Church	105.00	175	Miller Creek Mounds Channel	0.10	72.45			1.20	476.03			548.48	1.30	

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M O Binninger, J M Binninger, & Ardis L Binninger	117.00	175	Miller Creek Mounds Channel	0.10	72.45			1.35	535.54			607.98	1.45		
Frank R Turner, Earl Turner, and Gene Turner	42.20	175, 187	Miller Creek Mounds Channel, Church Lower Turner Creek Meadow	0.10	72.45			0.40	158.68			231.12	0.50		
Frank R Turner, Earl Turner, and Gene Turner	80.00	175, 202	Miller Creek Mounds Channel, Turner Mounds	0.10	72.45			0.90	357.02			429.47	1.00		
Horace G Adams	120.00	176	Adams Mounds	0.10	72.45	0.40	158.68	1.00	396.69			627.82	1.50		
Delia R Martinetti	29.40	177	Martinetti Spring Brook	0.43	311.52							311.52	0.43		
Delia R Martinetti	64.00	177	Martinetti Spring Brook, Cavitt Spring Brook	0.20	144.89	0.90	357.02					501.92	1.10		
Delia R Martinetti	30.00	262	Cavitt Foothill Springs Church,		0.00	0.45	178.51					178.51	0.45		
Delia R Martinetti	37.70	184, 185	Cavitt Turner Creek	0.20	144.89	0.45	178.51					323.40	0.65		
Frank W Freeman	117.50	180	Freeman Freeman	0.60	434.68	1.20	476.03					910.71	1.80		
Frank W Freeman	88.90	188	Lower Meadow	0.10	72.45			1.00	396.69			469.14	1.10		
T K Turner, Earl Turner, Frank R Turner, & Gene Turner	0.20	180	Freeman	0.02	14.49							14.49	0.02		
Frank R Turner, Earl Turner, and Gene Turner	78.60	181, 182	Turner West, Turner East	0.60	434.68	0.65	257.85					692.53	1.25		
Frank R Turner, Earl Turner, and Gene Turner	25.00	183	Turner Canyon Church,			0.40	158.68					158.68	0.40		
Frank R Turner, Earl Turner, and Gene Turner	21.90	184, 185	Cavitt Turner Creek Church			0.35	138.84					138.84	0.35		
Frank R Turner, Earl Turner, and Gene Turner	109.40	187	Lower Turner Creek Meadow			0.15	59.50	0.25	99.17	1.00		158.68	1.40		
Albert B Church	58.30	184	Church Church			0.80	317.36					317.36	0.80		
Albert B Church	148.90	186	Upper Turner Creek Church	0.20	144.89	1.60	634.71					779.60	1.80		
Albert B Church	134.10	187	Lower Turner Creek Meadow	0.20	144.89			1.50	595.04			739.93	1.70		
Samuel Devine, Kate L Devine, Same H Devine, Allen B Devine, and Bradley & Wooding Trustees, Royal Union Fund	200.80	189	Clark Turner Creek Meadow	0.20	144.89			1.30	515.70	1.00	396.69	1,057.29	2.50		
Estate of C W Toomey & Estate of Virginia McLean	200.00	189, 190	Clark Turner Creek meadow, Toomey Meadow	0.20	144.89					1.80	714.05	0.50	198.35	1,057.29	2.50
Isolina Pasquetti	184.70	189, 191, 202	Clark Turner Creek Meadow, Pasquetti Turner, Turner Mounds	0.20	144.89					0.80	317.36	1.30	515.70	977.95	2.30

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Isolina Pasquetti	302.20	204, 205	Pasquetti Upper Westside, Pasquetti Lower Westside			0.50	362.23	2.10	833.06	1.15	456.20				1,651.49	3.75
Frank R Turner, Earl Turner, and Gene Turner	109.90	202	Turner Mounds Adams Mounds, Henderson Westside Adams Mounds, Pasquetti Upper West Side	0.20	144.89	0.30	217.34	0.90	357.02							
George A Henderson	120.00	176, 203	Henderson Westside Adams Mounds, Pasquetti Upper West Side			0.50	362.23	1.00	396.69						758.93	1.50
Battista Pasquetti	189.00	176, 204	Pasquetti Lower West Side, Humphrey O'Hara, Humphrey Upper, Humphrey Lower, Humphrey Home			0.50	362.23	1.50	595.04	0.40	158.68				1,115.95	2.40
F E Humphrey, Jr.	742.30	205, 206, 207, 208, 209	Humphrey Division, Humphrey Freeman Humphrey-Newman, Humphrey Division			1.50	1,086.69	5.30	2,102.48	1.60	634.71				3,823.88	8.40
F E Humphrey, Jr.	411.50	210, 214	Humphrey Division, Humphrey Freeman			0.75	543.35	2.50	991.74	1.35	535.54				2,070.62	4.60
F E Humphrey, Jr.	160.00	212, 214	Humphrey Division			0.50	362.23	1.10	436.36	0.30	119.01				917.60	1.90
F E Humphrey, Jr.	270.60	219, 220	Mercer, Albini & Humphrey Matley, Humphrey Division			0.50	362.23	0.60	238.02	0.60	238.02	3.00	1,190.08		1,190.08	3.00
John B Matley & Annie M Matley	134.30	211, 214	Humphrey Division			0.50	362.23	0.60	238.02	0.60	238.02				838.26	1.70
Fred Berry & Lillian Berry	121.20	213, 215	Berry West Side, Berry Meadow Dams			0.25	181.12			1.25	495.87				676.98	1.50
Fred Berry & Lillian Berry	110.80	214	Humphrey Division							0.90	357.02	0.50	198.35		555.37	1.40
E F Ghidossi	349.40	213, 216	Berry West Side, Ghidossi Upper Field Dams			0.25	181.12			2.55	1,011.57	1.60	634.71		1,827.40	4.40
E F Ghidossi	114.10	218	Ghidossi Lower West Side Dams			0.25	181.12			1.00	396.69	0.15	59.50		637.31	1.40
A A Viscia	158.90	216, 217	Ghidossi upper Field Dams, Casey Westside Dams			0.25	181.12			0.95	376.86	0.80	317.36		875.33	2.00
Henry Albini	61.80	220	Albini & Humphrey							0.80	317.36				317.36	0.80
James L Humphrey	127.50	220 239	Albini & Humphrey							0.80	317.36	0.60	238.02		555.37	1.40
<b>Subtotal Schedule 7 - Claimants from West Side Canal and its Tributaries (Hamlin, Miller and Turner Creeks)</b>	<b>7,712.40</b>			<b>8.35</b>	<b>6,049.26</b>	<b>30.85</b>	<b>14,352.12</b>	<b>29.00</b>	<b>11,504.13</b>	<b>22.50</b>	<b>8,528.93</b>	<b>5.45</b>	<b>2,161.98</b>	<b>41,997.02</b>	<b>96.15</b>	

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				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)			
<b>Schedule 8, Claimants from Fletcher Creek and Spring Channels</b>																
Davies-Johnson Lumber Company	134.80	192, 193, 197	Davies-Johnson House, Davies-Johnson Spring Challen	0.85	615.79	0.85	337.19								952.98	1.70
Davies-Johnson Lumber Company	Industrial	196	Calpine Pipe Freeman Spring Channel,												0.00	0.00
Estate of William Freeman, Frank W Freeman, Administrator	53.80	194, 198	Freeman Fletcher Creek Meadow Devine Spring	0.10	72.45	0.60	238.02								310.46	0.70
Samuel Devine & Kate L Devine	195.10	195, 199	Channel, Devine Meadow Devine Spring	0.40	289.79	1.00	396.69	0.35	138.84						825.32	1.75
Samuel Devine, Kate L Devine, Sam H Devine Allen B Devine, and Bradley & Wooding, Trustees Royal Union Fund	200.10	199, 200	Meadow Devine Clarke Fletcher Creek Meadow	0.20	144.89	1.45	575.21	0.28	111.07						831.17	1.93
<b>Subtotal Schedule 8, Claimants from Fletcher Creek and Spring Channels</b>	<b>583.80</b>			<b>1.55</b>	<b>1,122.92</b>	<b>3.90</b>	<b>1,547.11</b>	<b>0.63</b>	<b>249.92</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2,919.94</b>	<b>6.08</b>

**Schedule 9, Allocations to Shareholders in Sierra Valley Water Company for Rediversion From Little Truckee River Water Conveyed Into Middle Fork of Feather River Stream System**

	No. of Shares	Allotment, cfs	Face Value Amount
Anna B Miller	700.00	7	2,697.52
C Maddalena	200.00	2	769.59
Dell L Johnson	200.00	2	769.59
Francesca G Bonny & Marcel J Bonny	200.00	2	769.59
Fred P Alpers	200.00	2	769.59
Ken Torri	300.00	3	1,158.35
Wilson	200.00	2	769.59
Small	125.00	1	483.97
Mabel Eur	200.00	2	769.59
Russel	750.00	7	2,887.93
Van Vleck	200.00	2	769.59
Van Vleck	100.00	1	388.76
Mello	100.00	1	388.76
Alice Vanetti	200.00	2	769.59
A Hillio	200.00	2	769.59
Russel	200.00	2	769.59
George Filippini	300.00	3	1,158.35
Russel	500.00	6	2,407.93
Russel	200.00	2	769.59
Francis A Bradley, Jr	125.00	1	483.97
S J Carmichael	525.00	4	1,527.27
Wiley (97), Howes (3)	100.00	1	404.63
Bryce Euer	150.00	1	579.17
Paul Noble	200.00	2	769.59
<b>Subtotal, Schedule 9</b>	<b>6,175.00</b>	<b>60</b>	<b>23,801.65</b>

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				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)	Sixth Priority Class (cfs)						Sixth Priority Face Value (AF)
S C Linebaugh	6.00	127	Treasure and Camp Springs	0.04	28.98	0.08	31.74											60.71	0.12	
S C Linebaugh	1.30	134	Town Pumps	0.02	14.49													14.49	0.02	
John Amodei & Anna Amodei	144.60	155	Amodei	1.50	1,086.69	1.00	396.69											1,483.39	2.50	
James W Morgan	67.70	156, 157	Morgan East Channel, Morgan West Channel	1.10	796.91													796.91	1.10	
James W Morgan	16.90	133	Morgan, Johnson & Adams	0.10	72.45			0.18	71.40									143.85	0.28	
Dell L Johnson	50.50	128, 128A	Johnson Cold Creek, Cook	0.20	144.89			0.80	317.36									462.25	1.00	
Dell L Johnson	146.70	131, 132, 145, 258	Johnson Webber Creek, Johnson Town Creek, Webber, Diltz & Johnson, Hobo Springs	0.20	144.89	2.00	793.39	0.25	99.17									1,037.45	2.45	
Dell L Johnson	60.70	133	Morgan, Johnson & Adams	0.20	144.89			0.80	317.36									462.25	1.00	
Kelso N Deller & Columbine Deller	181.60	129	Miller-Dillera	0.50	362.23	1.35	535.54			0.45	178.51							1,076.28	2.30	
Anna B Miller	129.60	129, 258A	Miller-Dellera, Miller Spring	0.50	362.23	1.35	535.54											897.77	1.85	
Anna B Miller	20.00	133	Morgan, Johnson & Adams	0.27	195.60													195.60	0.27	
Randolph Water Company	12.80	130	Randolph	0.50	362.23													362.23	0.50	
Annie Dora Adams	2.90	133	Morgan, Johnson & Adams	0.04	28.98													28.98	0.04	
Thomas E Miller	9.90	134	Town Pumps	0.04	28.98			0.15	59.50									88.48	0.19	
C D Johnson	13.40	134	Town Pumps	0.05	36.22			0.20	79.34									115.56	0.25	
John A McIntosh	1.00	134	Town Pumps	0.02	14.49													14.49	0.02	
Fred Dolley	0.50	134	Town Pumps	0.01	7.24													7.24	0.01	
Carmichael	5.40	135	Wilson Dam	0.10	72.45			0.50	198.35									270.79	0.60	
Francesca G Bony & Marcel J Bony	388.70	136, 137, 138, 139	Bony Upper Dam, Bony Division Dam, Bony Middle Concrete Dam, Bony Lower Dam	0.50	362.23			5.05	2,003.31									2,365.54	5.55	
Fred P Alpers & Christina Alpers	173.80	140	Alpers Lower Field	0.20	144.89			2.00	793.39									938.28	2.20	
Fred P Alpers & Christina Alpers	80.00	256	Alpers Springs	0.20	144.89	0.80	317.36											462.25	1.00	
Giulio Torri	321.90	142, 143, 255	Torri Upper, Torri Lower, Henderson Springs	0.20	144.89			3.80	1,507.44									1,652.33	4.00	
Anna B Miller	236.00	137	Bony Division Dam	0.20	144.89					1.90	753.72	0.90	357.02					1,255.64	3.00	
Anna B Miller	251.80	146	Miller Upper	0.50	362.23			2.60	1,031.40					1.00	396.69			1,790.33	4.10	
Anna B Miller	132.50	147	Miller Schoolhouse					1.90	753.72									753.72	1.90	

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				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)	Total Allotments, Face Value (AF)			
Anna B Miller	326.00	149, 152	Perry Creek Division, Miller Lower Perry Creek							2.00	793.39	2.00	793.39			1,586.78	4.00
William A Diltz	8.00	145	Webber & Diltz & Johnson	0.05	36.22			0.10	39.67							75.89	0.15
Mary Ella Webber	7.00	145	Webber & Diltz & Johnson	0.05	36.22			0.10	39.67							75.89	0.15
Francesca G Bony & Marcel J Bony	91.60	147, 148A	Schoolhouse, Bony Perry Dam							1.30	515.70					515.70	1.30
Horace G Adams	157.80	148	Adams	0.50	362.23			1.19	472.07	0.31	122.98					957.27	2.00
Seth Law & Florence M Law	150.00	148	Adams	0.50	362.23			1.19	472.07	0.21	83.31					917.60	1.90
Seth Law & Florence M Law	123.00	149	Perry Creek Division							1.55	614.88					614.88	1.55
Seth Law & Florence M Law	119.40	150, 151	Webber Upper, Webber Lower							1.45	575.21					575.21	1.45
George A Henderson	156.80	144, 154	Henderson Town Creek, Henderson Perry Creek	0.20	144.89					1.80	714.05					858.94	2.00
Battista Pasquetti	232.20	221	Pasquetti Dam	0.20	144.89					2.15	852.89			0.25	99.17	1,096.96	2.60
Robert L Henderson	134.70	222	East Side Slough	0.20	144.89					1.30	515.70					660.60	1.50
Alice Vanetti	227.40	222, 223	East Side Slough, Vanetti Slough	0.20	144.89					2.05	813.22					958.12	2.25
F E Humphrey Jr	1,309.70	224, 225, 226, 227, 228, 229	Humphrey Upper River, Humphrey North River, East Side, Humphrey Lower Concrete Dam, Humphrey Lower River Dam, Robbins Dam	0.70	507.12	0.80	579.57			5.20	2,062.81	3.70	1,467.77	2.70	1,071.07	5,688.35	13.10
Perpetua Genasci & Raffaele Dotta	143.10	226, 229	East Side, Robbins Dam							0.85	337.19	0.60	238.02			575.21	1.45
Cesare C Dotta	184.70	225	Humphrey North River											2.40	952.07	952.07	2.40
Cesare C Dotta	122.80	226, 230, 231	East Side, Dotta Meadow Dams, Dotta Pump			0.40	289.79			1.40	555.37					845.16	1.80
Julius Filippini	158.40	226	East Side Filippini Upper Meadow Dams									1.05	416.53	0.95	376.86	793.39	2.00
Julius Filippini	364.80	232, 233	Filippini Lower Meadow Dams			0.50	362.23			2.30	912.40			0.85	337.19	1,611.82	3.65
M B Humphrey	222.90	226	East Side Mickey Meadow, Mickey East Side Dam									2.20	872.73			872.73	2.20
M B Humphrey	698.70	235, 236	Mickey East Side Dam							3.20	1,269.42	2.30	912.40	1.50	595.04	2,776.86	7.00

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Amelia D Ramelli	102.30	226	East Side Filippini									1.05	416.53			416.53	1.05	
A A Viscia	40.00	234	Middle Filippini						0.40	158.68						158.68	0.40	
F E Humphrey Jr	78.50	234	Middle Ede River									0.75	297.52			297.52	0.75	
Francis A Bradley, Jr.	65.00	237	Dam Humphrey						0.30	119.01		0.35	138.84			257.85	0.65	
James L Humphrey	1,052.40	238, 239, 240	Dam East, Humphrey Dam West, Humphrey Lower Field Dams						1.30	515.70		7.60	3,014.88	1.60	634.71	4,165.29	10.50	
Louisa Scolari, Ida A Scolari, Celia D Fallon, P R Scolari, R A Scolari, Olivia R Riberti, Lydia H Westover	124.40	238	Humphrey Dam East									1.25	495.87		495.87	1.25		
Antone E Dotta	109.80	238, 119	Humphrey Dam East, Ede Lake Cut									1.10	436.36	0.30	119.01	555.37	1.40	
Henry Albani	80.00	239	Humphrey Dam West									0.80	317.36		317.36	0.80		
M B Humphrey	302.60	241, 242	M B Humphrey Tognazini Ranch									1.90	753.72	1.10	436.36	1,190.08	3.00	
L D Maddalena	32.50	242, 52	L D Maddalena River, Maddalena South									0.20	79.34	0.15	59.50	138.84	0.35	
Westover Company	432.70	243,244,245, 263, 54, 55	Noble East, Noble West, Noble Dam, Noble Reservoir, Noble North, Noble South									2.50	991.74	2.00	793.39	1,785.12	4.50	
Giacomo Falchi	144.40	246	Decker Dam									0.40	158.68	1.05	416.53	575.21	1.45	
C Roy Carmichael	85.90	246, 247	Carmichael Dam											0.85	337.19	337.19	0.85	
<b>Subtotal, Schedule 10, Claimants from Middle Fork of Feather River and Tributaries Cold, Webber, Town, and Perry Creeks</b>																		
<b>Additional Special Class Claimants, Last Chance Creek Group</b>				<b>cfs</b>	<b>AF</b>	<b>Season</b>												
Sam Bonta	Domestic, Stockwater, Irrigation	270	Bonta Creek Ditches	3.15	2,282.06	Continuous												
Sam Bonta	Stockwater, Irrigation	271	Bonta East Ditch	0.37	8.07	Apr 10 - Apr 20												
A D Maddalena	Domestic, Stockwater, Irrigation	269	Maddalena Pasture Ditches	0.52	376.72	Continuous												
L D Maddalena	Domestic, Stockwater		Maddalena Spring Pipe Line	0.02	10.87	Continuous												
L D Maddalena	Stockwater, Irrigation	272	L D Maddalena Pasture Ditch	0.47	330.24	Apr 21 - Apr 9												
Louis A LaFranchini	Domestic, Stockwater, Irrigation	273	LaFranchini Creek Ditches	3.20	2,318.28	Continuous												
<b>Subtotal, Schedule 10, Claimants from Middle Fork of Feather River and Tributaries Cold, Webber, Town, and Perry Creeks</b>				<b>9.79</b>	<b>7,092.49</b>		<b>8.28</b>	<b>3,841.83</b>	<b>20.81</b>	<b>8,255.21</b>	<b>31.42</b>	<b>12,464.13</b>	<b>30.65</b>	<b>12,158.68</b>	<b>16.70</b>	<b>6,624.79</b>	<b>50,437.14</b>	<b>117.65</b>

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Elsie Herz Golden	Domestic, Stockwater, Irrigation	274, 275	Trosi West Canyon, Trosi Middle Canyon, Trosi East Canyon Ditches	2.25	1,630.04	Continuous										
Fred P Giudici and Myrtle W Giudici	Storage	21, 22	F P Giudici Upper and F P Giudici Lower Ditches	3.50	1,388.43	Irrigation Season										
Mauricilio Giudici & Julie Giudici	Stockwater, Irrigation	Drainage from F.P. Giudici and M W Giudici	Drainage from F.P. Giudici and M W Giudici	unspecified	unspecified	Continuous										
<b>Subtotal, Additional Special Class Claimants - Last Chance Creek Group</b>				<b>13.48</b>	<b>8,344.71</b>											
<b>Additional Surplus Class Claimants - Last Chance Creek Group</b>																
Amelia D Ramelli	Domestic, Stockwater, Irrigation	70	Roberti Lower Channel, Last Chance Lake		220.00											
Louisa Scolari, Ida A Scolari, Celia D Fallon, P R Scolari, R A Scolari, Olivia R Riberti, Lydia H Westover	Domestic, Stockwater, Irrigation	70	Roberti Lower Channel, Last Chance Lake		84.00											
James L Humphrey	Domestic, Stockwater, Irrigation	70	Roberti Lower Channel, Last Chance Lake		27.00											
<b>Subtotal, Additional Surplus Class Claimants, Last Chance Creek Group</b>					<b>331.00</b>											
<b>Additional Special Class Claimants, Smithneck Creek Group</b>																
J S Rees and John Caccini	Domestic, Stockwater, Irrigation	74	Parker (Grey) Ditch	0.50	362.23	Continuous										
John Caccini	Domestic, Stockwater, Irrigation	75	Caccini Ditches	1.15	833.13	Continuous										
Leon F Dotta and Raffaele Dotta	Domestic, Stockwater, Irrigation	76	Lower Staverille Channel Graveyard Creek through the Grandi Ditch	0.80	317.36	Irrigation Season										
Odo Grandi	Domestic, Stockwater, Irrigation			0.50	198.35	Irrigation Season										
<b>Subtotal, Additional Special Class Claimants - Smithneck Creek Group</b>				<b>2.95</b>	<b>1,711.07</b>											
<b>Additional Surplus Class Claimants - Smithneck Creek Group</b>																
Charles W Ede	Domestic, Stockwater, Irrigation	118	Ede Lake		70.00											
M B Humphrey	Domestic, Stockwater, Irrigation	118			70.00											
Clover Valley Lumber Company	Industrial	89	Mill Pond		50.00											
J S Rees	Domestic, Stockwater, Irrigation	87	Lewis (Rees) Reservoir		50.00											
<b>Subtotal, Additional Surplus Class Claimants - Smithneck Creek Group</b>					<b>240.00</b>											
<b>Additional Special Class Claimants, West Side Canal Group</b>																



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F E Humphrey Jr	Domestic, Stockwater, Irrigation	201	Lower Craycroft Creek Diversion	0.22	87.27	Irrigation Season										
Henry Albini	Domestic, Stockwater, Irrigation	201	Lower Craycroft Creek Diversion	0.18	71.40	Irrigation Season										
James L Humphrey	Domestic, Stockwater, Irrigation	201	Lower Craycroft Creek Diversion	0.60	238.02	Irrigation Season										
James L Humphrey	Domestic, Stockwater, Irrigation	201	Lower Craycroft Creek Diversion	0.20	79.34	Irrigation Season										
F E Humphrey Jr	Domestic, Stockwater, Irrigation	201A	Upper Craycroft Creek Diversion	0.75	297.52	Irrigation Season										
<b>Subtotal, Additional Special Class Claimants, West Side Canal Group</b>				<b>1.95</b>	<b>773.55</b>											
<b>Additional Surplus Class Claimants - Fletcher Creek Group</b>																
Isolina Pasquetti	Domestic, Stockwater, Irrigation		Fletcher Creek and Spring Channels	0.25	99.17	Irrigation Season										
<b>Subtotal, Additional Surplus Class Claimants, Fletcher Creek Group</b>				<b>0.25</b>	<b>99.17</b>											
<b>Additional Special Class Claimants - Middle Fork Feather River Group</b>																
Caesar P Lombardi	Domestic, Stockwater, Irrigation	120, 121, 122	Antelope Upper, Antelope East Channel, Antelope West Channel Ditches	4.00	1,586.78	Irrigation Season										
Julius Filippini and Perpetua Genasci	Domestic, Stockwater, Irrigation		Antelope Creek	2.00	793.39	Irrigation Season										
Anna B Miller	Domestic, Stockwater, Irrigation	123 to 126	Blinman Spring Channel, Lemon East, Lemon West, Lemon Lower Ditches	5.00	3,622.31	Continuous										
Fred P Alpers & Christina Alpers	Domestic, Stockwater, Irrigation		Lemon Creek	2.70	1,956.05	Continuous										
Marie Mattarola and B V Mattarolo	Domestic, Stockwater, Irrigation	257, 258	Campbell Springs, Echo Springs Ditches	0.80	579.57	Continuous										
Frank Carmichael	Domestic, Stockwater, Irrigation	267, 268	Mapes West Meadow, Mapes East Meadow Ditches	5.00	3,622.31	Continuous										
Veste Nelson	Domestic, Stockwater, Irrigation	265	Nelson Ditches	1.30	941.80	Continuous										
Giacomo Falchi and M Falchi	Domestic, Stockwater, Irrigation	266		1.70	1,231.59	Continuous										

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Continuous, regardless of season	365.25	days
March 1 through October 31	245.00	days
March 15 through September 30	200.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments											Check, total CFS	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)	Total Allotments, Face Value (AF)		
Westover Company	Domestic, Stockwater, Irrigation	266		1.80	1,304.03	Continuous										
Westover Company	Domestic, Stockwater	Unnamed Spring	Unnamed Spring Amodel Upper	0.01	3.62	Continuous										
John Amodel & Anna Amodel	Domestic, Stockwater, Irrigation	259, 260	Spring, Amodel Meadow Spring Ditches Amodel Upper	1.20	869.36	Continuous										
A E Strang	Domestic, Stockwater, Irrigation	259, 260	Spring, Amodel Meadow Spring Ditches	0.20	144.89	Continuous										
A E Strang	Irrigation	Amodel Springs	Amodel Meadow Springs	0.80	579.57	Continuous										
<b>Subtotal, Additional Special Class Claimants - Middle Fork Feather River</b>				<b>26.51</b>	<b>17,235.28</b>											
<b>Additional Surplus Class Claimants - Middle Fork Feather River</b>																
Anna B Miller	Domestic, Stockwater, Irrigation	155	Amodel Ditch	3.00	1,190.08	Irrigation Season										
Westover Company	Domestic, Stockwater, Irrigation	243, 244, 245	Noble East, Noble West Ditches	3.30	1,309.09	Irrigation Season										
Westover Company	Domestic, Stockwater, Irrigation	263	Noble Reservoir		200.00											
Frank Carmichael	Domestic, Stockwater, Irrigation	Mapes Creek & Tributaries	Mapes Reservoir		80.00											
<b>Subtotal, Additional Surplus Class Claimants - Middle Fork Feather River Group</b>				<b>6.30</b>	<b>2,779.17</b>											

**Middle Fork Feather River (and Its Tributaries Above Beckwith) Decree County of Plumas, Case No. 3095**

**Seasons of Use**

Continuous, regardless of season	365.25	days
March 1 through October 31	245.00	days
March 15 through September 30	200.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments											Check, total CFS
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)	Total Allotments, Face Value (AF)	
<b>Summary of Middle Fork of Feather River Adjudication Decree</b>	<b>Total cfs</b>	<b>Total AF</b>													
Subtotal, Schedule 3 - Last Chance Creek Group	18.50	7,338.84													
Subtotal, Schedule 4	75.05	28,958.68													
Schedule 5, Claimants from Last Chance Creek Below Adams Neck	15.85	4,899.17													
Schedule 6, Claimants from Smithneck Creek and Tributaries	67.14	31,012.66													
Schedule 7, Claimants from West Side Canal and its Tributaries (Hamlin, Miller and Turner Creeks)	96.15	41,997.02													
Schedule 8, Claimants from Fletcher Creek and Spring Channels	6.08	2,919.94													
Schedule 9, Allocations to Shareholders in Sierra Valley Water Company for Rediversion From Little Truckee River Water Conveyed Into Middle Fork of Feather River Stream System	60.00	23,801.65													
Schedule 10, Claimants from Middle Fork of Feather River, and Tributaries Cold, Webber, Town and Perry Creeks	117.65	50,437.14													
<b>Subtotal, Schedules 3-10</b>	<b>456.42</b>	<b>191,365.11</b>													
Subtotal, Additional Special Class Claimants - Last Chance Creek Group	13.48	8,344.71													
Subtotal, Additional Special Class Claimants - Smithneck Creek Group	0.00	240.00													
Subtotal, Additional Special Class Claimants, West Side Canal Group	1.95	773.55													
Subtotal, Additional Special Class Claimants - Middle Fork Feather River	26.51	17,235.28													
<b>Subtotal Schedules 3-10 and Special Class Claimants</b>	<b>498.35</b>	<b>217,958.65</b>													
Subtotal, Additional Surplus Class Claimants, Last Chance Creek Group	0.00	331.00													
Subtotal, Additional Surplus Class Claimants - Smithneck Creek Group	0.00	240.00													
Subtotal, Additional Surplus Class Claimants, Fletcher Creek Group	0.25	99.17													
Subtotal, Additional Surplus Class Claimants - Middle Fork Feather River Group	6.30	2,779.17													
<b>Subtotal, All Surplus Class Claimants</b>	<b>6.55</b>	<b>3,449.35</b>													
<b>Grand Total, All Schedules and Classes of Claimants</b>	<b>504.90</b>	<b>221,408.00</b>													

## Summary of Pit River Decrees

<b>Pit River Decrees</b>	<b>Face Amount</b>
Ash Creek	66,518.40
Burney Creek	11,308.76
Big Valley of Pit River	102,467.90
Franklin Creek	4,230.48
Hat Creek	93,210.83
Rattlesnake Creek	37,023.47
North Fork Pit River	46,856.17
South Fork Pit River	68,097.30
Roaring Creek	5,289.43
Willow Creek	552.02
<b>Total Pit River Decrees</b>	<b>435,554.75</b>

Ash Creek Decree Water Rights

**Modoc County Judgment and Decree No. 3670**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Total (cfs)	Total (AF)	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)	Fifth Priority (cfs)	Fifth Priority (AF)			
<b>Rush Creek Group (Schedule 3)</b>																
Joe F Walker and Elsie D Walker	7.00	61, 62	Walker Upper, Walker Lower	0.18	70.69										0.18	70.69
Thomas J McClure	5.00	63	Higgins	0.12	47.13										0.12	47.13
C L Harper and Neta Harper	35.80	63	Higgins	0.60	235.64										0.60	235.64
Audrey Rice	62.80	64, 65	Audrey Rice, T J Rice	1.05	412.36										1.05	412.36
Erma Harrigan, Lillian Rice, May West, Red Rice, Clarence Rice, Mary Ash, and Rose Bartle	14.00	65	T J Rice	0.25	98.18										0.25	98.18
N S Kresge and Laura Kresge	49.50	66, 67	Kresge-Holbrook, Kresge East	0.85	333.82										0.85	333.82
Joseph H Holbrook, Ervin E Triplett, Henry O Triplett, and Grace Gordon	131.60	66, 68, 69, 70, 71	Kresge-Holbrook, Holbrook-Barrows, Holbrook-East Dams, Holbrook West, Holbrook Lower	2.20	864.00										2.20	864.00
<b>Subtotal, Rush Creek Group</b>	<b>305.70</b>			<b>5.25</b>	<b>2,061.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.25</b>	<b>2,061.82</b>
<b>Butte Creek Group (Schedule 4)</b>																
Herbert S Bath and Anne Bath	53.50	72, 73	H S Bath Upper, H S Bath Lower	0.40	157.09										0.40	157.09
S J Niles and Myrtle Niles	106.50	74, 75, 76, 79 to 83	Niles Upper Meadow, Niles and Auble, Niles Middle Meadow, Niles Lower Meadow Dams	1.60	628.36										1.60	628.36
E M Auble and Ivy Auble	56.40	75, 77, 78	Niles and Auble, Auble Upper, Auble Lower	0.40	157.09										0.40	157.09
E J Schmidt and Emma B Schmidt	75.20	84	Elzea	0.10	39.27	0.90	353.45								1.00	392.73
<b>Subtotal, Butte Creek Group</b>	<b>291.60</b>			<b>2.50</b>	<b>981.82</b>	<b>0.90</b>	<b>353.45</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>	<b>1,335.27</b>
<b>Willow Creek Group (Schedule 5)</b>																
Alton, P. Avilla, Lloyd Avilla, Irene Totten, Ida D Copper	15.00	85	Avilla Upper Springs							0.15	58.91				0.15	58.91
E V Wing	105.30	88, 89	Avilla West Side, Avilla East Side							0.85	333.82				0.85	333.82
Alice Gray	94.50	90A	Gray							0.80	314.18				0.80	314.18
E B Armstrong and Wilhelmina R Armstrong	70.00	91	Armstrong							0.50	196.36				0.50	196.36
Floyd E Walker	71.20	92	Knight	0.07	50.71	0.63	247.42								0.70	298.13
J E Albaugh	356.90	92	Knight	0.32	231.83	2.88	1,131.05								3.20	1,362.88
Frank Studley and Hattie Studley	355.80	93	Studley Johnson	0.32	231.83	2.88	1,131.05								3.20	1,362.88
R L Holmes and May L Holmes	210.90	93	Studley Johnson	0.16	115.91	1.44	565.53								1.60	681.44
Kasper Weigand and Etta Weigand	153.10	94, 95	Weigand Upper Dams, Weigand Lower Dams	0.10	72.45			1.50	589.09						1.60	661.54
<b>Subtotal, Willow Creek Group</b>	<b>1,432.70</b>			<b>0.97</b>	<b>702.73</b>	<b>7.83</b>	<b>3,075.05</b>	<b>1.50</b>	<b>589.09</b>	<b>2.30</b>	<b>903.27</b>	<b>0.00</b>	<b>0.00</b>	<b>12.60</b>	<b>5,270.15</b>	
<b>Ash Creek Group (Schedule 6)</b>																
John T Bath, Alice B Walker, Carrie F Stone	126.60	7, 8	Bath Dam, Bath North Springs	1.95	765.82										1.95	765.82
Robert Fleming and Ora Lee Fleming	131.20	9	Fulstone Springs	2.00	785.45										2.00	785.45
John T Bath, Alice B Walker, Carrie F Stone	219.10	10	Bath (West Ranch)	3.30	1,296.00										3.30	1,296.00
John T Bath, Alice B Walker, Carrie F Stone	13.50	10	Bath	0.20	78.55										0.20	78.55
John T Bath, Alice B Walker, Carrie F Stone, Robert Fleming, Mary Fleming, and Ora Lee Fleming	142.20	10, 10A	Bath, Bath North	2.20	864.00										2.20	864.00
G H Perkins and Eltha A Perkins	263.30	11, 12	Perkins Springs, Perkins	3.90	1,531.64										3.90	1,531.64
T A Barrows and Lulu M Barrows	305.10	13, 13A, 14, 14A	Barrows Upper, Barrows Dam #2, Barrows Slough, Barrows Lower Dams	4.70	1,845.82										4.70	1,845.82
John A Kresge and May E Kresge	28.00	15	John A Kresge Dam	0.45	176.73										0.45	176.73
R E Clark and Donnie Clark	23.90	None	Subirrigation	0.35	158.98										0.35	158.98

Ash Creek Decree Water Rights

**Modoc County Judgment and Decree No. 3670**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments											Total (cfs)	Total (AF)	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)	Fifth Priority (cfs)	Fifth Priority (AF)				
J E Yowell, Addie Yowell, F E Yowell and Dorothy Yowell	24.50	17	Vogt	0.35	158.98											0.35	158.98
Louise Vogt and John Vogt	353.50	17, 18	Vogt, Vogt Lower Dam	5.45	2,475.47											5.45	2,475.47
W H Hunt Estate Co.	739.10	19	Clarke Co Upper Support Dams, New Canal Swamp Head	8.80	3,997.09									0.95	431.50	9.75	4,428.60
A J Weeks and Mary A Weeks	93.20	19	Clarke Co Upper Support Dams North Slough, New Canal Swamp Head, Cannon Box, Lane Death Slough Dam					1.00	454.21			1.45	658.61			1.45	658.61
J C Lane and Nora Lane	278.20	20, 21, 22, 48	Clarke Co Upper Support Dams North Slough, New Canal Swamp Head, Cannon Box, Lane Death Slough Dam					1.40	635.90					1.10	499.64	2.10	953.85
A L Cannon	110.00	22	Cannon Box					0.80	363.37							0.80	363.37
Indian Allotment	61.80	22	Cannon Box														
			New Canal Swamp Head, Cannon Box, Jenkins-Cannon, Death Slough Head Box, North Branch South Channel Lower, Island Taps, Lane Death Slough Dams, Death Slough, Death Slough South Bypass, Death Slough North					25.00	11,355.37					0.10	45.42	25.10	11,400.79
W H Hunt Estate Co.	1,997.90	21, 22, 23, 24, 46, 47, 48, 49, 50, 51	Death Slough South Bypass, Death Slough North														
W H Hunt Estate Co.	88.00	23	Jenkins-Cannon			0.50	362.23	0.60	272.53							1.10	634.76
A L Cannon	88.00	22, 23	Cannon Box, Jenkins-Cannon			0.50	362.23	0.60	272.53							1.10	634.76
Wm Kramer and Rachel R Kramer	25.00	22, 23	Cannon Box, Jenkins-Cannon									0.30	136.26			0.30	136.26
			South Channel Head Box, Big Valley Drainage Canal, North Branch South Channel, Middle Branch South Channel, Chisholm Upper Dam, Wayman Support Dam, C W Clarke Co Upper South Channel Dam, C W Clarke Co Middle South Channel Dam, Weigand-Gerig Dam, Gerig Swamp Dam, South Branch South Channel Dam, Middle Branch South Channel Dam					23.20	10,537.79							23.20	10,537.79
W H Hunt Estate Co.	1,855.00	25, 26, 27, 28, 29, 32, 36, 37, 38, 42, 43, 44, 45	Wayman Support Dam, C W Clarke Co Upper South Channel Dam, C W Clarke Co Middle South Channel Dam, Weigand-Gerig Dam, Gerig Swamp Dam, South Branch South Channel Dam, Middle Branch South Channel Dam														
Wm H Bean	38.90	25, 29, 30	South Channel Head Box, Chisholm Upper Dam, Chisholm Lower Dam					0.50	227.11							0.50	227.11
M D Wayman and Alice M Wayman	232.90	25, 26, 31, 32, 33	South Channel Head Box, Big Valley Drainage Canal, Wayman Upper Dam, Wayman Support Dam, Wayman Lower Dam					2.90	1,317.22							2.90	1,317.22
R L Holmes and May L Holmes	94.00	25, 34, 35	South Channel Head Box, Holmes Upper Dam, Holmes Lower Dam					1.20	545.06							1.20	545.06
J P Miller and Clara Miller	172.40	25, 39, 40, 41	South Channel Head Box, Miller Upper Dam, Miller Middle Dam, Miller Lower Dam					2.15	976.56							2.15	976.56
Kasper Weigand and Etta Weigand	141.10	25, 42	South Channel Head Box, Weigand-Gerig Dam					1.75	794.88							1.75	794.88
Charles A Gerig	200.70	25, 42, 43	South Channel Head Box, Weigand-Gerig Dam, Gerig Swamp Dam					2.50	1,135.54							2.50	1,135.54
W H Hunt Estate Co.	97.90	26	Big Valley Drainage Canal									1.25	567.77			1.25	567.77
W H Hunt Estate Co.	38.00	52, 53	Gerig, Mouth of Ash Creek									0.20	90.84			0.20	90.84
James A Hollenbeak and Lela Hollenbeak	207.00	52, 54, 55	Gerig, Watson, Hollenbeak Swale									1.15	522.35			1.15	522.35
Ardella Babcock and Estate of Andrew Babcock	12.00	52, 54	Gerig, Watson									0.07	31.80			0.07	31.80
Arad Babcock	91.00	52, 54	Gerig, Watson									0.50	227.11			0.50	227.11

Ash Creek Decree Water Rights

**Modoc County Judgment and Decree No. 3670**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through October 15	198.00	days
March 1 through October 15	229.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Total (cfs)	Total (AF)	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority (cfs)	Fourth Priority Face Value (AF)	Fifth Priority (cfs)	Fifth Priority (AF)			
Lester A Babcock and Frances B Babcock	259.00	52, 54	Gerig, Watson								1.45	658.61			1.45	658.61
Oral Lester Babcock	4.00	52, 54	Gerig, Watson								0.03	13.63			0.03	13.63
Marjorie M Merritt and McElroy Brown	32.40	52, 54	Gerig, Watson								0.20	90.84			0.20	90.84
<b>Subtotal Ash Creek Group Special Class Claimants on Ash Creek (Schedule 7)</b>	<b>8,588.40</b>			<b>33.65</b>	<b>14,134.51</b>	<b>1.00</b>	<b>724.46</b>	<b>63.60</b>	<b>28,888.07</b>	<b>6.60</b>	<b>2,997.82</b>	<b>2.15</b>	<b>976.56</b>	<b>107.00</b>	<b>47,721.42</b>	
Robert McGarva and Rhoda McGarva	28.60	56, 57	Steele Upper, Steele Lower	0.60	235.64									0.60	235.64	
Robert McGarva and Rhoda McGarva	21.20	58, 59, 60	Johnson Upper, Johnson Middle, Johnson, Lower	0.40	157.09									0.40	157.09	
Audrey Rice	4.00	96	Rice Spring Channel	0.05	36.22									0.05	36.22	
Alice Gray	94.50	90	Gray Springs	0.80	579.57									0.80	579.57	
Robert Fleming and Ora Lee Fleming	818.80	1, 2, 3	Fleming West Springs, Fleming East Springs, Fleming Spreading Dams	9.15	3,593.45									9.15	3,593.45	
John T Bath, Alice B Walker, Carrie F Stone	599.90	4, 5, 6, 8	Bath West Springs, Bath Middle Springs, Bath East Springs, Bath North Springs	6.95	2,729.45									6.95	2,729.45	
John T Bath, Alice B Walker, Carrie F Stone	36.70	None	Bath Seeps	Entire Flow										0.00	0.00	
T A Barrows and Lulu M Barrows	37.20	106, 107	Unnamed, Shane Gulch	0.50	362.23									0.50	362.23	
T A Barrows and Lulu M Barrows Domestic		108	Unnamed	0.50	362.23									0.50	362.23	
T A Barrows and Lulu M Barrows	6.00	98	Barrows Spring	0.10	39.27									0.10	39.27	
Alta J Wallace and Daisy H Smith	75.00	97	Wallace	1.00	454.21									1.00	454.21	
John A Kresge and May E Kresge	134.50	99, 100, 101	Kresge South Springs, Kresge North Springs, Kresge House Spring	1.40	549.82									1.40	549.82	
John A Kresge and May E Kresge	7.00	102	Kresge Lower Spring	0.15	108.67									0.15	108.67	
J E Yowell, Addie Yowell, F E Yowell and Dorothy Yowell	68.00	103	Clark Springs	1.05	412.36									1.05	412.36	
J A Clark, W E Clark, and Donnie Clark	70.80	105	Clark Upper Springs	0.38	147.27									0.38	147.27	
W H Hunt Estate Co.	1,263.50	None	Tule Swamp	Entire Flow										0.00	0.00	
R L Holmes and May L Holmes	162.50	None	Holmes Pond	Entire Flow										0.00	0.00	
R L Holmes and May L Holmes, M D Wayman and Alice M Wayman	125.40	104	Hot Spring Channel	0.50	362.23									0.50	362.23	
J C Lane and Nora Lane	92.00	109	Lane-Fleming	Entire Flow										0.00	0.00	
<b>Subtotal, Special Class (Schedule 7)</b>	<b>3,645.60</b>			<b>23.53</b>	<b>10,129.74</b>									<b>23.53</b>	<b>10,129.74</b>	

Summary of Ash Creek Decree	First Priority Face Value (AF)	Second Priority Face Value (AF)	Third Priority Face Value (AF)	Fourth Priority Face Value (AF)	Fifth Priority Face Value (AF)	Total Face Amount (AF)
Rush Creek Group	2,061.82	0.00	0.00	0.00	0.00	2,061.82
Butte Creek Group	981.82	353.45	0.00	0.00	0.00	1,335.27
Willow Creek Group	702.73	3,075.05	589.09	903.27	0.00	5,270.15
Ash Creek Group	14,134.51	724.46	28,888.07	2,997.82	976.56	47,721.42
Special Class Rights Holders	10,129.74	0.00	0.00	0.00	0.00	10,129.74
<b>Total</b>	<b>28,010.61</b>	<b>4,152.97</b>	<b>29,477.16</b>	<b>3,901.09</b>	<b>976.56</b>	<b>66,518.40</b>

**Big Valley Pit River Decree - Between Canby Bridge to Muck Valley Modoc County Decree No. 6395**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days

**Allotments**

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Total (cfs)	Total (AF)
<b>Tributary Group</b>													
R M Bushey	Domestic	4a	Unnamed Spring	0.05	18.15							0.05	18.15
Merlin Kennedy and Erma Kennedy	50.00	5, 6	Upper Turner Creek	0.72	261.34							0.72	261.34
E W Caldwell and Rose Marie Caldwell	60.00	6a	Hulbert Creek	0.86	312.16							0.86	312.16
Robert Sherer and A F Gerig	80.00	12a	Stone Coal Creek	1.15	417.42							1.15	417.42
W O Gravier	Domestic	11	Stone Coal Creek	--								0.00	0.00
Robert Sherer and A F Gerig	96.00	10a	Tom Deakins Creek	1.36	493.65							1.36	493.65
Gladys Troy	Domestic	14b	Holl Creek			0.07	25.41					0.07	25.41
H S Lorenz and Flora Richards, Executrix	5.00	14c	Holl Creek	0.07	25.41							0.07	25.41
George W Hines, Marvin A Hines, and Mason Hines	80.00	14f	Holl Creek					1.14	413.79			1.14	413.79
J H Duncan and Marian Duncan	40.00	14d	Holl Creek					0.57	206.90			0.57	206.90
Gladys Troy	160.00	15a	Lower Turner Creek	2.28	827.58							2.28	827.58
George W Hines, Marvin A Hines, and Mason Hines	40.00	15b	Lower Turner Creek	0.57	206.90							0.57	206.90
R E Potter, Joe L Potter, L J Potter, and Forrest D Potter	160.00	29b	Egg Lake Slough-Taylor Creek	2.28	827.58							2.28	827.58
Albert W Joiner and Lillian B Joiner	23.00	29c	Egg Lake Slough-Taylor Creek	0.33	119.78							0.33	119.78
R E Potter, Joe L Potter, L J Potter, and Forrest D Potter	85.00	29a	Egg Lake Slough-Taylor Creek					1.22	442.83			1.22	442.83
L W Kramer	130.00	29d	Egg Lake Slough-Taylor Creek					1.86	675.13			1.86	675.13
J H Holl and Kenneth K Holl	204.00	46, 43a	Egg Lake Slough-Taylor Creek							2.92	1,059.89	2.92	1,059.89
Richard Hemsted and Karl Hemsted	400.50	30, 31, 32, 33, 34, 35	Widow Valley Creek	5.72	2,076.22							5.72	2,076.22
W Lee Jr	4.00	31a	Widow Valley Creek	0.06	21.78							0.06	21.78
L W Kramer	200.00	36	Widow Valley Creek					2.86	1,038.11			2.86	1,038.11
L W Kramer	1,075.00	37, 38	Widow Valley Creek			15.40	5,589.82					15.40	5,589.82
W L Gray	1.00	47a	Knox Spring	0.02	7.26							0.02	7.26
W L Gray	Domestic, Stockwater	47b	Knox Spring Channel	0.01	3.63							0.01	3.63
Gerald G Packwood	76.00	53	Bassett Hot Springs	1.08	392.01							1.08	392.01
Charles A Gerig and W L Gray	28.00	53a, 53	Bassett Hot Springs					0.40	145.19			0.40	145.19
Norris Gerig	133.00	28, 43	Bull Run Slough	1.90	689.65							1.90	689.65
Alvin E Watson and Mary V Watson	160.00	54a	Bull Run Slough			2.28	827.58					2.28	827.58
Andrew C Babcock and Dorothy J Babcock	168.00	72	Bull Run Slough					2.40	871.14			2.40	871.14
S J Thompson	40.00	54b	Bull Run Slough							0.57	206.90	0.57	206.90
Frank Iverson	372.50	62	Juniper Creek	5.33	1,934.66							5.33	1,934.66
<b>Subtotal, Tributary Group</b>	<b>3,871.00</b>			<b>23.79</b>	<b>8,635.18</b>	<b>17.75</b>	<b>6,442.81</b>	<b>10.45</b>	<b>3,793.09</b>	<b>3.49</b>	<b>1,266.78</b>	<b>55.48</b>	<b>20,137.86</b>
<b>Big Valley Pit River Group</b>													
Klaus Mohr	37.00	2				0.53	192.38					0.53	192.38
R M Bushey	152.00	3				2.17	787.66					2.17	787.66
Alden Miller	211.00	12				3.02	1,096.19					3.02	1,096.19
Robert Sherer and A F Gerig	100.00	12a				1.43	519.05					1.43	519.05
C M Shaw and R Shaw	134.50	13a				1.92	696.91					1.92	696.91
R A Blair	60.50	13b				0.86	312.16					0.86	312.16
R D Kerley and Angel E Kerley (Criss Ranch)	110.00	13d				1.57	569.87					1.57	569.87
R D Kerley and Angel E Kerley (Home Ranch)	880.00	28, 42, 44				1.94	704.17			10.63	3,858.43	12.57	4,562.60
J H Duncan and Marian Duncan	200.00	13c				2.86	1,038.11					2.86	1,038.11
Kenneth K Gould	84.00	14a				1.20	435.57					1.20	435.57

y required.



**Big Valley Pit River Decree - Between Canby  
Bridge to Muck Valley  
Modoc County Decree No. 6395**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days

**Allotments**

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Total (cfs)	Total (AF)
George A Hines, Marvin A Hines, and Mason Hines	508.00	15				7.26	2,635.20					7.26	2,635.20
Gladys Troy	112.00	14b				1.60	580.76					1.60	580.76
Albert W Joiner and Lillian B Joiner (Upper Ranch)	160.00	29c				2.28	827.58					2.28	827.58
Albert W Joiner and Lillian B Joiner (Miller Ranch)	263.00	17				3.76	1,364.79					3.76	1,364.79
Albert W Joiner and Lillian B Joiner (Home Ranch)	66.00	18				0.94	341.20					0.94	341.20
Ernest C Robinson	178.00	24				1.77	642.47			0.77	279.49	2.54	921.96
L H Monchamp	121.00	22a				1.73	627.95					1.73	627.95
F E Yowell	287.00	22b					0.00	4.10	1,488.20			4.10	1,488.20
H M Roberts	229.00	22b				0.21	76.22	3.06	1,110.70			3.27	1,186.93
Cyril R Mamath	609.00	24				3.83	1,390.20	2.84	1,030.85	2.03	736.84	8.70	3,157.88
D J Leventon (Courtright Ranch)	200.00	25				1.49	540.83	0.85	308.53	0.52	188.75	2.86	1,038.11
D J Leventon (Courtright Ranch)	140.00	25				1.00	362.98	1.00	362.98			2.00	725.95
Cornelius Test	794.00	25				1.66	602.54	9.68	3,513.60			11.34	4,116.14
E K Brown and Leila A Brown	331.00	23				0.59	214.16	3.85	1,397.45	0.29	105.26	4.73	1,716.87
R E Potter, Joe L Potter, Forrest D Potter, and L J Potter	314.00	27				4.50	1,633.39					4.50	1,633.39
C R Brown, A G Brown, and E K Brown	202.00	26				2.89	1,049.00					2.89	1,049.00
H L Hayes, Jessie Hayes, and Emma Hayes	537.00	23, 24				3.37	1,223.23	1.17	424.68	3.13	1,136.11	7.67	2,784.02
Oral Gerig and Gertrude M Gerig	159.00	27a				2.27	823.95					2.27	823.95
W H Hunt Estate Co.	440.00	23				6.30	2,286.74					6.30	2,286.74
L W Gerig	305.50	23, 39				2.70	980.03			1.66	602.54	4.36	1,582.57
L W Kramer	640.50	28				5.24	1,901.99			3.91	1,419.23	9.15	3,321.22
E J Raehn	61.00	28				0.87	315.79					0.87	315.79
James H Pircean and Verna L Pircean	23.00	28				0.33	119.78					0.33	119.78
Peter Gerig (Knox Ranch)	268.00	28, 43				3.83	1,390.20					3.83	1,390.20
Peter Gerig (Home Ranch)	339.00	23, 43, 39				4.66	1,691.46			0.18	65.34	4.84	1,756.80
E V Wing	146.00	28				2.08	754.99					2.08	754.99
Norris Gerig	27.00	28, 43				0.39	141.56					0.39	141.56
Alvin E Watson and Mary V Watson	15.00	28				0.21	76.22					0.21	76.22
Ralph T Yordy	31.00	28				0.44	159.71					0.44	159.71
Andrew C Babcock and Dorothea J Babcock	12.00	28				0.17	61.71					0.17	61.71
Lester Babcock	268.00	42				2.23	809.43	2.23	809.43			4.46	1,618.87
Arad Babcock	97.00	42				0.81	294.01	0.81	294.01			1.62	588.02
J H Holl and Kenneth K Holl	407.00	28				5.82	2,112.52					5.82	2,112.52
J H Holl and Kenneth K Holl	160.00	45								2.28	827.58	2.28	827.58
Merlin Kennedy	32.50	48				0.47	170.60					0.47	170.60
Aubrey C Bieber and Carmen B Conner	30.00	48a				0.43	156.08					0.43	156.08
W M Snipes	193.00	49				1.61	584.39			1.13	410.16	2.74	994.55
Mary DeMange Kennedy	176.00	49				2.51	911.07					2.51	911.07
Kenneth McArthur and John R McArthur	320.00	49				4.56	1,655.17					4.56	1,655.17
Andrew C Babcock	53.00	49				0.76	275.86					0.76	275.86
Chester Babcock	154.00	49				2.20	798.55					2.20	798.55
R A Babcock	120.00	49				1.71	620.69					1.71	620.69
Ernest G Babcock and Bessie J Babcock	677.00	49				9.67	3,509.97					9.67	3,509.97
King A Stubblefield and Beatrice Stubblefield	160.00	51a				2.28	827.58					2.28	827.58
Estate of Walter Burnham Armstrong	381.00	49				5.44	1,974.59					5.44	1,974.59
Kenneth McArthur and John R McArthur, Anna McArthur	320.00	67				4.56	1,655.17					4.56	1,655.17
Kenneth McArthur and John R McArthur, Anna McArthur	680.00	66				7.58	2,751.35			2.14	776.77	9.72	3,528.12
E J Britten and Thelma Britten	876.00	68, 69				11.23	4,076.21			1.27	460.98	12.50	4,537.19
W L Campbell	120.00	71				1.28	464.61			0.43	156.08	1.71	620.69
S J Thompson	803.50	70, 71								11.50	4,174.21	11.50	4,174.21

15 cubic feet per second to maintain channel storage and supply stock water or such amounts as may be reasonable.

**Big Valley Pit River Decree - Between Canby  
Bridge to Muck Valley  
Modoc County Decree No. 6395**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days
		days

**Allotments**

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Total (cfs)	Total (AF)
S J Thompson and W H Thompson	304.00	49				3.21	1,165.15			1.13	410.16	4.34	1,575.31
<b>Subtotal, Big Valley Pit River Group</b>	<b>15,819.00</b>			<b>15.00</b>	<b>5,444.63</b>	<b>154.23</b>	<b>55,981.67</b>	<b>29.59</b>	<b>10,740.44</b>	<b>43.00</b>	<b>15,607.93</b>	<b>241.82</b>	<b>82,330.04</b>
Surplus Class Claimants (in order of priority)	cfs	Acre-feet	Season										
Albert W Joiner and Lillian B Joiner	0.09	28.00	Nov 1 - Apr 1										
Oral Babcock, H W Killebrew, Richard B Keene, Homer C Jack	10.00	892.56	Apr 1 - May 15										
Oral Babcock, H W Killebrew, Richard B Keene, Homer C Jack	11.84	3,600.00	Jan 15 - May 15										
Big Valley Mutual Water Company	8.67	2,635.00	Oct 1 - June 1										
Big Valley Mutual Water Company	0.33	100.00	Oct 1 - June 1										
Big Valley Mutual Water Company	8.60	2,615.00	Oct 1 - June 1										
L W Kramer	6.75	2,476.86	May 1 - Nov 1										
L W Kramer	0.28	86.50	Feb 1 - Apr 1										
L W Kramer	0.09	27.80	Nov 1 - Apr 30										
Russell M Bushey	500 gpd	0.56	Jan 1 - Dec 31										
United States, Modoc Nat'l Forest	1800 gpd	2.02	Apr 1 - Nov 30										
United States, Modoc Nat'l Forest	650 gpd	0.73	May 1 - Oct 30										
Cornelius Iest	4.93	1,500.00	Nov 1 - Mar 31										
United States, Modoc Nat'l Forest	375 gpd	0.42	May 1 - Oct 30										
United States, Modoc Nat'l Forest	650 gpd	0.73	May 15 - Oct 15										
Clinton Peltier and Do-Be Melcon Peltier	0.63	190.00	Nov 1 - Apr 1										
George W Hines, Marvin A Hines and Mason M Hines	0.66	200.00	Oct 1 - May 1										
Alden Miller	0.60	182.00	Oct 1 - Apr 30										
United States, DOI, BLM	0.01	2.23	Oct 1 - May 31										
United States, DOI, BLM	0.00	0.21	Oct 1 - May 31										
California Dept of Water Resources	263.19	80,000.00	Jan 1 - Dec 31										
Pit Soil Conservation District	252.00	76,600.00	Oct 1 - Apr 30										
<b>Total, Surplus Water Claims</b>	<b>568.67</b>	<b>171,140.62</b>											
<b>Summary</b>	<b>cfs</b>	<b>Acre-feet</b>											
Tributary Group	55.48	20,137.86											
Big Valley Pit River Group	241.82	82,330.04											
Total Senior Claimant Groups	297.30	102,467.90											
Surplus Water Claimants	568.67	171,140.62											
<b>Total, Big Valley Pit River Decree Claims</b>	<b>865.97</b>	<b>273,608.52</b>											

Stone Coal Reservoir project for Big Valley Irrigation District

Burney Creek Decree

**Burney Creek Decree  
Shasta County, Decree No.  
5111**

**Seasons of Use**

Continuous, regardless of season	365.25	days
May 5 through November 1	181.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotment During Irrigation Period	Allotment Face Value (AF)
<b>West Side Users</b>					
Richard W Haynes	376.00		Haynes or Creek Laterals	9.45	1,696.31
J C Erickson	21.00		Erickson	0.60	107.70
John Snooks	18.00		Snooks	0.50	89.75
Timothy Desmond	75.00		Cayton or Natural Channel of Burney Creek	1.88	337.47
Karl Elling	314.00		Cayton or Elling	7.85	1,409.11
Mary Ann Cornaz	150.00		Greer-Cornaz or Natural Channel of Burney Creek	3.75	673.14
Ray Vedder	75.00		Greer-Cornaz or Natural Channel of Burney Creek	1.87	335.67
<b>Subtotal, West Side Users</b>	<b>1,029.00</b>			<b>25.90</b>	<b>4,649.16</b>
<b>East Side Users</b>					
A R Haynes	50.00		A R Haynes	1.25	224.38
Fred Greer	87.00		Greer-Cornaz	2.50	448.76
Mary Ann Cornaz	137.00		Greer-Cornaz	3.42	613.90
Red River Lumber Co.	175.00		Greer-Cornaz	4.33	777.25
Ednah M Black	320.00		Greer-Cornaz	8.80	1,579.64
Karl Elling	200.00		Cayton or Elling	5.00	897.52
<b>Subtotal, East Side Users</b>	<b>969.00</b>			<b>25.30</b>	<b>4,541.45</b>
<b>Surplus Water Users</b>					
Karl Elling	71.00		Cayton or Elling	0.90	323.11
Timothy Desmond	8.00		Cayton or Natural Channel of Burney Creek	0.10	35.90
Fred Greer	10.00		Greer-Cornaz	0.12	43.08
Mary Ann Cornaz	32.00		Greer-Cornaz or Natural Channel of Burney Creek	0.40	143.60
Red River Lumber Co.	150.00		Greer-Cornaz	1.88	674.94
Ednah M Black	137.00		Greer-Cornaz	1.70	610.31
Ray Vedder	64.00		Greer-Cornaz or Natural Channel of Burney Creek	0.80	287.21
<b>Subtotal, Surplus Water Users</b>	<b>472.00</b>			<b>5.90</b>	<b>2,118.15</b>
<b>Total, Burney Creek Decree</b>	<b>2,470.00</b>			<b>31.50</b>	<b>11,308.76</b>

Franklin Creek Adjudication - Modoc County Decree No. 3118

**Franklin Creek Decree  
Modoc County Decree No. 3118**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments				Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Total (cfs)	Total Face Value (AF)
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)						
<b>Allotments from Franklin Creek</b>													
Earl & Mary Ehrman	15.20		Ehrman	0.18	63.52						0.18	63.52	
Ira A & Ida M Hanson	12.80		Hanson North, and/or Hanson Middle				58.08						
						0.16					0.16	58.08	
P Indart	20.55		Indart Main and/or Indart South				94.37						
						0.26					0.26	94.37	
G R Stone	12.80		Stone			0.16	58.08				0.16	58.08	
John & Fannie Morrison	20.80		Morrison			0.26	94.37				0.26	94.37	
Earl & Bernice Sherer and Bank of America NT&SA	8.00		North Channel			0.10	36.30				0.10	36.30	
Paulina Lee	20.80		North Channel			0.26	94.37				0.26	94.37	
J G & Mattie M Dawson	20.80		North Channel			0.26	94.37				0.26	94.37	
P Indart	50.80		North Channel					0.63	228.67		0.63	228.67	
Paulina Lee	52.00		North Channel					1.05	381.12		1.05	381.12	
J G & Mattie M Dawson	83.90		North Channel					1.05	381.12		1.05	381.12	
Ella M Shartel	10.30		North Channel					0.14	50.82		0.14	50.82	
C E & Mary A Crowder	114.20		North Channel					1.43	519.05		1.43	519.05	
G R Stone	21.80		Stone					0.28	101.63		0.28	101.63	
John & Fannie Morrison	124.60		Morrison, Morrison Middle, and/or Morrison Lower						566.24				
								1.56			1.56	566.24	
Earl & Bernice Sherer and Bank of America NT&SA	8.00		Morrison Middle, and/or Morrison Lower						36.30				
								0.10			0.10	36.30	

Franklin Creek Adjudication - Modoc County Decree No. 3118

**Franklin Creek Decree  
Modoc County Decree No. 3118**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total (cfs)	Total Face Value (AF)	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)			
Ira A & Ida M Hanson	9.60		Hanson North, Hanson Middle, and/or Hanson South							43.56				
P Indart	30.80		South Channel					0.12					0.12	43.56
Paulina Lee	79.90		South Channel					0.40		145.19			0.40	145.19
C E & Mary A Crowder	70.50		South Channel					0.85		308.53			0.85	308.53
Ira A & Ida M Hanson	19.50		Hanson North, Hanson Middle, and/or Hanson South					0.88		319.42			0.88	319.42
P Indart	15.60		Indart Main										0.25	90.74
Paulina Lee	12.00		Lee Upper										0.20	72.60
John & Fannie Morrison	22.50		Morrison and/or Morrison Middle										0.15	54.45
Earl & Bernice Sherer and Bank of America NT&SA	51.60		Morrison Middle, and/or Morrison Lower											101.63
<b>Total Franklin Creek Allotments</b>	<b>909.35</b>			<b>0.18</b>	<b>63.52</b>	<b>1.46</b>	<b>529.94</b>	<b>8.49</b>	<b>3,081.66</b>	<b>1.53</b>	<b>555.35</b>	<b>11.66</b>	<b>4,230.48</b>	

**Hat Creek Decree**  
**Shasta County Decree No. 5724**  
**Shasta County Decree No. 7858**  
**Seasons of Use**

Continuous, regardless of season  
 May 1 through October 27  
 October 28 through April 30

**Summer Season**  
**Winter Season**

365.25 days  
 180.00 days  
 185.25 days

Name of Claimant	Name of Diversion System	Allotments	
		Allotment (cfs)	Allotment (AF)
<b>Summer Season Decree No. 5724</b>			
<b>Upper Users, First Rotation - Schedule I</b>			
Harvey W Wilcox	Harvey Wilcox Upper or Lower	2.13	379.34
Vint W Stevenson	Stevenson	2.38	423.97
Carrie Klots Hall and W P Hall	Hall	2.75	490.91
Alec Brown (Indian)	Alec Brown	0.50	89.26
Charles Hawkins	Hawkins	2.25	401.65
Charles Hawkins	Harry Wilcox Middle	1.88	334.71
Harry M Wilcox	Harry Wilcox Upper	5.63	1,004.13
Harry M Wilcox	Harry Wilcox Middle	8.25	1,472.73
R A Wilcox and Amy Wilcox	Harry Wilcox Upper	1.50	267.77
R A Wilcox and Amy Wilcox	Harry Wilcox Middle	13.00	2,320.66
R A Wilcox and Amy Wilcox	Harry Wilcox Lower	1.00	178.51
R A Wilcox and Amy Wilcox	Rube Wilcox	2.88	513.22
Felice Kelly Davis	Rube Wilcox - Davis	2.13	379.34
Holliday Brown (Indian)	Harry Wilcox Middle	1.13	200.83
William Valentine	Valentine Upper	1.13	200.83
William Valentine	Valentine Lower	0.50	89.26
Charles Heryford	Heryford Upper	1.50	267.77
Charles Heryford	Heryford Middle	0.50	89.26
Charles Heryford	Heryford Lower	1.50	267.77
Edith Snook (Indian)	Edith Snook	0.50	89.26
J S Ratledge	Ratledge-Henry Lonquist	3.50	624.79
J S Ratledge	Ratledge-Opdyke-Forest Service	0.88	156.20
Olive Opdyke	Ratledge-Opdyke-Forest Service	5.88	1,048.76
Perry Opdyke, Percy Opdyke	Opdyke	11.88	2,119.83
Henry Lonquist	Ratledge-Henry Lonquist	1.88	334.71
H Morris	Morris Upper or Morris Lower	16.13	2,878.51
Iva Morris (Mrs A L Doty, Iva Doty)	Morris Upper or Morris Lower	6.13	1,093.39
Clare Brown, Fay Brown	Reiger	3.25	580.17
Charles Sidney Gray	Gray	1.00	178.51
<b>Subtotal, Schedule I, First Rotation</b>		<b>103.50</b>	<b>18,476.03</b>

**Upper Users, Second Rotation - Schedule II**

	Harvey Wilcox Upper	0.25	44.63
	Harvey Wilcox Lower	0.25	44.63
	Stevenson	0.25	44.63
	Gray	0.13	22.31
	Hall	0.50	89.26
	Alec Brown	0.13	22.31
	Hawkins	0.25	44.63
	Harry Wilcox Upper	0.75	133.88
	Harry Wilcox Middle	1.00	178.51
	Rube Wilcox - Davis	0.50	89.26
	Harry Wilcox Lower	0.25	44.63
	Valentine Upper	0.25	44.63
	Valentine Lower	0.25	44.63
	Heryford Upper	0.25	44.63
	Heryford Middle	0.25	44.63
	Heryford Lower	0.25	44.63
	Edith Snook	0.13	22.31
	Ratledge-Henry Longquist	0.75	133.88
	Ratledge-Opdyke-Forest Service	0.75	133.88
	Opdyke	1.00	178.51
	Morris Upper	0.75	133.88
	Morris Lower	0.75	133.88
	Rieger (for Clare and Fay Brown)	0.50	89.26
<b>Subtotal, Schedule II, Second Rotation</b>		<b>10.13</b>	<b>1,807.44</b>

**Lower Users, First Rotation - Schedule III**

Vernon March	Morris Upper or Morris Lower	13.50	2,409.92
Harry A Lonquist	Harry Lonquist	0.75	133.88
Harry A Lonquist	Rieger	3.75	669.42
Harry A Lonquist	Harry Lonquist-Reynolds-Bidwell	2.50	446.28
Harry A Lonquist	Harry Lonquist-Reynolds-East Side	2.25	401.65
Harry A Lonquist	Harry Lonquist-Reynolds-Middle	0.50	89.26
N Reynolds, A N Reynolds (F Allen)	Harry Lonquist-Reynolds-East Side	1.25	223.14

<b>Hat Creek Decree</b>		<b>Summer Season</b>		
<b>Shasta County Decree No. 5724</b>		<b>Winter Season</b>		
<b>Shasta County Decree No. 7858</b>				
<b>Seasons of Use</b>				
Continuous, regardless of season		365.25	days	
May 1 through October 27		180.00	days	
October 28 through April 30		185.25	days	
		<b>Allotments</b>		
<b>Name of Claimant</b>	<b>Name of Diversion System</b>	<b>Allotment (cfs)</b>	<b>Allotment (AF)</b>	
N Reynolds, A N Reynolds (F Allen)	Reynolds Canal	4.00	714.05	
N Reynolds, A N Reynolds (F Allen)	Harry Lonquist-Reynolds-Middle	2.50	446.28	
N Reynolds, A N Reynolds (F Allen)	Harry Lonquist-Reynolds-Bidwell	3.75	669.42	
Henry Lonquist	Henry Lonquist	1.75	312.40	
Henry Lonquist	Opdyke	0.13	22.31	
Henry Lonquist	Henry & Fritz Lonquist Upper or Henry & Fritz Lonquist Lower	4.50	803.31	
Fritz Lonquist	Henry & Fritz Lonquist Upper or Henry & Fritz Lonquist Lower	2.88	513.22	
R E Bidwell	Harry Lonquist-Reynolds-Bidwell	8.75	1,561.98	
Jeff Bone & Lee Bone (Indians)	Jeff Bone Upper	0.50	89.26	
Jeff Bone & Lee Bone (Indians)	Jeff Bone Lower	0.50	89.26	
Jeff Bone & Lee Bone (Indians)	Lee Bone	0.50	89.26	
Sam Williams (Indian)	Lee Bone	0.50	89.26	
Sam Williams (Indian)	Sam Williams	0.75	133.88	
Julia Wilson (Indian)	Julia Wilson	2.00	357.02	
Joe Wilson (Indian)	Joe Wilson	2.75	490.91	
Harry Bob (Indian)	Julia Wilson	3.50	624.79	
Ellen Brown (Alan Brown as successor)	Ellen Brown Upper	3.00	535.54	
Ellen Brown (Alan Brown as successor)	Ellen Brown Lower	3.25	580.17	
Ellen Brown (Alan Brown as successor)	Ellen Brown - W W Brown	4.00	714.05	
Ellen Brown (Alan Brown as successor)	Hat Creek (no ditch)	2.00	357.02	
W W Brown	Ellen Brown - W W Brown	7.50	1,338.84	
W W Brown	Hat Creek (no ditch)	0.50	89.26	
Charley Snooks (Indian)	Charley Snooks	0.50	89.26	
David Doyel	Doyel	4.50	803.31	
David Doyel	Hat Creek (no ditch)	0.50	89.26	
David Doyel, Catherine Doyel, Effie May Doyel	Doyel	13.50	2,409.92	
David Doyel, Catherine Doyel, Effie May Doyel	Hat Creek (no ditch)	5.75	1,026.45	
Bertha Geissner	Bertha Geissner	10.25	1,829.75	
Bertha Geissner	Doyel	2.00	357.02	
Otto Geissner	Otto Geissner or Hat Creek (No Ditch)	8.00	1,428.10	
<b>Subtotal, Schedule III, First Rotation</b>		<b>129.00</b>	<b>23,028.10</b>	
<b>Lower Users, Second Rotation - Schedule IV</b>				
	Henry Lonquist	0.75	133.88	
	Henry & Fritz Lonquist Upper	0.38	66.94	
	Henry & Fritz Lonquist Lower	0.38	66.94	
	Harry Lonquist	0.25	44.63	
	Harry Lonquist-Reynolds-Bidwell	1.00	178.51	
	Harry Lonquist-Reynolds-East Side	0.75	133.88	
	Harry Lonquist-Reynolds-Middle	0.25	44.63	
	Reynolds Canal	0.75	133.88	
	Jeff Bone Upper	0.13	22.31	
	Jeff Bone Lower	0.13	22.31	
	Lee Bone	0.25	44.63	
	Julia Wilson	0.25	44.63	
	Sam Williams	0.25	44.63	
	Joe Wilson	0.25	44.63	
	Ellen Brown Upper	0.25	44.63	
	Ellen Brown - W W Brown	1.00	178.51	
	Ellen Brown Lower	0.25	44.63	
	Charley Snooks	0.13	22.31	
	Doyel	1.00	178.51	
	Bertha Geissner	0.25	44.63	
	Otto Geissner	0.50	89.26	
<b>Subtotal, Schedule IV, Second Rotation</b>		<b>9.13</b>	<b>1,628.93</b>	
<b>Schedule 2 - Decree No. 7858</b>				
Harvey W Wilcox	Harvey Wilcox Upper, Harvey Wilcox Middle, and/or Harvey Wilcox Lower	3.06	1,124.36	
Vint W Stevenson	Upper Ranch, Stevenson Channel and/or Stevenson	5.20	1,910.68	
Ruby F Hencrat and Charles W Gray	Gray	0.75	275.58	
Carrie Klotz Hall and W P Hall	Hall	2.79	1,025.15	

**Hat Creek Decree  
Shasta County Decree No. 5724  
Shasta County Decree No. 7858  
Seasons of Use**

Continuous, regardless of season	365.25	days
May 1 through October 27	180.00	days
October 28 through April 30	185.25	days

**Summer Season  
Winter Season**

Name of Claimant	Name of Diversion System	Allotments	
		Allotment (cfs)	Allotment (AF)
Mrs M H Shearin	Shearin Upper and/or Shearin Lower	0.96	352.74
Alex Brown (Indian)	Alex Brown	0.25	91.86
Estate of Harry M Wilcox and Emma E Wilcox	Hawkins, Harry Wilcox Upper and/or Harry Wilcox Middle	9.40	3,453.92
Gladys Gertrude Smith, Ermyl Roberta Ward, Ida May Wilcox	Harry Wilcox Middle, Wilcox Lower and/or Wilcox Davis	10.54	3,872.80
Holiday Brown (Indian)	Harry Wilcox Middle, and/or Holiday Brown	0.56	205.77
Dessie Snooks (Indian)	Wilcox-Davis	1.06	389.48
William Valentine and Fred Valentine	Valentine Upper and/or Valentine Lower	0.81	297.62
Charles Heryford	Heryford Upper, Herford Middle, and/or Herford Lower	1.75	643.02
Edith Snooks (Indian)	Edith Snooks	0.25	91.86
J S Ratledge and Sabilla J Ratledge	Ratledge-Lonquist and/or Ratledge-Opdyke-Forest Service	2.19	804.69
Perry Opdyke	Opdyke and/or Ratledge-Opdyke-Forest Service	8.88	3,262.85
Henry Lonquist	Ratledge-Lonquist, Henry Lonquist Upper and/or Henry Lonquist Lower	5.56	2,042.96
Iva Doty and Asa L Doty	Morris Upper and/or Morris Lower	11.12	4,085.91
S E Kornis	Reiger	1.63	598.92
Vernon March	Morris Upper and/or Morris Lower	6.75	2,480.21
Harry A Lonquist	Harry Lonquist, Reiger, Lonquist-Reynolds-Bidwell, and/or Lonquist Reynolds	4.88	1,793.10
Sofia U Lonquist	Lonquist-Reynolds-Bidwell and/or Reynolds Dam	5.75	2,112.77
R E Bidwell	Lonquist-Reynolds-Bidwell and/or Bidwell	4.98	1,829.84
L H Sullivan and Eva B Sullivan	Reiger	2.30	845.11
Jackson Bone (Indian)	Bone Upper and/or Bone Lower	0.50	183.72
Lee Bone (Indian)	Lee Bone	0.50	183.72
Sam Williams (Indian)	Lee Bone and/or Williams	0.60	220.46
Julia Wilson (Indian)	Julia Wilson	1.00	367.44
Harry Bob (Indian)	Julia Wilson	1.75	643.02
Lorena Wilson Mitchell, Alta Wilson Mullen, Hattie Wilson, Flora Wilson, and Ira Wilson (Indians)	Joe Wilson	1.38	507.06
Alan Brown	Brown Upper, Brown Lower and/or Ellen Brown-W W Brown	6.13	2,252.40
W W Brown	Ellen Brown, W W Brown	4.60	1,690.21
Kate Snooks, Greely Snooks, Cecilia Barnes, and Dessie Snooks (Indians)	Charley Snooks	0.25	91.86
David Doyel, Catherine Doyel and Effie May Doyel	Doyel and/or Doyel East	12.12	4,453.35
Bertha Geissner	Bertha Geissner and/or Doyel	6.12	2,248.72
Otto Geissner	Otto Geissner	4.00	1,469.75
W E Dunwoody	Jones	0.50	183.72
Clara Grant (Indian)	Grant Upper and/or Grant Lower	0.50	183.72
<b>Subtotal, Schedule 2, Decree No. 7858</b>		<b>131.37</b>	<b>48,270.33</b>

**Summary**

		Allotment (AF)	
Upper Users, First Rotation - Schedule I	Summer Irrigation, Stockwater, Domestic	103.50	18,476.03
Upper Users, Second Rotation - Schedule II		10.13	1,807.44
Lower Users, First Rotation - Schedule III	Summer Irrigation, Stockwater, Domestic	129.00	23,028.10
Lower Users, Second Rotation - Schedule IV		9.13	1,628.93
Schedule 2 - Decree No. 7858	Winter Irrigation, Stockwater, Domestic	131.37	48,270.33
<b>Total, Hat Creek Decrees</b>		<b>383.12</b>	<b>93,210.83</b>



**North Fork Pit River (and all its tributaries except for Franklin Creek)  
Modoc County Decree No. 4074**

Seasons of Use		
Continuous, regardless of season	365.25	days
April 1 to September 30	183.00	days
April 15 to September 30	169.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Total cfs	Total AF	
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)			
<b>Linville Creek and Its Tributaries Claimants</b>																
Grace F Bonner	4.90	1	Crabtree	0.10	72.45										0.10	72.45
J W Watkins and Dottie Watkins	112.60	2, 3, 4, 5	Watkins Upper, Watkins House, Watkins Middle, Watkins Lower	1.60	1,159.14										1.60	1,159.14
C C Clarke and Belle Clarke	150.70	6, 7, 8, 9, 10	Clarke Pond, Clarke Upper, Clarke House, Clarke Upper Meadow, Clarke Lower Meadow	1.10	796.91	1.10	399.27								2.20	1,196.18
Milan S Renner	70.00	11, 12	Renner House, Page-Renner	1.01	731.71										1.01	731.71
Lake Shore Cattle Company	323.20	12, 148, 149, 150	Page-Renner, Page Upper Collecting, Page, Page Lower Collecting	0.10	72.45	3.29	1,194.19								3.39	1,266.63
<b>Subtotal, Linville Creek Group</b>	<b>661.40</b>			<b>3.91</b>	<b>2,832.65</b>	<b>4.39</b>	<b>1,593.46</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.30</b>	<b>4,426.11</b>
<b>Joseph Creek and its Tributaries Claimants</b>																
Martin Espil and Lucie Espil	80.00	14, 15, 16, 17, 18	Upper Shingle, Lower Shingle, South Couch, Upper Couch, Lower Couch	0.65	470.90					0.50	181.49				1.15	652.39
V L Jacobs and Georgia Jacobs	29.10	19, 152	Jacobs, Jacobs East Spring, Jacobs West Spring	0.40	289.79										0.40	289.79
Irvin K Wilson	89.00	20, 21, 22, 23	Wilson Upper, Wilson House, Wilson Main, Wilson Lower	1.19	862.11					0.09	32.67				1.28	894.78
LeRoy G Black	21.60	22	Wilson Main			0.40	145.19								0.40	145.19
LeRoy G Black	16.40	24	Joseph Creek	0.20	144.89	0.30	108.89								0.50	253.79
Carl William Blac, Mable Sophia Black, Walter Vernon Black, Mildred Black, LeRoy G Black and Capitola Nunn Black United States in Trust	234.20	24, 25	Joseph Creek, Lower Joseph	2.15	1,557.60					1.25	453.72				3.40	2,011.31
Carl William Blac, Mable Sophia Black, Walter Vernon Black, Mildred Black, LeRoy G Black and Capitola Nunn Black	62.80	26	X L Joseph			1.30	471.87								1.30	471.87
Carl William Blac, Mable Sophia Black, Walter Vernon Black, Mildred Black, LeRoy G Black and Capitola Nunn Black	253.50	27, 28, 29, 30	Schoolhouse, Black Upper, Black Middle, Black Lower			1.30	471.87	1.70	617.06	0.55	199.64				3.55	1,288.56
<b>Subtotal, Joseph Creek Group</b>	<b>786.60</b>			<b>4.59</b>	<b>3,325.28</b>	<b>3.30</b>	<b>1,197.82</b>	<b>1.70</b>	<b>617.06</b>	<b>2.39</b>	<b>867.51</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.98</b>	<b>6,007.67</b>
<b>Thoms Creek and Its Tributaries Claimants</b>																
Philip W McKenney	2.40	31, 31A, 31B, 32	Wortman 1st East, Wortman 2nd East, Wortman 3rd East, Wortman Lower	0.10	72.45										0.10	72.45
Herman Acty	9.00	38 to 40	Acty	0.20	144.89										0.20	144.89
Robert T Johnstone and Jeane Mary Johnstone	18.90	33, 34, 35, 36	Jones Upper Left, Jones Upper Right, Jones Lower Right, Jones Lower Left	0.10	72.45	0.38	127.38								0.48	199.82
Alfred DeWitt	69.10	37, 41 to 45	DeWitt Thoms, DeWitt Bowlin	0.30	217.34	1.05	351.97								1.35	569.31
Clyde Hays and Ruth Hays	33.20	46, 47 to 53, 57 to 59, 61	Hays Garden, Hays Meadow, Hays Cantrall, Hays Mile	0.27	195.60	0.98	328.50								1.25	524.11
Howard Royce and Pearl Royce	38.40	54, 55, 56	H Royce Upper, H Royce Middle, H Royce Lower	0.04	28.98	0.42	140.79								0.46	169.77
Clara May DeWitt and Willie DeWitt	4.00	56A	Willie DeWitt			0.06	20.11								0.06	20.11

**North Fork Pit River (and all its tributaries except for Franklin Creek)  
Modoc County Decree No. 4074**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to September 30	183.00	days
April 15 to September 30	169.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Total cfs	Total AF		
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)				
J M Royce	14.60	62, 63	Royce Upper Thoms, Royce Lower Thoms			0.10	33.52	0.15	50.28							0.25	83.80
Albert Stiner, Harold A Stiner, and Howard J Stiner	20.00	64, 65	Stiner Upper, Stiner Lower					0.40	134.08							0.40	134.08
C A Spaulding and Elsie Spaulding	42.30	66 to 70	Spaulding					0.84	281.57							0.84	281.57
Rufus S Carter, Charles M Carter, George Carter, Jacob M Carter, Oliver W Carter, Mrs. Jake Rechsteiner, and Mrs T A Read	21.10	69	Spaulding Lower North					0.30	100.56							0.30	100.56
The Federal Land Bank of Berkeley	32.40	71, 72, 73	Baker Upper, Baker North, Baker Lower			0.05	16.76	0.60	201.12							0.65	217.88
W F Dukes	1.30	74	Dukes			0.10	33.52									0.10	33.52
<b>Subtotal, Thoms Creek Group Gleason Creek and Its Tributaries Group</b>	<b>306.70</b>			<b>1.01</b>	<b>731.71</b>	<b>3.14</b>	<b>1,052.55</b>	<b>2.29</b>	<b>767.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.44</b>	<b>2,551.88</b>	
Ella Russell	64.60	84, 85, 86	Russell Upper, Russell Middle, Russell Lower	0.20	144.89							0.80	290.38		1.00	435.27	
Georgia M Jones	133.00	87, 88, 89, 90, 91	Jones North, Jones Upper South, Jones Pasture, Jones Middle South, Jones Lower South			0.20	144.89	1.80							2.00	144.89	
J B Faulkner	10.00	86A, 86B, 86C	Faulkner Upper, Faulkner Middle, Faulkner Lower							0.20	72.60				0.20	72.60	
United States in Trust	94.30	92	X L Gleason			0.20	144.89			1.15	417.42				1.35	562.31	
<b>Subtotal, Gleason Creek Group Parker Creek and Its Tributaries Claimants</b>	<b>301.90</b>			<b>0.20</b>	<b>144.89</b>	<b>0.40</b>	<b>289.79</b>	<b>1.80</b>	<b>0.00</b>	<b>1.35</b>	<b>490.02</b>	<b>0.80</b>	<b>290.38</b>	<b>4.55</b>	<b>1,215.07</b>		
P D McDowell and L Gayle McDowell	155.00	93, 95, 96, 98	Pepperdine-McDowell, McDowell Upper, McDowell House, McDowell Upper Meadow, McDowell Lower Meadow	0.21	152.14	1.89	686.02			0.15	54.45				2.25	892.61	
Wheeler E Pepperdine & Nettie L Pepperdine	46.50	93, 100, 100A, 100B	Pepperdine-McDowell, Pepperdine Upper, Pepperdine Lower, Pepperdine House	0.07	50.71	0.63	228.67								0.70	279.39	
W S Trumbo	111.50	101, 102, 103, 110	Trumbo Upper Shields, Trumbo Lower Shields, Trumbo Upper Isle, Trumbo Lower Isle	0.20	144.89	1.50	544.46								1.70	689.36	
W S Trumbo	12.40	111, 112	Page Upper, Page Lower			0.20	72.60								0.20	72.60	
Martha E Page	135.20	111, 112	Page Upper, Page Lower	0.20	144.89	1.70	617.06								1.90	761.95	
Myrtle O Stanton	15.00	111, 112	Page Upper, Page Lower			0.20	72.60								0.20	72.60	
Martha E Page	23.00	100, 133	Pepperdine Upper, Plum Canyon Reservoir							0.25	90.74				0.25	90.74	
Leland Chester Porter, Floyd Eldon Porter, and Oakley Willis Porter	65.00	134	Plum Creek							0.50	181.49				0.50	181.49	
James C Porter, Cleve Smith, and Carlton Porter	40.00	158A	Nikolai	0.10	72.45					0.90	326.68				1.00	399.12	
Estate of A R Conklin	72.00	158	Conklin							0.63	228.67				0.63	228.67	
G B Dorris	129.00	104, 105, 106	Payne Upper, Payne Noth, Payne Lower	0.20	144.89			1.60	580.76						1.80	725.65	

**North Fork Pit River (and all its tributaries except for Franklin Creek)  
Modoc County Decree No. 4074**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to September 30	183.00	days
April 15 to September 30	169.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments										Total cfs	Total AF		
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)				
W S Trumbo	100.00	105, 107, 108, 109	Payne North, Trumbo South Parker, Trumbo North Parker, Stanton					1.30	471.87							1.30	471.87
Myrtle O Stanton	110.00	109	Stanton	0.20	144.89			1.40	508.17							1.60	653.06
Electa Fogarty	105.00	113	Fogarty-Porter	0.20	144.89			1.25	453.72							1.45	598.61
Martha E Page	24.00	114	Fogarty Upper					0.35	127.04							0.35	127.04
Electa Fogarty	10.00	115	Fogarty Lower					0.15	54.45							0.15	54.45
Leland Chester Porter, Floyd Eldon Porter, and Oakley Willis Porter	153.00	116, 117, 118, 120, 123, 124	Alice Porter Main, Alice Porter Upper North, Alice Porter Lower North, Parker, Peral Porter, Alice Porter Slough	0.20	144.89			1.78	646.10	0.20	72.60					2.18	863.58
Pearl F Gibson and C C Gibson	159.00	113, 121, 123	Fogarty-Porter, Porter Upper Reservoir Pearl Porter	0.20	144.89			0.63	228.67	0.29	105.26					1.12	478.83
Pearl F Gibson and C C Gibson	33.50	120	Parker					0.50	181.49							0.50	181.49
James C Porter and Estate of Phear E Porter	86.00	120	Parker	0.40	289.79			0.95	344.83							1.35	634.61
United States in Trust	160.00	130, 130A	X L Parker	0.20	144.89			2.77	1,005.44							2.97	1,150.33
Pearl F Gibson and C C Gibson	41.50	125, 126	Arnold P & J Porter Middle Board Dam, Porter West					0.65	235.93							0.65	235.93
James C Porter and Estate of Phear E Porter	67.50	127, 129A, 130	Porter West, X L Parker, J C Porter Lower	0.20	144.89			0.95	344.83							1.15	489.72
James C Porter	81.00	131, 131A, 131B						1.30	471.87							1.30	471.87
<b>Subtotal, Parker Creek Group</b>	<b>1,935.10</b>			<b>2.58</b>	<b>1,869.11</b>	<b>6.12</b>	<b>2,221.41</b>	<b>15.58</b>	<b>5,655.15</b>	<b>2.92</b>	<b>1,059.89</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>27.20</b>	<b>10,805.56</b>
<b>North Fork of Pit River Claimants</b>																	
M R Woody	19.50	13	Woody	0.35	253.56											0.35	253.56
United States in Trust	423.00	135, 136	X L Upper Lauer, Lauer, X L Middle, X L Lower	7.00	5,071.24											7.00	5,071.24
C J Clarke Co	10.30	137, 138	X L Upper Lauer, Lauer, X L Middle, X L Lower	0.20	144.89											0.20	144.89
Frank McArthur	635.20	136	Lauer							3.53	1,281.30					3.53	1,281.30
Charles Bettendorff and Georgie Bettendorff	56.70	139	North Fork			2.00	725.95						0.30	108.89		2.30	834.84
Hans A Hoesch and Margaret M Hoesch	184.20	139	North Fork	0.20	144.89	3.00	1,088.93						0.30	108.89		3.50	1,342.71
A Bolliger and A Keller	55.20	139	North Fork			0.80	290.38						0.30	108.89		1.10	399.27
Sarah Laird, Eda Laird, James R Laird, Mildred (Laird) Kenfield, and Fannie F Laird	136.90	139	North Fork	0.20	144.89	2.12	769.51			0.30	108.89					2.62	1,023.29
Estate of B F Lynip, deceased	550.70	139	North Fork	0.20	144.89	5.08	1,843.91						1.31	475.50		6.59	2,464.30
C A Raker	130.50	139	North Fork			3.20	1,161.52									3.20	1,161.52
A Bolliger and A Keller	236.70	141, 142	Gloster, Hughes					4.00	1,451.90							4.00	1,451.90
John C Noer	10.00	141, 142	Gloster, Hughes					0.16	58.08							0.16	58.08
M J Gloster & Annie G Gloster	68.30	141, 142, 143, 144	Gloster, Hughes, Walls Pump, Walls & Gloster					2.00	725.95							2.00	725.95
Mary E Walls & Eleanor W Asher	85.80	141, 142, 143, 144	Gloster, Hughes, Walls Pump, Walls & Gloster					1.44	522.68							1.44	522.68
Kirk Williams	5.00	141, 142, 143, 144	Gloster, Hughes, Walls Pump, Walls & Gloster					0.40	145.19							0.40	145.19
P S Dorris	1,985.90	142	Hughes							6.33	2,297.63					6.33	2,297.63
G B Dorris and Beryl Parker Dorris	1,626.20	142	Hughes							6.33	2,297.63					6.33	2,297.63
W E Minard	26.50	142	Hughes							0.30	108.89					0.30	108.89
O D Austin and Thelma Austin	132.30	146	Butcher									0.73	264.97			0.73	264.97
<b>Subtotal, North Fork of Pit River Group</b>	<b>6,378.90</b>			<b>8.15</b>	<b>5,904.37</b>	<b>16.20</b>	<b>5,880.20</b>	<b>8.00</b>	<b>2,903.80</b>	<b>16.79</b>	<b>6,094.35</b>	<b>2.94</b>	<b>1,067.15</b>	<b>0.73</b>	<b>264.97</b>	<b>52.08</b>	<b>21,849.87</b>
<b>Special Class Continuous Usage</b>																	
C T Watkins	2.55	1,847.38															

**North Fork Pit River (and all its tributaries except for Franklin Creek)  
Modoc County Decree No. 4074**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to September 30	183.00	days
April 15 to September 30	169.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments					Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)	Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)						
Grace F Bonner	0.03	21.73												
Electa Fogarty	1.00	724.46												
United States in Trust	0.10	72.45												
<b>Subtotal, Special Class Continuous</b>	<b>3.68</b>	<b>2,666.02</b>												
Surplus Class (Apr 1 - Sep 30)														
James C Porter	1.15	417.42												
<b>Subtotal, Surplus Class</b>	<b>1.15</b>	<b>417.42</b>												
<b>Special Class (Apr 15 - Sep 30)</b>														
J F Kerr	2.40	804.50												
F W Koenig and A H Koenig	0.20	67.04												
F L Wallace and Jane Wallace	2.40	804.50												
<b>Subtotal, Special Class Apr 15-Sep 30</b>	<b>5.00</b>	<b>1,676.03</b>												

**North Fork Pit River (and all its tributaries except for Franklin Creek)  
Modoc County Decree No. 4074**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to September 30	183.00	days
April 15 to September 30	169.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments					Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)	Fifth Priority Class (cfs)	Fifth Priority Face Value (AF)	Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)						
<b>Summary</b>	<b>Total cfs</b>	<b>Total AF</b>												
Linville Creek Group	8.30	4,426.11												
Joseph Creek Group	11.98	6,007.67												
Thoms Creek Group	6.44	2,551.88												
Gleason Creek Group	4.55	1,215.07												
Parker Creek Group	27.20	10,805.56												
North Fork Pit River Group	52.08	21,849.87												
Special Class Continuous Group	3.68	2,666.02												
Surplus Class Group	1.15	417.42												
Special Class Apr 15-Sep 30 Group	5.00	1,676.03												
<b>Total, All Groups</b>	<b>110.55</b>	<b>46,856.17</b>												

**Rattlesnake Creek Decree (Pit River in Hot Springs Valley)**  
**Modoc County Decree Recorded in Book 17, page 171**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments	
				Allotment (cfs)	Allotment (AF)
<b>Schedule 2, Allotments from Rattlesnake Creek and Pit River</b>					
Spicer Corporation	399.00		Rattlesnake	2.00	725.95
P S Dorris and Bank of Modoc County (Hoy & Christen)	167.00		Butcher	1.15	417.42
Emma Godfrey	71.00		Barnes	0.90	326.68
Emma Godfrey, Estate of J W Cummins, A H Layton, John Strawn	124.00		Cummins	0.20	72.60
Hot Spring Valley Irrigation District, Estate of McBrien and McConnell, John Lybarger	225.00		McBrien	2.45	889.29
James M Edwards, Estate of G C Lindauer, Hot Spring Valley Irrigation District (Lindauer)	521.00		Lindauer Upper	0.80	290.38
Estate of G C Lindauer, Hot Spring Valley Irrigation District	242.00		Lindauer Lower	0.55	199.64
Estate of G C Lindauer, Frank McArthur, John Kelley, C S Baldwin, Hot Springs Valley Irrigation District	492.00		McArthur Upper	0.60	217.79
Frank McArthur	140.00		McArthur Lower	0.45	163.34
Frank McArthur, Bank of Modoc County (Claussen), Federal Land Bank of Berkeley	253.00		Claussen	0.40	145.19
Bank of Modoc County (Claussen), Ira Hulbert, Bank of Modoc County (Connelly), George Fellencer, Katherine E Hazelton, California Joint Stock Land Bank (Fitzhugh)	538.00		Fellencer	0.20	72.60
California Joint Stock Land Bank (Fitzhugh), Bank of Modoc County (Connelly)	273.00		Fitzhugh	0.65	235.93
California Joint Stock Land Bank (Fitzhugh), Bank of Modoc County (Connelly), George Fellencer, Estate of G L Kramer	220.00		Marie Caldwell Upper	0.40	145.19
Estate of G L Kramer	100.00		Marie Caldwell Lower	0.55	199.64
G B Wilcox	166.00		Warren Caldwell	1.10	399.27
G B Wilcox	99.00		Hughes	0.40	145.19
Federal Land Bank of Berkeley	28.00		Howe	0.80	290.38
Federal Land Bank of Berkeley (Howe), Lizzie D Pope	89.00		Lizzie Pope	0.40	145.19
Hot Spring Valley Irrigation District (Shelton)	0.00		No Dam	Stockwater	0.00
Hot Spring Valley Irrigation District (Anklin)	0.00		No Dam		0.00
Hot Spring Valley Irrigation District (Mohr)	0.00		No Dam		0.00
Mary L Elledge	0.00		No Dam		0.00
Dora H Kelley	0.00		No Dam		0.00
<b>Subtotal, Schedule 2</b>	<b>4,147.00</b>			<b>14.00</b>	<b>5,081.65</b>

**Schedule 3 Allotments from Pit River and Rattlesnake Creek**

Estate of J M Clark	22.00		Kelley Ditch	0.44	159.71
Emma Godfrey	3.00		Kelley Ditch	0.06	21.78
Estate of J W Cummins	37.00		Kelley Ditch	0.74	268.60
S B and B L Kelley	43.00		Kelley Ditch	0.86	312.16
S B Kelley	4.00		Kelley Ditch	0.08	29.04
Dora B Kelley	82.00		Kelley Ditch	1.64	595.28
A H Layton	1.00		Kelley Ditch	0.02	7.26
T W Lush	15.00		Kelley Ditch	0.30	108.89
Spicer Corporation	35.00		Rattlesnake Canal	0.70	254.08
Pickering Lumber Company	39.00		Rattlesnake Canal	0.78	283.12
Spicer Corporation	364.00		Rattlesnake Creek and/or Rattlesnake Canal	7.28	2,642.46
Bank of Modoc County	4.00		Rattlesnake Creek and/or Rattlesnake Canal	0.08	29.04
P S Dorris	39.00		Butcher Dam	0.78	283.12
Bank of Modoc County	128.00		Butcher Dam	2.56	929.22
Emma Godfrey	71.00		Barnes Dam	1.42	515.42
Estate of J W Cummins	35.00		Barnes Dam, Cummins Dam, and/or Kelley Ditch	0.70	254.08

**Rattlesnake Creek Decree (Pit River in Hot Springs Valley)  
Modoc County Decree Recorded in Book 17, page 171**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments	
				Allotment (cfs)	Allotment (AF)
A H Layton	32.00		Barnes Dam, Cummins Dam, and/or Kelley Ditch	0.64	232.30
Emma Godfrey	57.00		Barnes Dam, Cummins Dam, and/or Kelley Ditch	1.14	413.79
John Strawn	3.00		Barnes Dam, Cummins Dam, and/or Kelley Ditch	0.06	21.78
Hot Spring Valley Irrigation District	179.00		McBrien Dam	3.58	1,299.45
Estates of McBrien and McConnell	30.00		McBrien Dam	0.60	217.79
John Lybarger	16.00		McBrien Dam	0.32	116.15
James M Edwards	44.00		Lindauer Upper Dam	0.88	319.42
Estate of G C Lindauer	136.00		Lindauer Upper Dam	2.72	987.29
Hot Spring Valley Irrigation District	83.00		Lindauer Upper Dam	1.66	602.54
Estate of G C Lindauer	59.00		Lindauer Upper and/or Lower Dam	1.18	428.31
Hot Spring Valley Irrigation District	441.00		Lindauer Upper and/or Lower Dam	8.82	3,201.44
Estate of G C Lindauer	20.00		Lindauer Upper Dam, Lindauer Lower Dam, and/or McArthur Upper Dam	0.40	145.19
Frank McArthur	542.00		McArthur Upper and/or Lower Dam	10.84	3,934.65
John Kelley	12.00		McArthur Upper and/or Lower Dam	0.24	87.11
C S Baldwin	47.00		McArthur Upper and/or Lower Dam	0.94	341.20
Hot Spring Valley Irrigation District	65.00		McArthur Upper and/or Lower Dam	1.30	471.87
Frank McArthur	122.00		McArthur Upper Dam, McArthur Lower Dam, and/or Claussen Dam	2.44	885.66
Federal Land Bank of Berkeley	37.00		Claussen Dam	0.74	268.60
Bank of Modoc County	65.00		Claussen Dam, and/or Fellencer Dam	1.30	471.87
Katherine E Hazelton	94.00		Fellencer Dam	1.88	682.39
George Fellencer	259.00		Fellencer Dam	5.18	1,880.21
Bank of Modoc County	107.00		Fellencer Dam	2.14	776.77
Ira Hulbert	23.00		Fellencer Dam	0.46	166.97
California Joint Stock Land Bank	50.00		Fellencer Dam and/or Fitzhugh Dam	1.00	362.98
California Joint Stock Land Bank	228.00		Fitzhugh Dam	4.56	1,655.17
Bank of Modoc County	25.00		Fitzhugh Dam	0.50	181.49
California Joint Stock Land Bank	4.00		Marie Caldwell Upper Dam	0.08	29.04
Bank of Modoc County	73.00		Marie Caldwell Upper Dam	1.46	529.94
George Fellencer	54.00		Marie Caldwell Upper Dam	1.08	392.01
Estate of G L Kramer	89.00		Marie Caldwell Upper Dam	1.78	646.10
Estate of G L Kramer	100.00		Marie Caldwell Lower Dam	2.00	725.95
G B Wilcox	166.00		Warren Caldwell Dam	3.32	1,205.08
G B Wilcox	10.00		Hughes Dam	0.20	72.60
Annie Hughes	89.00		Hughes Dam	1.78	646.10
Federal Land Bank of Berkeley	28.00		Howe Dam	0.56	203.27
Federal Land Bank of Berkeley	25.00		Lizzie Pope Dam	0.50	181.49
Lizzie D Pope	64.00		Lizzie Pope Dam	1.28	464.61
<b>Subtotal Schedule 3</b>	<b>4,400.00</b>			<b>88.00</b>	<b>31,941.82</b>

**Summary**

	Allotment (cfs)	Allotment (AF)
Schedule 2	14.00	5,081.65

**Rattlesnake Creek Decree (Pit River in Hot Springs Valley)  
Modoc County Decree Recorded in Book 17, page 171**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through September 30	183.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments	
				Allotment (cfs)	Allotment (AF)
Schedule 3	88.00	31,941.82			
<b>Total</b>	<b>102.00</b>	<b>37,023.47</b>			



**Roaring Creek Decree  
Shasta County, Decree No.  
83723**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through November 1	215.00	days
November 1 through April 1	150.25	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)		
<b>Schedule 3, Roaring Creek Claimants</b>													
Reich, Walter H and Annabel	16.00	3								0.75	319.83	0.75	319.83
Vopat, Frank	10.00	3								0.47	200.43	0.47	200.43
Parham, Eugene and Linda et al	19.00	3								0.89	379.54	0.89	379.54
Epperson, Ronald T and Theresa M	4.00	3								0.19	81.02	0.19	81.02
Henry, Lynn and Christine	15.00	5		0.75	319.83							0.75	319.83
Carroll, Jerry T and Charlene C	25.00	5		1.26	537.32							1.26	537.32
Miller, Jack O and Helen	2.00	6								0.12	51.17	0.12	51.17
Leonard, Vernon I and Leona J	10.00	6								0.60	255.87	0.60	255.87
Caldwell, F B III and Easton, R B	5.00	6								0.30	127.93	0.30	127.93
Easton, Robert B and Constance C	3.00	6								0.18	76.76	0.18	76.76
Cantrell, Gloria	2.00	6								0.12	51.17	0.12	51.17
Bay Histology Service	2.00	2								0.12	51.17	0.12	51.17
Meckley, Chester and Mary J	Domestic	6								0.36	153.52	0.36	153.52
Terry, Eugene F and Marsha P	Domestic									0.01	7.24	0.01	7.24
Van Steene, Jack L and Doris A	Domestic									0.01	7.24	0.01	7.24
Nipper, Jack J and Grace M	Domestic									0.01	7.24	0.01	7.24
Reddick, Arthur C and Sally	Domestic									0.01	7.24	0.01	7.24
Sivain, Susan Marie Wimbler	Domestic									0.01	7.24	0.01	7.24
Garnett, Bernard E and Ruth M	Domestic									0.01	7.24	0.01	7.24
Close, James and Lucille	1.00	1								0.06	25.59	0.06	25.59
Wilson, Thomas E and Gayle A	Domestic									0.01	7.24	0.01	7.24
Richard, Charles L and Evelyn A	3.00	3								0.18	76.76	0.18	76.76
Roderick, James C and Delores J	5.00	5						0.15	63.97			0.15	63.97
<b>Subtotal, Schedule 3, Roaring Creek Claimants</b>	<b>122.00</b>			<b>2.01</b>	<b>857.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>63.97</b>	<b>4.41</b>	<b>1,901.49</b>	<b>6.57</b>	<b>2,822.61</b>
<b>Schedule 4, Jake Creek Claimants</b>													
Reich, Walter H and Annabel	16.00	4				0.75	319.83					0.75	319.83
Vopat, Frank	10.00	4				0.47	200.43					0.47	200.43
Parham, Eugene and Linda et al	19.00	4				0.89	379.54					0.89	379.54
Epperson, Ronald T and Theresa M	4.00	4				0.19	81.02					0.19	81.02
<b>Subtotal, Schedule 4, Jake Creek Claimants</b>	<b>49.00</b>			<b>0.00</b>	<b>0.00</b>	<b>2.30</b>	<b>980.83</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.30</b>	<b>980.83</b>
<b>Schedule 5, Browns Creek Claimants</b>													
Parham, Eugene and Linda et al	19.00					0.89	379.54					0.89	379.54
Epperson, Ronald T and Theresa M	4.00					0.19	81.02					0.19	81.02
Parham, Eugene and Linda et al	2.00							0.04	17.06			0.04	17.06
Henry, Lynn and Christine	15.00			0.75	319.83							0.75	319.83
Carroll, Jerry T and Charlene C	25.00									1.26	537.32	1.26	537.32
<b>Subtotal, Schedule 5, Browns Creek Claimants</b>	<b>65.00</b>			<b>0.75</b>	<b>319.83</b>	<b>1.08</b>	<b>460.56</b>	<b>0.04</b>	<b>17.06</b>	<b>1.26</b>	<b>537.32</b>	<b>3.13</b>	<b>1,334.78</b>
<b>Schedule 6, Miscellaneous Claimants</b>													
U S Forest Service				1500	gpd							0.00	0.00

**Roaring Creek Decree  
Shasta County, Decree No.  
83723**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through November 1	215.00	days
November 1 through April 1	150.25	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)		
U S Forest Service				0.06	43.47							0.06	43.47
Roseberg Lumber Co				0.05	36.22							0.05	36.22
<b>Subtotal, Schedule 6, Miscellaneous Claimants</b>	<b>0.00</b>			<b>0.11</b>	<b>79.69</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>79.69</b>
<b>Paragraph 19: Winter Season Domestic and Stockwater Entitlement</b>													
<b>Schedule 3, Roaring Creek Claimants</b>													
Reich, Walter H and Annabel	16.00	3		0.01	2.98								
Vopat, Frank	10.00	3		0.01	2.98								
Parham, Eugene and Linda et al	19.00	3		0.01	2.98								
Epperson, Ronald T and Theresa M	4.00	3		0.01	2.98								
Henry, Lynn and Christine	15.00	5		0.01	2.98								
Carroll, Jerry T and Charlene C	25.00	5		0.01	2.98								
Miller, Jack O and Helen	2.00	6		0.01	2.98								
Leonard, Vernon I and Leona J	10.00	6		0.01	2.98								
Caldwell, F B III and Easton, R B	5.00	6		0.01	2.98								
Easton, Robert B and Constance C	3.00	6		0.01	2.98								
Cantrell, Gloria	2.00	6		0.01	2.98								
Bay Histology Service	2.00	2		0.01	2.98								
Meckley, Chester and Mary J		Domestic 6											
Terry, Eugene F and Marsha P		Domestic											
Van Steene, Jack L and Doris A		Domestic											
Nipper, Jack J and Grace M		Domestic											
Reddick, Arthur C and Sally		Domestic											
Sivain, Susan Marie Wimbler		Domestic											
Garnett, Bernard E and Ruth M		Domestic											
Close, James and Lucille	1.00	1		0.01	2.98								
Wilson, Thomas E and Gayle A		Domestic											
Richard, Charles L and Evelyn A	3.00	3		0.01	2.98								
Roderick, James C and Delores J	5.00	5		0.01	2.98								
<b>Subtotal, Schedule 3, Roaring Creek Claimants</b>	<b>122.00</b>			<b>0.15</b>	<b>44.70</b>								
<b>Schedule 4, Jake Creek Claimants</b>													
Reich, Walter H and Annabel	16.00	4		0.01	2.98								
Vopat, Frank	10.00	4		0.01	2.98								
Parham, Eugene and Linda et al	19.00	4		0.01	2.98								
Epperson, Ronald T and Theresa M	4.00	4		0.01	2.98								
<b>Subtotal, Schedule 4, Jake Creek Claimants</b>	<b>49.00</b>			<b>0.04</b>	<b>11.92</b>								
<b>Schedule 5, Browns Creek Claimants</b>													
Parham, Eugene and Linda et al	19.00			0.01	2.98								
Epperson, Ronald T and Theresa M	4.00			0.01	2.98								
Parham, Eugene and Linda et al	2.00			0.01	2.98								
Henry, Lynn and Christine	15.00			0.01	2.98								
Carroll, Jerry T and Charlene C	25.00			0.01	2.98								

**Roaring Creek Decree  
Shasta County, Decree No.  
83723**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through November 1	215.00	days
November 1 through April 1	150.25	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments								Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)	Third Priority Class (cfs)	Third Priority Face Value (AF)	Fourth Priority Class (cfs)	Fourth Priority Face Value (AF)		
<b>Subtotal, Schedule 5, Browns Creek Claimants</b>	<b>65.00</b>			<b>0.05</b>	<b>14.90</b>								
<b>Subtotal, Winter Season Domestic &amp; Stockwater Allotments</b>	<b>236.00</b>			<b>0.24</b>	<b>71.52</b>								
<b>Summary</b>	<b>Total cfs</b>	<b>Total AF</b>											
<b>Subtotal, Schedule 3, Roaring Creek Claimants</b>	6.57	2,822.61											
<b>Subtotal, Schedule 4, Jake Creek Claimants</b>	2.30	980.83											
<b>Subtotal, Schedule 5, Browns Creek Claimants</b>	3.13	1,334.78											
<b>Subtotal, Schedule 6, Miscellaneous Claimants</b>	0.11	79.69											
<b>Subtotal, Winter Season Domestic &amp; Stockwater Allotments</b>	0.24	71.52											
<b>Total, Roaring Creek Stream System Decree Claims</b>	<b>12.35</b>	<b>5,289.43</b>											

South Fork Pit River and Its Tributaries Adjudication - Modoc County Decree No. 3273

**South Fork Pit River Decree  
Modoc County Decree No. 3273**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to June 30	91.00	days
April 1 to October 15	198.00	days
July 1 to July 21	21.00	days
July 22 to August 11	21.00	days
August 12 to October 15	65.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments				Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)		
<b>Schedule 2, Fitzhugh Creek and Its Tributaries Claimants</b>									
John Blevins, Cecil Blevins, and Willetta L Blevins (Bowman)	67.50	124	North Fitzhugh Creek	0.60	235.64			0.60	235.64
Cornelia A Hershey, Davidella Hershey, Grace H Hershey, D N Hershey, and Florence F Hershey	104.50	125	North Fitzhugh Creek	1.00	392.73	0.60	235.64	1.60	628.36
Minnie Derevan	20.10	126, 127	North Fitzhugh Creek	0.50	362.23			0.50	362.23
Walter Cantrall, Elsie A Cantrall, A E Sweeney, and Frances E Sweeney	77.40	128 to 131	Middle and South Fitzhugh Creeks	0.50	362.23	0.70	274.91	1.20	637.14
Minnie Derevan	46.50	132 to 135	South Fitzhugh Creek			0.70	274.91	0.70	274.91
George M Clark and J E Clark	322.00	137 to 141	Fitzhugh Creek	0.60	434.68	4.40	1,728.00	5.00	2,162.68
Frank McArthur and Ethel M McArthur	316.50	142	Fitzhugh Creek	0.20	144.89	4.70	1,845.82	4.90	1,990.71
W E Armstrong	30.00	142	Fitzhugh Creek	0.20	144.89	0.30	117.82	0.50	262.71
<b>Subtotal, Schedule 2, Fitzhugh Creek Claimants</b>	<b>984.50</b>			<b>3.60</b>	<b>2,077.29</b>	<b>11.40</b>	<b>4,477.09</b>	<b>15.00</b>	<b>6,554.38</b>

South Fork Pit River and Its Tributaries Adjudication - Modoc County Decree No. 3273

**South Fork Pit River Decree  
Modoc County Decree No. 3273**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to June 30	91.00	days
April 1 to October 15	198.00	days
July 1 to July 21	21.00	days
July 22 to August 11	21.00	days
August 12 to October 15	65.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments				Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)		
<b>Schedule 3, South Fork of Pit River and Its Tributaries Claimants</b>									
John McGarva, Peter B McGarva, and Phyllis McGarva	121.80	40 to 46	North and South Forks of Parsnip Creek	0.85	615.79	0.90	162.45	1.75	778.24
J C Van Loan	572.20	47, 48, 49	West Valley Creek	3.65	2,644.29	4.50	812.23	8.15	3,456.52
Frank McArthur and Ethel M McArthur	293.30	1	Mill Creek	1.90	746.18			1.90	746.18
John Blevins, Cecil Blevins, and Willetta L Blevins			Mill Creek	0.44	318.76			0.44	318.76
A J Cantrall and Ida Cantrall	152.30	5, 6, 7, 9	Mill Creek	0.85	615.79	1.65	297.82	2.50	913.61
W S Brooks and Ada H Brooks	22.00	5, 6, 7, 9	Mill Creek					0.00	0.00
Walter Cantrall, Elsie A Cantrall	176.50	2, 3, 4, 7, 8, 9	Mill Creek	0.85	615.79	1.85	333.92	2.70	949.71
W S Brooks and Ada H Brooks	10.50	2, 3, 4, 7, 8, 9	Mill Creek					0.00	0.00
W S Brooks and Ada H Brooks	114.20	10 to 13	Mill Creek	0.85	615.79	1.15	207.57	2.00	823.36
Bessie Whitman and Della Johnson	24.20	21, 22	Soup Creek					0.00	0.00
Arthur Flournoy	91.90	4	Mill Creek	0.85	615.79	1.15	207.57	2.00	823.36
Bessie Whitman and Della Johnson	48.80	4	Mill Creek					0.00	0.00
Felice Leoni	148.00	2, 3, 4	Mill Creek	0.85	615.79	1.25	225.62	2.10	841.41
Bessie Whitman and Della Johnson	10.20	14	Mill Creek			0.15	27.07	0.15	27.07
Arthur Flournoy	178.10	23, 24	Mill Creek			2.80	505.39	2.80	505.39
Bessie Whitman and Della Johnson	19.30	23, 24	Mill Creek					0.00	0.00
George Campbell	52.40	27 to 32	East Creek	0.85	615.79	0.25	45.12	1.10	660.92
Arthur Flournoy	23.70	27 to 32	East Creek					0.00	0.00
Arthur Flournoy	1,736.50	27, 30, 33 to 39	East Creek	5.00	3,622.31	19.80	3,573.82	24.80	7,196.13
Verdi Lumber Company	73.00	50	South Fork of Pit River	0.25	181.12	1.53	276.16	1.78	457.27
Royal E Williams, Marion G Williams and Ann Eliza Duke	150.00	50	South Fork of Pit River			0.70	126.35	0.70	126.35
Arthur Flournoy	56.70	50	South Fork of Pit River	0.40	289.79			0.40	289.79
Arthur Flournoy	80.00	50	South Fork of Pit River	0.33	239.07	1.27	229.23	1.60	468.30
A T Coffman and Eppa W Coffman	171.70	50	South Fork of Pit River	0.18	130.40	1.90	342.94	2.08	473.35
A L Stinson, and Mary E Stinson	7.00	50	South Fork of Pit River	0.08	57.96			0.08	57.96
Douglas McGarva and Margaret McGarva	33.00	50	South Fork of Pit River	0.50	362.23			0.50	362.23
Town of Likely		50	South Fork of Pit River	0.06	43.47			0.06	43.47
Verdi Lumber Company	97.00	51	South Fork of Pit River	0.40	289.79	0.80	144.40	1.20	434.18
Homer Blevins	93.00	51	South Fork of Pit River	0.40	289.79	0.80	144.40	1.20	434.18
John Blevins, Cecil Blevins, and Willetta L Blevins	101.20	51	South Fork of Pit River	0.40	289.79	0.80	144.40	1.20	434.18

South Fork Pit River and Its Tributaries Adjudication - Modoc County Decree No. 3273

**South Fork Pit River Decree  
Modoc County Decree No. 3273**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to June 30	91.00	days
April 1 to October 15	198.00	days
July 1 to July 21	21.00	days
July 22 to August 11	21.00	days
August 12 to October 15	65.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments				Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)		
Dolph E Van Loan and Eva Van Loan	1.00	51	South Fork of Pit River					0.00	0.00
W H Flournoy and Gladys W Flournoy	160.50	52	South Fork of Pit River	0.17	123.16	1.28	231.03	1.45	354.19
Gary Williams and Theresa Williams	286.30		South Fork of Pit River	0.51	369.48	3.84	693.10	4.35	1,062.58
J A Hughes and Willie W Hughes	426.60		South Fork of Pit River	0.68	492.63	5.12	924.14	5.80	1,416.77
Frank McArthur and Ethel M McArthur	515.50		South Fork of Pit River	0.68	492.63	5.12	924.14	5.80	1,416.77
Dolph E Van Loan and Eva Van Loan	111.00	53	South Fork of Pit River	0.25	181.12	1.35	243.67	1.60	424.79
Dolph E Van Loan and Eva Van Loan	345.00		South Fork of Pit River	0.75	543.35	4.05	731.01	4.80	1,274.36
W H Flournoy and Gladys W Flournoy	294.10		South Fork of Pit River	0.50	362.23	2.70	487.34	3.20	849.57
Arthur Flournoy	10.00		South Fork of Pit River					0.00	0.00
Arthur Flournoy	400.00	54	South Fork of Pit River	1.50	1,086.69	3.50	631.74	5.00	1,718.43
F E Humphrey, V F Christensen and Charlotte E Christensen	400.00		South Fork of Pit River			5.00	902.48	5.00	902.48
Gary Williams and Theresa Williams	170.10	55	South Fork of Pit River			2.15	388.07	2.15	388.07
Frank McArthur and Ethel M McArthur	3,414.80	56, 58, 59, 61 to 77, 87 to 91	East Side Canal	1.25	905.58	43.55	7,860.60	44.80	8,766.17
Frank McArthur and Ethel M McArthur	230.60	92 to 96, 98	East Side Canal			3.00	541.49	3.00	541.49
S J Vaughn	17.30	92 to 96, 98	East Side Canal			0.25	45.12	0.25	45.12
Dolph E Van Loan and Eva Van Loan	480.00	57	East Side Canal	0.25	181.12	6.05	1,092.00	6.30	1,273.12
Mrs Katie H Nelson	526.30	60	East Side Canal	0.25	181.12	6.65	1,200.30	6.90	1,381.41
W E Armstrong	206.00	78 to 86	East Side Canal	0.25	181.12	2.45	442.21	2.70	623.33
W E Armstrong	144.60	97	East Side Canal			1.90	342.94	1.90	342.94
F E Humphrey, V F Christensen and Charlotte E Christensen	122.30	99	West Side Canal	0.10	72.45	1.45	261.72	1.55	334.17
Dolph E Van Loan and Eva Van Loan	140.00	99	West Side Canal	0.10	72.45	1.65	297.82	1.75	370.26
Frank McArthur and Ethel M McArthur	161.80	99	West Side Canal	0.10	72.45	1.95	351.97	2.05	424.41
F E Humphrey, V F Christensen and Charlotte E Christensen	1,251.10	100 to 104	West Side Canal	0.90	652.02	14.95	2,698.41	15.85	3,350.43
John McGarva, Peter B McGarva, and Phyllis McGarva	219.50	105	West Side Canal	0.15	108.67	2.65	478.31	2.80	586.98
R J Gaustad and Nellie Gaustad	175.00	106, 107	West Side Canal	0.15	108.67	2.05	370.02	2.20	478.69
R O Gaustad	77.00	106, 107	West Side Canal	0.05	36.22	0.95	171.47	1.00	207.69
R O Gaustad	75.00	108	West Side Canal	0.05	36.22	0.90	162.45	0.95	198.67
Raymond Stepp Bertha L Stepp, Lena Graham and Herbie Graham	90.00	108	West Side Canal	0.10	72.45	1.05	189.52	1.15	261.97
Frank McArthur and Ethel M McArthur	1,161.20	109 to 123	West Side Canal	0.80	579.57	13.90	2,508.89	14.70	3,088.46
<b>Subtotal, Schedule 3, South Fork Pit River and Tributaries Claimants</b>	<b>16,271.10</b>			<b>29.48</b>	<b>20,074.85</b>	<b>182.71</b>	<b>30,279.99</b>	<b>196.34</b>	<b>50,354.84</b>

**Schedule 3, Surplus Rotational Allotments for Second Priority Class Claimants, July 1 through July 21**

**South Fork Pit River Decree  
Modoc County Decree No. 3273**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to June 30	91.00	days
April 1 to October 15	198.00	days
July 1 to July 21	21.00	days
July 22 to August 11	21.00	days
August 12 to October 15	65.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments			Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)		
John McGarva, Peter B McGarva, and Phyllis McGarva	121.80	40 to 46	North and South Forks of Parsnip Creek			0.90	37.49	
J C Van Loan	572.20	47, 48, 49	West Valley Creek			4.50	187.44	
Frank McArthur and Ethel M McArthur	293.30	1	Mill Creek					
John Blevins, Cecil Blevins, and Willetta L Blevins			Mill Creek					
A J Cantrall and Ida Cantrall	152.30	5, 6, 7, 9	Mill Creek			1.65	68.73	
W S Brooks and Ada H Brooks	22.00	5, 6, 7, 9	Mill Creek					
Walter Cantrall, Elsie A Cantrall	176.50	2, 3, 4, 7, 8, 9	Mill Creek			1.85	77.06	
W S Brooks and Ada H Brooks	10.50	2, 3, 4, 7, 8, 9	Mill Creek					
W S Brooks and Ada H Brooks	114.20	10 to 13	Mill Creek			1.15	47.90	
Bessie Whitman and Della Johnson	24.20	21, 22	Soup Creek					
Arthur Flournoy	91.90	4	Mill Creek			1.15	47.90	
Bessie Whitman and Della Johnson	48.80	4	Mill Creek					
Felice Leoni	148.00	2, 3, 4	Mill Creek			1.25	52.07	
Bessie Whitman and Della Johnson	10.20	14	Mill Creek			0.15	6.25	
Arthur Flournoy	178.10	23, 24	Mill Creek			2.80	116.63	
Bessie Whitman and Della Johnson	19.30	23, 24	Mill Creek					
George Campbell	52.40	27 to 32	East Creek			0.25	10.41	
Arthur Flournoy	23.70	27 to 32	East Creek					
Arthur Flournoy	1,736.50	27, 30, 33 to 39	East Creek			19.80	824.73	
<b>Subtotal, July 1 to 21 Surplus Rotation Claimants Schedule 3, Surplus Rotational Allotments for Second Priority Class Claimants, July 22 through August 11</b>	<b>3,795.90</b>					<b>35.45</b>	<b>1,476.60</b>	
Verdi Lumber Company	73.00	50	South Fork of Pit River			1.53	63.73	
Royal E Williams, Marion G Williams and Ann Eliza Duke	150.00	50	South Fork of Pit River			0.70	29.16	
Arthur Flournoy	56.70	50	South Fork of Pit River					
Arthur Flournoy	80.00	50	South Fork of Pit River			1.27	52.90	
A T Coffman and Eppa W Coffman	171.70	50	South Fork of Pit River			1.90	79.14	
A L Stinson, and Mary E Stinson	7.00	50	South Fork of Pit River					
Douglas McGarva and Margaret McGarva	33.00	50	South Fork of Pit River					
Town of Likely		50	South Fork of Pit River					
Verdi Lumber Company	97.00	51	South Fork of Pit River			0.80	33.32	
Homer Blevins	93.00	51	South Fork of Pit River			0.80	33.32	

South Fork Pit River and Its Tributaries Adjudication - Modoc County Decree No. 3273

**South Fork Pit River Decree  
Modoc County Decree No. 3273**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to June 30	91.00	days
April 1 to October 15	198.00	days
July 1 to July 21	21.00	days
July 22 to August 11	21.00	days
August 12 to October 15	65.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments		Total cfs	Total AF
				First Priority Class (cfs)	Second Priority Class (cfs)		
John Blevins, Cecil Blevins, and Willetta L Blevins	101.20	51	South Fork of Pit River		0.80		33.32
Dolph E Van Loan and Eva Van Loan	1.00	51	South Fork of Pit River				
W H Flournoy and Gladys W Flournoy	160.50	52	South Fork of Pit River		1.28		53.32
Gary Williams and Theresa Williams	286.30		South Fork of Pit River		3.84		159.95
J A Hughes and Willie W Hughes	426.60		South Fork of Pit River		5.12		213.26
Frank McArthur and Ethel M McArthur	515.50		South Fork of Pit River		5.12		213.26
Dolph E Van Loan and Eva Van Loan	111.00	53	South Fork of Pit River		1.35		56.23
Dolph E Van Loan and Eva Van Loan	345.00		South Fork of Pit River		4.05		168.69
W H Flournoy and Gladys W Flournoy	294.10		South Fork of Pit River		2.70		112.46
Arthur Flournoy	10.00		South Fork of Pit River				
Arthur Flournoy	400.00	54	South Fork of Pit River		3.50		145.79
F E Humphrey, V F Christensen and Charlotte E Christensen	400.00		South Fork of Pit River		5.00		208.26
Gary Williams and Theresa Williams	170.10		South Fork of Pit River		2.15		89.55
Frank McArthur and Ethel M McArthur	3,414.80	56, 58, 59, 61 to 77, 87 to 91	East Side Canal		43.55		1,813.98
Frank McArthur and Ethel M McArthur	230.60	92 to 96, 98	East Side Canal		3.00		124.96
S J Vaughn	17.30	92 to 96, 98	East Side Canal		0.25		10.41
Dolph E Van Loan and Eva Van Loan	480.00	57	East Side Canal		6.05		252.00
Mrs Katie H Nelson	526.30	60	East Side Canal		6.65		276.99
W E Armstrong	206.00	78 to 86	East Side Canal		2.45		102.05
W E Armstrong	144.60	97	East Side Canal		1.90		79.14
F E Humphrey, V F Christensen and Charlotte E Christensen	122.30	99	West Side Canal		1.45		60.40
Dolph E Van Loan and Eva Van Loan	140.00	99	West Side Canal		1.65		68.73
Frank McArthur and Ethel M McArthur	161.80	99	West Side Canal		1.95		81.22
F E Humphrey, V F Christensen and Charlotte E Christensen	1,251.10	100 to 104	West Side Canal		14.95		622.71
John McGarva, Peter B McGarva, and Phyllis McGarva	219.50	105	West Side Canal		2.65		110.38
R J Gaustad and Nellie Gaustad	175.00	106, 107	West Side Canal		2.05		85.39
R O Gaustad	77.00	106, 107	West Side Canal		0.95		39.57
R O Gaustad	75.00	108	West Side Canal		0.90		37.49



**South Fork Pit River Decree  
Modoc County Decree No. 3273**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to June 30	91.00	days
April 1 to October 15	198.00	days
July 1 to July 21	21.00	days
July 22 to August 11	21.00	days
August 12 to October 15	65.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments		Total cfs	Total AF
				First Priority Class (cfs)	Second Priority Class (cfs)		
Raymond Stepp Bertha L Stepp, Lena Graham and Herbie Graham	90.00	108	West Side Canal		1.05		43.74
Frank McArthur and Ethel M McArthur	1,161.20	109 to 123	West Side Canal		13.90		578.98
<b>Subtotal, July 22 to August 11 Rotations Claimants</b>	<b>12,475.20</b>				<b>147.26</b>		<b>6,133.80</b>

**Surplus Class Claimants, South Fork Pit River and Tributaries - Rotation Schedule from Paragraph 38 from August 12 to October 15**

	Cubic Feet per Second	Acre-Feet
Mill Creek Ditches	3.00	386.78
East Creek Ditches	3.20	412.56
Parsnip Creek Ditches	0.50	64.46
West Valley Creek Ditches	1.35	174.05
Masters Ditch	2.00	257.85
Jackson Ditch	1.00	128.93
Corporation Ditch	4.00	515.70
Van Loan Ditch	2.00	257.85
Flournoy Ditch	2.00	257.85
Williams Ditch	0.70	90.25
East and West Side Canals	8.00	1,031.40
<b>Subtotal, August 12 to October 15 Rotations Claimants</b>	<b>27.75</b>	<b>3,577.69</b>

**South Fork Pit River Decree  
Modoc County Decree No. 3273**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 to June 30	91.00	days
April 1 to October 15	198.00	days
July 1 to July 21	21.00	days
July 22 to August 11	21.00	days
August 12 to October 15	65.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Name of Diversion System	Allotments			Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)		
<b>Summary</b>	<b>Cubic Feet per Second</b>	<b>Acre-Feet</b>						
Subtotal, Schedule 2, Fitzhugh Creek Claimants	15.00	6,554.38						
Subtotal, Schedule 3, South Fork Pit River and Tributaries Claimants	196.34	50,354.84						
<b>Subtotal, Basic South Fork Claimants Before Surplus Rotations</b>	<b>211.34</b>	<b>56,909.22</b>						
Subtotal, July 1 to 21 Surplus Rotation Claimants	35.45	1,476.60						
Subtotal, July 22 to August 11 Rotations Claimants	147.26	6,133.80						
Subtotal, August 12 to October 15 Rotations Claimants	27.75	3,577.69						
<b>Grand Total, All Claimants, Basic Plus Surplus Rotations</b>	<b>421.80</b>	<b>68,097.30</b>						

Willow Creek Adjudication - Shasta County Decree No. 87524

**Willow Creek Decree  
Shasta County, Decree No.  
87524**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through November 1	215.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Use	Allotments				Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)	Second Priority Face Value (AF)		
<b>Schedule 3, Willow Creek Claimants</b>									
Buffington, John L Jr		1	Domestic						
Buffington, John L Jr	8.00	2	Domestic, Irrigation						
Buffington, John L Jr		3	Domestic						
Bull, Charles E	10.00	21	Domestic, Irrigation, Fire						
Stanbro, Phillip W and Sharon A		5	Domestic, Stockwater	0.01	7.24			0.01	7.24
Stanbro, Phillip W and Sharon A	8.00	5	Irrigation			0.13	55.44	0.13	55.44
Colbert, Louis E and Wilma C	15.00	6	Irrigation			0.15	63.97	0.15	63.97
Gates, Robert L and Marjorie S		7, 8	Domestic	0.01	7.24			0.01	7.24
Gates, Robert L and Marjorie S	6.00	9	Irrigation, Recreation			0.06	25.59	0.06	25.59
Gabriele, Julius and Linda		11	Domestic, Irrigation	0.01	7.24			0.01	7.24
Gabriele, Julius and Linda	30.00	11				0.30	127.93	0.30	127.93
Pacific Gas & Electric Co		22	Stockwater	350 gpd	0.39				0.39
Bertagna, Joseph and Marian L		12	Domestic	0.01	7.24			0.01	7.24
Bertagna, Joseph and Marian L	10.00		Irrigation, Stockwater			0.10	42.64	0.10	42.64
Harber, Virgil and Pauline		15	Domestic	0.01	7.24			0.01	7.24
	1.00		Irrigation			0.01	4.26	0.01	4.26
<b>Subtotal, Schedule 3 Willow Creek Claimants</b>	<b>88.00</b>			<b>0.05</b>	<b>36.62</b>	<b>0.75</b>	<b>319.83</b>	<b>0.80</b>	<b>356.45</b>
<b>Schedule 4, Minnow and Dunn Creeks Claimants</b>									
Bertagna, Joseph and Marian L	10.00	13	Irrigation			0.10	42.64	0.10	42.64
Bertagna, Joseph and Marian L		14	Domestic	0.01	7.24			0.01	7.24
Bertagna, Joseph and Marian L	10.00	14	Irrigation			0.10	42.64	0.10	42.64
Bertagna, Paul J and Mary E	4.00	13	Irrigation			0.04	17.06	0.04	17.06
Webb, Joyce J		16	Domestic	0.01	7.24			0.01	7.24
Webb, Joyce J	2.00	16	Irrigation			0.02	8.53	0.02	8.53
<b>Subtotal, Schedule 4 Minnow and Dunn Creeks Claimants</b>	<b>26.00</b>			<b>0.02</b>	<b>14.49</b>	<b>0.26</b>	<b>110.88</b>	<b>0.28</b>	<b>125.37</b>
<b>Schedule 5, Post-1914 Appropriative Water Rights</b>									
Puhlman, Albert E and Carol J		4	Stockwater		2.30				

Willow Creek Adjudication - Shasta County Decree No. 87524

**Willow Creek Decree  
Shasta County, Decree No.  
87524**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through November 1	215.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Use	Allotments			Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)		
Gates, Robert L and Marjorie S	2.00		Irrigation, Domestic, Stockwater		10.00			
Lincoln, Richard G and Michele L	10.00		Irrigation, Domestic, Stockwater		20.00			
Gabriele, Julius and Linda	30.00		Irrigation, Domestic, Stockwater		14.40			
Wheeler, Ernest L			Stockwater		10.00			
Shaw, Veldon et al			Stockwater		10.00			
Klein, Frederick & Phyllis	3.00		Irrigation, Domestic		3.00			
Truman, John C and Helen G			Recreation, Fire		0.50			
<b>Subtotal, Post-1914 Appropriative Water Rights</b>	<b>45.00</b>			<b>0.00</b>	<b>70.20</b>			
<b>Summary</b>	<b>Total cfs</b>	<b>Total AF</b>						
Subtotal, Schedule 3 Willow Creek Claimants	0.80	356.45						
Subtotal, Schedule 4 Minnow and Dunn Creeks Claimants	0.28	125.37						
Subtotal, Post-1914 Appropriative Water Rights		70.20						
<b>Total, Willow Creek Decree Claimants</b>	<b>1.08</b>	<b>552.02</b>						

Willow Creek Adjudication - Shasta County Decree No. 87524

**Willow Creek Decree  
Shasta County, Decree No. 87524**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through November 1	215.00	days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Use	Allotments		Second Priority Class (cfs)	Second Priority Face Value (AF)	Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)				
<b>Schedule 3, Willow Creek Claimants</b>									
Buffington, John L Jr		1	Domestic	Entire Flow of Spring					
Buffington, John L Jr	8.00	2	Domestic, Irrigation	Entire Flow of Spring					
Buffington, John L Jr		3	Domestic	Entire Flow of Spring					
Bull, Charles E	10.00	21	Domestic, Irrigation, Fire	Entire Flow of Spring					
Stanbro, Phillip W and Sharon A		5	Domestic, Stockwater	0.01	7.24			0.01	7.24
Stanbro, Phillip W and Sharon A	8.00	5	Irrigation			0.13	55.44	0.13	55.44
Colbert, Louis E and Wilma C	15.00	6	Irrigation			0.15	63.97	0.15	63.97
Gates, Robert L and Marjorie S		7, 8	Domestic	0.01	7.24			0.01	7.24
Gates, Robert L and Marjorie S	6.00	9	Irrigation, Recreation			0.06	25.59	0.06	25.59
Gabriele, Julius and Linda		11	Domestic, Irrigation	0.01	7.24			0.01	7.24
Gabriele, Julius and Linda	30.00	11				0.30	127.93	0.30	127.93
Pacific Gas & Electric Co		22	Stockwater	350 gpd	0.39				0.39
Bertagna, Joseph and Marian L		12	Domestic	0.01	7.24			0.01	7.24
Bertagna, Joseph and Marian L	10.00		Irrigation, Stockwater			0.10	42.64	0.10	42.64
Harber, Virgil and Pauline		15	Domestic	0.01	7.24			0.01	7.24
	1.00		Irrigation			0.01	4.26	0.01	4.26
<b>Subtotal, Schedule 3 Willow Creek Claimants</b>	<b>88.00</b>			<b>0.05</b>	<b>36.62</b>	<b>0.75</b>	<b>319.83</b>	<b>0.80</b>	<b>356.45</b>
<b>Schedule 4, Minnow and Dunn Creeks Claimants</b>									
Bertagna, Joseph and Marian L	10.00	13	Irrigation			0.10	42.64	0.10	42.64
Bertagna, Joseph and Marian L		14	Domestic	0.01	7.24			0.01	7.24
Bertagna, Joseph and Marian L	10.00	14	Irrigation			0.10	42.64	0.10	42.64
Bertagna, Paul J and Mary E	4.00	13	Irrigation			0.04	17.06	0.04	17.06
Webb, Joyce J		16	Domestic	0.01	7.24			0.01	7.24
Webb, Joyce J	2.00	16	Irrigation			0.02	8.53	0.02	8.53
<b>Subtotal, Schedule 4 Minnow and Dunn Creeks Claimants</b>	<b>26.00</b>			<b>0.02</b>	<b>14.49</b>	<b>0.26</b>	<b>110.88</b>	<b>0.28</b>	<b>125.37</b>
<b>Schedule 5, Post-1914 Appropriative Water Rights</b>									
Puhlman, Albert E and Carol J		4	Stockwater		2.30				
Gates, Robert L and Marjorie S	2.00		Irrigation, Domestic, Stockwater		10.00				
Lincoln, Richard G and Michele L	10.00		Irrigation, Domestic, Stockwater		20.00				
Gabriele, Julius and Linda	30.00		Irrigation, Domestic, Stockwater		14.40				
Wheeler, Ernest L			Stockwater		10.00				
Shaw, Veldon et al			Stockwater		10.00				
Klein, Frederick & Phyllis	3.00		Irrigation, Domestic		3.00				
Truman, John C and Helen G			Recreation, Fire		0.50				
<b>Subtotal, Post-1914 Appropriative Water Rights</b>	<b>45.00</b>			<b>0.00</b>	<b>70.20</b>				

Willow Creek Adjudication - Shasta County Decree No. 87524

**Willow Creek Decree  
Shasta County, Decree No. 87524**

**Seasons of Use**

Continuous, regardless of season	365.25	days
April 1 through November 1	215.00	days
		days

Name of Claimant	Acreage to be supplied	Diversion No. as per DWR Map	Use	Allotments			Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)	Second Priority Class (cfs)		
Summary	<b>Total cfs</b>	<b>Total AF</b>						
Subtotal, Schedule 3 Willow Creek Claimants	0.80	356.45						
Subtotal, Schedule 4 Minnow and Dunn Creeks Claimants	0.28	125.37						
Subtotal, Post-1914 Appropriative Water Rights		70.20						
<b>Total, Willow Creek Decree Claimants</b>	<b>1.08</b>	<b>552.02</b>						

**Deer Creek Decree  
Tehama County Suit No. 2449  
Stanford Vina Ranch, plaintiff**

	<b>Cubic Feet Per Second</b>	<b>Acre-feet</b>	<b>Source</b>
Total Diversions in Decree	150	108,669	Deer Creek, thence Sacramento River

These rights were subsequently deeded over to Deer Creek Irrigation District in the late 1920s.

## **Appendix D**

### **Section D.4 Consumptive Statements of Diversion and Use**



## Trinity River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Right Type Claimed	Year of First Use	Season	Purpose of Use	County	Source
S012967	Dept of Fish and Game	109,500.00	Riparian	1963	All	Fish Culture	Trinity	TRINITY RIVER
	<b>Dept of Fish and Game Total</b>	109,500.00						
S013092	EDGAR MURRISON	724.46	Pre-14	1900	All	Irrigation, Stockwater	Trinity	BIG CREEK
S013093	EDGAR MURRISON	1,224.00	Pre-14	1900	All	Irrigation, Stockwater	Trinity	BIG CREEK
S013094	EDGAR MURRISON	2,408.00	Pre-14	1900	All	Irrigation, Stockwater, Hydropower	Trinity	BIG CREEK
	<b>EDGAR MURRISON Total</b>	4,356.46						
S002528	KEITH L GROVES	2,400.00	Pre-14	1866	All	Irrigation, Stockwater, Domestic	Trinity	HALLS GULCH
	<b>KEITH L GROVES Total</b>	2,400.00						
S010724	ROGER P ECKART	2,062.00	Riparian	1875	All	Irrigation, Stockwater, Domestic, Hydropower	Trinity	DYER CREEK
S010725	ROGER P ECKART	12,000.00	Riparian/Pre-14	1875	All	Irrigation, Stockwater, Domestic, Hydropower	Trinity	BELL CREEK
S010726	ROGER P ECKART	265.00	Riparian	1875	All	Irrigation, Stockwater, Domestic, Hydropower	Trinity	UNST AKA GOODWIN CREEK
S012609	ROGER P ECKART	270.00	Riparian	1875	All	Irrigation, Stockwater, Domestic, Hydropower	Trinity	ROBARDS CREEK
S013923	ROGER P ECKART	1,700.00	Pre-14	1875	All	Irrigation, Stockwater, Domestic, Hydropower	Trinity	DIXIE CREEK
	<b>ROGER P ECKART Total</b>	16,297.00						
S000327	WEAVERVILLE COMMUNITY SERVICES DISTRICT	777.29	Pre-14	1891	All	Irrigation, Stockwater, Domestic	Trinity	WEST WEAVER CREEK
S000361	WEAVERVILLE COMMUNITY SERVICES DISTRICT	753.72	Pre-14	1852	All	Domestic	Trinity	EAST WEAVER CREEK
	<b>WEAVERVILLE COMMUNITY SERVICES DISTRICT Total</b>	1,531.01						
	<b>Grand Total</b>	134,084.47						

Pit River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Claimed Amt	Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S001453	ALBERT E PUHLMAN JR	466.00	Pre-14	1884	All	Irrigation, Stockwatering, Domestic	Shasta	NORTH FORK MONTGOMERY CREEK
S001454	ALBERT E PUHLMAN JR	466.00	Pre-14	1884	All	Irrigation, Stockwatering, Domestic	Shasta	SOUTH FORK MONTGOMERY CREEK
S001455	ALBERT E PUHLMAN JR	466.00	Pre-14	1884	All	Irrigation, Stockwatering, Domestic	Shasta	SAWDUST CREEK
	<b>ALBERT E PUHLMAN JR Total</b>	1,398.00						
S002265	CLIFFORD K OILAR	490.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering	Modoc	OILAR SPRINGS
S002266	CLIFFORD K OILAR	493.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering, Domestic	Modoc	UNST
S010786	CLIFFORD K OILAR	470.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering, Domestic	Modoc	UNSP
S010814	CLIFFORD K OILAR	490.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering	Modoc	OILAR SPRINGS
S010815	CLIFFORD K OILAR	100.00	Riparian/Pre-14	1957	May-Dec	Irrigation, Stockwatering	Modoc	UNST
S010816	CLIFFORD K OILAR	200.00	Riparian/Pre-14	1940	May-Oct	Irrigation, Stockwatering, Domestic	Modoc	WHIPPLE SPRINGS
	<b>CLIFFORD K OILAR Total</b>	2,243.00						
S008735	CRAIG MCARTHUR	19,528.00	Riparian/Pre-14	1875	All	Irrigation, Stockwatering, Domestic	Shasta	TULE RIVER
S008912	CRAIG MCARTHUR	1,130.00	Riparian/Pre-14	1875	All	Irrigation, Stockwatering, Domestic	Shasta	PEACOCK CREEK
S015104	CRAIG MCARTHUR	7,242.00	Pre-14	1911	All	Irrigation, Stockwatering, Domestic	Shasta	LEE DRAIN CANAL
	<b>CRAIG MCARTHUR Total</b>	27,900.00						
S014558	Dennis Hoffman	1,135.49	Riparian	1995	Mar-Oct	Irrigation	Lassen	PIT RIVER
S014731	Dennis Hoffman	1,150.83	Riparian	2003	Apr-Sept	Irrigation	Shasta	PIT RIVER
	<b>Dennis Hoffman Total</b>	2,286.32						
S004691	Dept of Fish and Game	1,464.00	Pre-14	1904	All	Fish Culture, Domestic	Modoc	PINE CREEK
S012964	Dept of Fish and Game	36,135.00	Riparian	1965	All	Recreation, Fishing	Shasta	ROCK CREEK SPRINGS
	<b>Dept of Fish and Game Total</b>	37,599.00						
S009112	DIXIE VALLEY RANCH	4,000.00	Riparian	1873	All	Irrigation, Stockwatering	Lassen	DAVIS CREEK
S009113	DIXIE VALLEY RANCH	5,000.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering	Lassen	INDIAN CREEK
S009114	DIXIE VALLEY RANCH	4,000.00	Riparian	1977	All	Irrigation, Stockwatering	Lassen	UNST
S009115	DIXIE VALLEY RANCH	2,000.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering	Lassen	LITTLE DAVIS CREEK
S009116	DIXIE VALLEY RANCH	2,000.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering	Lassen	RUSSEL DAIRY SPRING
S009133	DIXIE VALLEY RANCH	5,000.00	Riparian/Pre-14	1873	All	Irrigation, Stockwatering	Lassen	BIG JACK LAKE
S009138	DIXIE VALLEY RANCH	2,173.39	Riparian/Pre-14	1873	All	Irrigation, Stockwatering	Lassen	BIG SPRING
	<b>DIXIE VALLEY RANCH Total</b>	24,173.39						
S008053	ED DEVAUL	1,620.00	Riparian	1949	All	Irrigation, Stockwatering, Domestic	Shasta	UNST
	<b>ED DEVAUL Total</b>	1,620.00						
S013170	EDWARD A BOSWORTH JR	0.00	Pre-14	1885	All	Irrigation, Stockwatering	Shasta	CAYTON CREEK
S013171	EDWARD A BOSWORTH JR	2,421.17	Pre-14	1885	All	Irrigation, Stockwatering, Domestic	Shasta	NORTH FORK CLARK CREEK
S013172	EDWARD A BOSWORTH JR	4,824.34	Pre-14	1885	All	Irrigation, Stockwatering, Domestic	Shasta	CLARK CREEK
	<b>EDWARD A BOSWORTH JR Total</b>	7,245.51						
S000798	ELLEN E TAYLOR	1,451.90	Pre-14	1913	Apr-Nov	Irrigation, Stockwatering	Shasta	LOST CREEK
	<b>ELLEN E TAYLOR Total</b>	1,451.90						

## Pit River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Claimed Amt	Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S014380	Glenn A Nader	2,279.00	Riparian	1876	Apr-Sept	Irrigation, Stockwatering	Modoc	WITCHER CREEK
S014381	Glenn A Nader	1,505.00	Pre-14	1873	Jun-Oct	Irrigation, Stockwatering	Modoc	WITCHER CREEK
S014382	Glenn A Nader	2,334.00	Riparian/Pre-14	1876	Mar-Oct	Irrigation, Stockwatering	Modoc	WITCHER CREEK
S014383	Glenn A Nader	420.00	Riparian	1876	Apr-Oct	Irrigation, Stockwatering	Modoc	WITCHER CREEK
S014384	Glenn A Nader	1,021.00	Pre-14	1876	Nov-Mar	Irrigation, Stockwatering	Modoc	WITCHER CREEK
	<b>Glenn A Nader Total</b>	7,559.00						
S013765	JOSEPH SCOTT VERMILYEA	8,789.00	Riparian	1983	All	Irrigation, Domestic	Shasta	BAKER CREEK
S013766	JOSEPH SCOTT VERMILYEA	2,076.00	Pre-14	1914	Mar-Nov	Irrigation, Stockwatering, Domestic	Shasta	STUMP CREEK
S013767	JOSEPH SCOTT VERMILYEA	720.00	Pre-14	1914	All	Irrigation, Stockwatering, Domestic	Shasta	LITTLE SHOTGUN CREEK
	<b>JOSEPH SCOTT VERMILYEA Total</b>	11,585.00						
S001050	KNOCH INC	19,560.00	Riparian/Pre-14	1909	All	Irrigation, Stockwatering	Shasta	FALL RIVER
	<b>KNOCH INC Total</b>	19,560.00						
S008540	LOWELL L NOVY	0.00	Riparian/Pre-14	1890	All	Irrigation, Stockwatering	Lassen	TULE LAKE RESERVOIR AKA MOON LAKE
S012914	LOWELL L NOVY	2,920.00	Riparian/Pre-14	1900	All	Irrigation, Stockwatering	Lassen	CEDAR CREEK
	<b>LOWELL L NOVY Total</b>	2,920.00						
S008627	MILANO LAND AND CATTLE CO LLC	2,500.00	Pre-14	1902	May-Oct	Irrigation, Stockwatering	Modoc	DUNCAN RESERVOIR
	<b>MILANO LAND AND CATTLE CO LLC Total</b>	2,500.00						
S014308	Outfitter Properties LLC-Oasis Springs	850.00	Riparian	1890	Apr-Sept	Irrigation, Stockwatering	Tehama	UNSP
S014309	Outfitter Properties LLC-Oasis Springs	195.00	Riparian	1900	Apr-Oct	Irrigation	Shasta	SPRING CREEK
S014310	Outfitter Properties LLC-Oasis Springs	500.00	Riparian	1900	Apr-Oct	Irrigation	Shasta	SPRING CREEK
S014311	Outfitter Properties LLC-Oasis Springs	1,700.00	Riparian	1875	Apr-Oct	Irrigation	Shasta	UNSP (AKA VINEYARD SPRING)
	<b>Outfitter Properties LLC-Oasis Springs Total</b>	3,245.00						
S002509	R HAMBY	1,600.00	Pre-14	1898	All	Irrigation, Stockwatering, Domestic	Shasta	EAST FORK NELSON CREEK
	<b>R HAMBY Total</b>	1,600.00						
S016096	Raymond J Paige	1,000.00	Riparian/Pre-14	1986	Mar-Oct	Irrigation	Shasta	LITTLE TULE RIVER TO FALL RIVER
S016097	Raymond J Paige	600.00	Riparian/Pre-14	1896	Mar-Oct	Irrigation	Shasta	LITTLE TULE RIVER TO FALL RIVER
	<b>Raymond J Paige Total</b>	1,600.00						
S014780	RICHARD L JENNINGS	5,250.00	Riparian/Pre-14	1885	Apr-Oct	Irrigation, Stockwatering	Modoc	PIT RIVER
S014781	RICHARD L JENNINGS	5,250.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwatering	Modoc	PIT RIVER
S014782	RICHARD L JENNINGS	2,800.00	Riparian/Pre-14	1870	Apr-Oct	Irrigation, Stockwatering	Modoc	RALSTON GULCH
S014783	RICHARD L JENNINGS	4,500.00	Riparian/Pre-14	1912	Apr-Oct	Irrigation, Stockwatering	Modoc	CANYON CREEK
S014784	RICHARD L JENNINGS	4,500.00	Riparian/Pre-14	1900	Apr-Sept	Irrigation, Stockwatering	Modoc	PIT RIVER
	<b>RICHARD L JENNINGS Total</b>	22,300.00						
S014913	Western Agricultural Services (River Butte Ranch)	150.00	Riparian	1965	Apr-Sept	Irrigation	Shasta	FALL RIVER
S014914	Western Agricultural Services (River Butte Ranch)	400.00	Riparian	1965	Apr-Sept	Irrigation	Shasta	FALL RIVER
	<b>Western Agricultural Services (River Butte Ranch) Total</b>	550.00						
S014193	Western Agricultural Services (Fall River Ranch)	375.00	Riparian	1900	Apr-Oct	Irrigation, Stockwatering	Shasta	FALL RIVER
S014194	Western Agricultural Services (Fall River Ranch)	60.00	Riparian	1900	Apr-Oct	Irrigation, Stockwatering	Shasta	FALL RIVER
	<b>Western Agricultural Services (Fall River Ranch) Total</b>	435.00						
S014937	Western Agricultural Services (River Ranch L P)	485.00	Riparian	1930	Apr-Oct	Irrigation	Shasta	FALL RIVER

## Pit River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Claimed Amt	Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S014938	Western Agricultural Services (River Ranch L P)	15.00	Riparian	1872	All	Stockwatering, Domestic	Shasta	FALL RIVER
S014939	Western Agricultural Services (River Ranch L P)	550.00	Riparian	1920	Apr-Oct	Irrigation	Shasta	FALL RIVER
S014940	Western Agricultural Services (River Ranch L P)	75.00	Riparian	1950	Apr-Sept	Irrigation	Shasta	FALL RIVER
S014941	Western Agricultural Services (River Ranch L P)	15.00	Riparian	1900	All	Stockwatering, Domestic	Shasta	FALL RIVER
S014942	Western Agricultural Services (River Ranch L P)	15.00	Riparian	1870	All	Stockwatering	Shasta	FALL RIVER
S014943	Western Agricultural Services (River Ranch L P)	425.00	Riparian	1920	Apr-Oct	Irrigation, Stockwatering	Shasta	FALL RIVER
S014944	Western Agricultural Services (River Ranch L P)	70.00	Riparian	1950	Apr-Oct	Irrigation	Shasta	FALL RIVER
S014945	Western Agricultural Services (River Ranch L P)	1,200.00	Riparian	1870	Apr-Oct	Irrigation, Stockwatering	Shasta	FALL RIVER
	<b>Western Agricultural Services (River Ranch L P) Total</b>	2,850.00						
S012933	ROBERT G BAIRD	1,149.00	Pre-14	1872	Apr-Nov	Irrigation, Stockwatering	Modoc	TOMS CREEK
	<b>ROBERT G BAIRD Total</b>	1,149.00						
S012446	ROBERT H MACKEY & SONS INC	570.00	Riparian	1871	Apr-Oct	Irrigation, Stockwatering	Modoc	CANYON CREEK
S012447	ROBERT H MACKEY & SONS INC	570.00	Riparian	1890	Apr-Oct	Irrigation, Stockwatering	Modoc	CANYON CREEK
S014303	ROBERT H MACKEY & SONS INC	720.00	Riparian	1880	All	Irrigation, Stockwatering, Domestic	Modoc	UNSP
	<b>ROBERT H MACKEY &amp; SONS INC Total</b>	1,860.00						
S004672	RONALD L SCHLUTER	1,500.00	Pre-14	1906	May-Oct	Irrigation, Stockwatering	Modoc	BIG DOBIE SOUTH
S004673	RONALD L SCHLUTER	900.00	Pre-14	1906	Apr-Sept	Irrigation	Modoc	BIG DOBIE NORTH
	<b>RONALD L SCHLUTER Total</b>	2,400.00						
S000106	S X RANCH INC	1,000.00	Riparian	1947	Apr-Sept	Irrigation	Lassen	PIT RIVER
S000107	S X RANCH INC	340.00	Riparian	1947	Apr-Oct	Irrigation, Stockwatering	Lassen	PIT RIVER
	<b>S X RANCH INC Total</b>	1,340.00						
S015534	SX Lowry Ranch	2,000.00	Pre-14	1897	Nov-Apr	Irrigation, Stockwatering	Modoc	SALISBURY GULCH AKA UNST
	<b>SX Lowry Ranch Total</b>	2,000.00						
S002877	WILLIAM K HAGGE	525.00	Riparian	1964	May-Sept	Irrigation, Stockwatering	Modoc	PIT RIVER
S002879	WILLIAM K HAGGE	150.00	Riparian	1947	May-Sept	Irrigation, Stockwatering	Modoc	PIT RIVER
S002880	WILLIAM K HAGGE	1,140.00	Riparian/Pre-14	1880	May-Sept	Irrigation, Stockwatering	Modoc	PIT RIVER
S014183	WILLIAM K HAGGE	380.00	Riparian	1945	May-Sept	Irrigation, Stockwatering	Modoc	PIT RIVER
	<b>WILLIAM K HAGGE Total</b>	2,195.00						
	<b>Grand Total</b>	193,565.12						

## Feather River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Claim Amt	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S013390	A L HANSEN	2,800.00	Pre-14	1860	Apr-Nov	Irrigation	Plumas	GREENHORN CREEK
	<b>A L HANSEN Total</b>	2,800.00						
S000267	ALBANO P BRESCIANI	700.00	Riparian/Pre-14	1857	All	Stockwater	Plumas	CLEAR STREAM
	<b>ALBANO P BRESCIANI Total</b>	700.00						
S001884	Phillip A Bresciani	300.00	Pre-14	1904	May-Sep	Irrigation, Stockwater	Plumas	SPANISH CREEK
	<b>Phillip A Bresciani Total</b>	300.00						
S001885	ALBANO P BRESCIANI	360.00	Riparian/Pre-14	1878	May-Sep	Stockwater	Plumas	MILL CREEK
S001886	ALBANO P BRESCIANI	300.00	Riparian/Pre-14	1878	Apr-Sep	Stockwater	Plumas	MILL CREEK
S002099	ALBANO P BRESCIANI	350.00	Riparian/Pre-14	1872	Apr-Oct	Stockwater	Plumas	GREENHORN CREEK
S002100	ALBANO P BRESCIANI	540.00	Riparian/Pre-14	1877	May-Oct	Stockwater	Plumas	SPANISH CREEK
S002101	ALBANO P BRESCIANI	150.00	Riparian/Pre-14	1873	May-Sep	Stockwater	Plumas	HAUN CREEK
S002102	ALBANO P BRESCIANI	250.00	Riparian/Pre-14	1877	Apr-Aug	Stockwater	Plumas	MILL CREEK
S002103	ALBANO P BRESCIANI	70.00	Riparian/Pre-14	1877	Apr-Oct	Stockwater	Plumas	MILL CREEK
S002104	ALBANO P BRESCIANI	182.00	Riparian/Pre-14	1877	Apr-Oct	Stockwater	Plumas	MILL CREEK
	<b>ALBANO P BRESCIANI Total</b>	2,202.00						
S010594	BERRY CREEK WATER USERS INCORPORATED	2,477.66	Pre-14	1852	All	Irrigation, Stockwater	Butte	BERRY CREEK
	<b>BERRY CREEK WATER USERS INCORPORATED Total</b>	2,477.66						
S002956	BROOKS WALKER ET AL	60.00	Riparian/Pre-14	1900	May-Jun	Irrigation, Stockwater	Lassen	UNNAMED STREAM
S002957	BROOKS WALKER ET AL	90.00	Riparian/Pre-14	1900	May-Jul	Irrigation, Stockwater	Lassen	HOMER CREEK
S002958	BROOKS WALKER ET AL	30.00	Riparian/Pre-14	1900	May-Jun	Irrigation, Stockwater	Lassen	UNNAMED STREAM
S002960	BROOKS WALKER ET AL	30.00	Riparian/Pre-14	1900	May-Jun	Irrigation, Stockwater	Lassen	UNNAMED STREAM
S002962	BROOKS WALKER ET AL	9,306.00	Riparian/Pre-14	1900	May-Oct	Irrigation, Stockwater	Lassen	GOODRICH CREEK
S002963	BROOKS WALKER ET AL	7,866.00	Riparian/Pre-14	1900	May-Oct	Irrigation, Stockwater	Lassen	GOODRICH CREEK
	<b>BROOKS WALKER ET AL Total</b>	17,382.00						
S002315	DEAN PANFILI	225.00	Riparian/Pre-14	1957	Apr-Sep	Irrigation, Stockwater, Domestic	Plumas	LONG VALLEY CREEK
S002316	DEAN PANFILI	175.00	Riparian/Pre-14	1870	May-Sep	Irrigation	Plumas	LONG VALLEY CREEK
S002317	DEAN PANFILI	0.00	Riparian/Pre-14	1856	Apr-Sep	Irrigation, Stockwater	Plumas	LONG VALLEY CREEK

## Feather River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Claim Amt	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S002318	DEAN PANFILI	613.78	Riparian/Pre-14	1870	Mar-Sep	Irrigation, Stockwater, Domestic	Plumas	LITTLE LONG VALLEY CREEK
	<b>DEAN PANFILI Total</b>	1,013.78						
S015506	GRAEAGLE LAND & WATER COMPANY	1,279.11	Pre-14	1820	Mar-Oct	Irrigation, Stockwater	Plumas	MOHAWK CREEK
S015913	GRAEAGLE LAND & WATER COMPANY	1,400.64	Pre-14	1820	All	Irrigation, Stockwater, Domestic	Plumas	MOHAWK CREEK
S015914	GRAEAGLE LAND & WATER COMPANY	607.64	Pre-14	1820	Mar-Oct	Irrigation, Stockwater	Plumas	MOHAWK CREEK
	<b>GRAEAGLE LAND &amp; WATER COMPANY Total</b>	3,287.39						
S008734	GRAEAGLE WATER COMPANY A CALIF CORP	990.71	Riparian	1941	All	Irrigation, Stockwater, Domestic	Plumas	GRAY EAGLE CREEK
	<b>GRAEAGLE WATER COMPANY A CALIF CORP Total</b>	990.71						
S013351	MOHAWK VALLEY RANCH, INC	485.80	Pre-14	1880	Mar-Oct	Irrigation, Domestic	Plumas	UNST
S013352	MOHAWK VALLEY RANCH, INC	1,457.72	Riparian	1950	Mar-Oct	Golf Course Irrigation	Plumas	SULPHUR CREEK
S013353	MOHAWK VALLEY RANCH, INC	2,171.85	Riparian	1950	All	Golf Course Irrigation	Plumas	BOULDER CREEK
S013354	MOHAWK VALLEY RANCH, INC	485.96	Pre-14	1880	Mar-Oct	Irrigation	Plumas	BOULDER CREEK
S013355	MOHAWK VALLEY RANCH, INC	485.96	Pre-14	1880	Mar-Oct	Irrigation	Sierra	BOULDER CREEK
S013356	MOHAWK VALLEY RANCH, INC	723.95	Pre-14	1880	All	Golf Course Irrigation	Plumas	UNST
S013357	MOHAWK VALLEY RANCH, INC	1,447.90	Pre-14	1880	All	Golf Course Irrigation	Plumas	UNST
	<b>MOHAWK VALLEY RANCH, INC Total</b>	7,259.15						
S009189	PLUMAS PINES GOLF RESORT	10,700.00	Pre-14	1877	May-Oct	Irrigation	Plumas	JAMISON CREEK
	<b>PLUMAS PINES GOLF RESORT Total</b>	10,700.00						
S002953	RED RIVER FORESTS PARTNERSHIP	894.00	Riparian/Pre-14	1900	May-Oct	Irrigation, Stockwater	Lassen	MOUNTAIN MEADOWS CREEK
S002954	RED RIVER FORESTS PARTNERSHIP	5,660.00	Riparian/Pre-14	1900	May-Oct	Irrigation, Stockwater	Lassen	COTTONWOOD CREEK
	<b>RED RIVER FORESTS PARTNERSHIP Total</b>	6,554.00						

## Feather River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Claim Amt	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S000262	REID LAND & CATTLE COMPANY	4,346.00	Pre-14	1857	May-Nov	Irrigation, Stockwater	Plumas	GREENHORN CREEK
S000263	REID LAND & CATTLE COMPANY	1,336.00	Pre-14	1857	All	Irrigation, Stockwater, Domestic	Plumas	CHANDLER CREEK
S000264	REID LAND & CATTLE COMPANY	1,217.00	Pre-14	1857	Jun-Nov	Irrigation, Stockwater	Plumas	TAYLOR CREEK
	<b>REID LAND &amp; CATTLE COMPANY Total</b>	6,899.00						
S000544	RICHARD D FRIPP II	0.56	Pre-14	1876	All	Irrigation, Stockwater, Domestic	Plumas	COGSWELL RAVINE
S000545	RICHARD D FRIPP II	1,086.69	Pre-14	1856	All	Irrigation, Stockwater, Domestic	Plumas	LONG VALLEY CREEK
	<b>RICHARD D FRIPP II Total</b>	1,087.25						
S000266	RICHARD D LEONHARDT	970.00	Pre-14	1857	All	Irrigation, Stockwater	Plumas	MILL CREEK
S000268	RICHARD D LEONHARDT	1,200.00	Pre-14	1857	Apr-Oct	Irrigation, Stockwater	Plumas	SPANISH CREEK
S000269	RICHARD D LEONHARDT	240.00	Pre-14	1857	May-Oct	Irrigation, Stockwater	Plumas	FOUR LETTER CREEK
	<b>RICHARD D LEONHARDT Total</b>	2,410.00						
S000378	RICHVALE IRRIGATION DISTRICT	7,560.00	Pre-14	1914	Apr-Sep	Irrigation	Butte	CHEROKEE CANAL
S000379	RICHVALE IRRIGATION DISTRICT	6,000.00	Riparian	1947	Mar-Jan	Irrigation	Butte	LITTLE DRY CREEK
	<b>RICHVALE IRRIGATION DISTRICT Total</b>	13,560.00						
S000925	WESTERN CANAL WATER DISTRICT	348,469.00	Pre-14	1902	Apr-Jan	Irrigation	Butte	FEATHER RIVER
	<b>WESTERN CANAL WATER DISTRICT Total</b>	348,469.00						
S006764	WESTWOOD COMMUNITY SERVICES DISTRICT	0.00	Pre-14	1913	All	Domestic	Lassen	DUCK LAKE
S010000	WESTWOOD COMMUNITY SERVICES DISTRICT	1,053.00	Prescriptive	1924	All	Domestic	Lassen	WALKER SPRINGS
	<b>WESTWOOD COMMUNITY SERVICES DISTRICT Total</b>	1,053.00						
S015240	WILLIAM S KEELER TRUST	1,750.00	Riparian/Pre-14	1900	May-Sep	Irrigation, Stockwater	Lassen	GOODRICH CREEK
	<b>WILLIAM S KEELER TRUST Total</b>	1,750.00						
S013159	WILLIARD H WATTENBURG	0.00					Plumas	UNNAMED SPRING
	<b>WILLIARD H WATTENBURG Total</b>	0.00						
	<b>Grand Total</b>	430,894.94						

## American River Watershed - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S017323	City of Folsom	50,712.40	Pre-14	1851	All	Municipal, Industrial	Sacramento	SOUTH FORK OF THE AMERICAN RIVER
S017326	City of Folsom	5,000.00	Pre-14	1851	All	Municipal, Industrial	Sacramento	SOUTH FORK OF THE AMERICAN RIVER
S017490	City of Folsom	22,000.00	Pre-14	1851	All	Municipal, Industrial	Sacramento	SOUTH FORK OF THE AMERICAN RIVER
S017491	City of Folsom	22,000.00	Pre-14	1851	All	Municipal, Industrial	Sacramento	SOUTH FORK OF THE AMERICAN RIVER
S000388	COLOMA-LOTUS RANCH DITCH USERS ASSOC	10,000.00	Pre-14	1853	Apr-Nov	Irrigation, Stockwater, Domestic	El Dorado	SOUTH FORK AMERICAN RIVER
S010717	EL DORADO IRRIGATION DISTRICT	60.75	Pre-14	1875	All	Irrigation, Municipal	El Dorado	SOUTH FORK AMERICAN RIVER
S000972	EL DORADO IRRIGATION DISTRICT	19.80	Pre-14	1856	Dec	Irrigation, Municipal, Industrial, Hydropower	El Dorado	CARPENTER CREEK
S000973	EL DORADO IRRIGATION DISTRICT	95.60	Pre-14	1873	Feb-May	Irrigation, Municipal, Industrial, Hydropower	El Dorado	UNST
S000974	EL DORADO IRRIGATION DISTRICT	678.00	Pre-14	1873	Apr-Oct	Irrigation, Municipal, Industrial, Hydropower	El Dorado	MILL CREEK
S000975	EL DORADO IRRIGATION DISTRICT	232.00	Pre-14	1873	Jan-Jun	Irrigation, Municipal, Industrial, Hydropower	El Dorado	BRYANT CREEK
S000976	EL DORADO IRRIGATION DISTRICT	132.90	Pre-14	1873	Jan-Jun	Irrigation, Municipal, Industrial, Hydropower	El Dorado	ESMERELDA CREEK
S004708	EL DORADO IRRIGATION DISTRICT	5,400.00	Pre-14	1876	Jul-Dec	Irrigation, Municipal, Industrial, Hydropower	Amador	SILVER FORK OF SOUTH FORK AMERICAN RIVER
S009034	EL DORADO IRRIGATION DISTRICT	40,373.00	Pre-14	1873	All	Irrigation, Municipal, Industrial, Hydropower	El Dorado	SOUTH FORK AMERICAN RIVER
S009035	EL DORADO IRRIGATION DISTRICT	360.00	Pre-14	1875	May-Aug	Irrigation, Municipal, Industrial, Hydropower	El Dorado	PYRAMID CREEK
S014323	EL DORADO IRRIGATION DISTRICT	3,968.00	Pre-14	1889	Apr-Oct	Irrigation, Municipal, Industrial, Hydropower	El Dorado	SLAB CREEK
S014968	EL DORADO IRRIGATION DISTRICT	3,373.00	Pre-14	1855	All	Irrigation, Municipal, Industrial, Hydropower	El Dorado	WEBER CREEK
S015937	EL DORADO IRRIGATION DISTRICT	1.55	Pre-14	1872	April	Irrigation, Municipal, Industrial, Hydropower	El Dorado	UNNAMED STREAM
S015938	EL DORADO IRRIGATION DISTRICT	150.60	Pre-14	1872	Dec-Apr	Irrigation, Municipal, Industrial, Hydropower	El Dorado	UNNAMED STREAM
S015939	EL DORADO IRRIGATION DISTRICT	41.64	Pre-14	1872	All	Irrigation, Municipal, Industrial, Hydropower	El Dorado	Stream at Spillway 8
S015940	EL DORADO IRRIGATION DISTRICT	15.20	Pre-14	1872	Feb-May	Irrigation, Municipal, Industrial, Hydropower	El Dorado	BULL CREEK
S015941	EL DORADO IRRIGATION DISTRICT	8,000.00	Pre-14	1872	Jul-Feb	Irrigation, Municipal, Industrial, Hydropower	Alpine	CAPLES LAKE
S014967	EL DORADO IRRIGATION DISTRICT	1,216.00	Pre-14	1852	Apr-Oct	Municipal, Industrial	El Dorado	HANGTOWN CREEK
S014597	GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	2,404.00	Pre-14	1850	All	Irrigation, Domestic	El Dorado	MUTTON CANYON



## American River Watershed - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S014598	GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	2,165.00	Pre-14	1850	All	Irrigation, Domestic	El Dorado	BACON CANYON
S014599	GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	850.00	Pre-14	1850	All	Irrigation, Domestic	El Dorado	UNST
S014600	GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	1,295.00	Pre-14	1850	All	Irrigation, Domestic	El Dorado	DEEP CANYON
S014601	GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	9,552.00	Pre-14	1850	Dec-Oct	Irrigation, Domestic	El Dorado	PILOT CREEK
S010794	NEVADA IRRIGATION DISTRICT	21,085.00	Pre-14	1880	All	Irrigation, Stockwater, Domestic	Placer	COON CREEK, ORR CREEK
S013791	NEVADA IRRIGATION DISTRICT	24,374.00	Pre-14	1853	All	Irrigation, Stockwater, Domestic, Mining	Placer	AUBURN RAVINE
S013790	NEVADA IRRIGATION DISTRICT	7,800.00	Pre-14	1853	Apr-Oct	Irrigation, Stockwater, Mining	Placer	AUBURN RAVINE
S000968	PACIFIC GAS AND ELECTRIC COMPANY	1,220.00	Prescriptive	1917	All	Irrigation, Domestic	Placer	ROCK CREEK
S000969	PACIFIC GAS AND ELECTRIC COMPANY	2,942.00	Prescriptive	1917	All	Irrigation, Domestic	Placer	DRY CREEK
S000959	PLACER COUNTY WATER AGENCY	5,422.00	Pre-14	1864	All	Irrigation, Domestic	Placer	CANYON CREEK
S000967	PLACER COUNTY WATER AGENCY	0.00	Pre-14	1864	All	Irrigation, Domestic	Placer	UNST
S010397	PLACER COUNTY WATER AGENCY	0.00	Pre-14	1896	All	Irrigation, Domestic	Placer	SOUTH FORK DRY CREEK
S010398	PLACER COUNTY WATER AGENCY	0.00	Pre-14	1909	All	Irrigation, Domestic	Placer	NORTH FORK DRY CREEK
S000656	San Juan Water District	33,000.00	Pre-14	1852	All	Domestic	Placer	FOLSOM LAKE
		285,939.44						

## Yuba River Watershed - Consumptive Statements of Diversion and Use

Application ID	Holder Name	Highest Claimed Amt	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S000645	BIG LAND DEVELOPMENT CORP	2,730.00	Riparian/Pre-14	1886	Apr-Oct	Irrigation, Stockwater	Butte	SOUTH HONCUT CREEK
	<b>BIG LAND DEVELOPMENT CORP Total</b>	2,730.00						
S010014	CITY OF NEVADA CITY	1,859.80	Pre-14	1910	All	Domestic	Nevada	LITTLE DEER CREEK
	<b>CITY OF NEVADA CITY Total</b>	1,859.80						
S016332	Hallwood Irrigation Company	69,798.00	Pre-14	1909	All	Irrigation	Yuba	Yuba River
	<b>Hallwood Irrigation Company Total</b>	69,798.00						
S001241	LAKE WILDWOOD ASSOCIATION	1,811.16	Pre-14	1861	All	Irrigation	Nevada	NIGGER CREEK
	<b>LAKE WILDWOOD ASSOCIATION Total</b>	1,811.16						
S004716	NEVADA IRRIGATION DISTRICT	94,346.00	Pre-14	1873	All	Hydropower, Irrigation, Domestic, Recreation	Nevada	CANYON CREEK
S004717	NEVADA IRRIGATION DISTRICT	27,007.00	Pre-14	1859	All	Hydropower, Irrigation, Domestic, Recreation	Nevada	CANYON CREEK
S010591	NEVADA IRRIGATION DISTRICT	2.20	Riparian	1967	May-Oct	Recreation	Nevada	DAMFINE SPRING
S010592	NEVADA IRRIGATION DISTRICT	3.20	Riparian	1967	May-Oct	Recreation	Sierra	UNST
S012949	NEVADA IRRIGATION DISTRICT	551.00	Pre-14	1851	Apr-Oct	Irrigation	Nevada	DEER CREEK
S012950	NEVADA IRRIGATION DISTRICT	13,500.00	Pre-14	1851	All	Irrigation, Stockwater, Domestic	Nevada	DEER CREEK
S012951	NEVADA IRRIGATION DISTRICT	7,900.00	Pre-14	1851	All	Irrigation, Domestic, Fire Protection, Recreation	Nevada	DEER CREEK
S012952	NEVADA IRRIGATION DISTRICT	34,300.00	Pre-14	1851	All	Irrigation, Domestic, Fire Protection, Recreation	Nevada	DEER CREEK
S012953	NEVADA IRRIGATION DISTRICT	30,645.00	Pre-14	1857	All	Irrigation, Domestic, Fire Protection, Recreation	Nevada	SOUTH FORK DEER CREEK
S013330	NEVADA IRRIGATION DISTRICT	83,639.00	Pre-14	1854	All	Irrigation, Domestic, Fire Protection, Recreation, Mining, Hydropower	Sierra	MIDDLE YUBA RIVER
S013800	NEVADA IRRIGATION DISTRICT	117,023.50	Pre-14	1872	All	Irrigation, Domestic, Fire Protection, Recreation, Mining, Hydropower	Nevada	CANYON CREEK
S013801	NEVADA IRRIGATION DISTRICT	47,996.00	Pre-14	1872	All	Irrigation, Domestic, Fire Protection, Recreation, Mining, Hydropower	Nevada	CANYON CREEK
S013927	NEVADA IRRIGATION DISTRICT	61,487.00	Pre-14	1874	All	Irrigation, Domestic, Fire Protection, Recreation, Mining, Hydropower	Nevada	SOUTH YUBA RIVER
S013928	NEVADA IRRIGATION DISTRICT	483,867.00	Pre-14	1874	All	Irrigation, Domestic, Fire Protection, Recreation, Mining, Hydropower	Nevada	SOUTH YUBA RIVER
S014353	NEVADA IRRIGATION DISTRICT	47,789.00	Riparian/Pre-14	1851	All	Irrigation, Domestic, Fire Protection, Recreation, Mining, Hydropower	Nevada	DEER CREEK
S016092	NEVADA IRRIGATION DISTRICT	1,279.00	Pre-14	1859	All	Irrigation, Domestic, Fire Protection, Recreation, Mining, Hydropower	Nevada	JACKSON CREEK
	<b>NEVADA IRRIGATION DISTRICT Total</b>	1,051,334.90						
	<b>Grand Total</b>	1,127,533.86						

## Bear River Watershed - Consumptive Statements of Diversio and Use

<b>Application ID</b>	<b>Holder Name</b>	<b>Highest Amount Claimed</b>	<b>Water Rights Claim Type</b>	<b>Year of First Use</b>	<b>Season</b>	<b>Purpose of Use</b>	<b>County</b>	<b>Source</b>
S013809	NEVADA IRRIGATION DISTRICT	69,433.00	Pre-14	1853	All	Irrigation, Domestic	Nevada	BEAR RIVER
S013926	NEVADA IRRIGATION DISTRICT	22,675.00	Pre-14	1859	All	Irrigation, Mining	Nevada	WOLF CREEK
		92,108.00						

## East Creeks Water Rights - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S001115	1990 Johannessen Family Trust	453.72	Pre-14	1880	Apr-Sep	Irrigation, Stockwater	Shasta	DEER CREEK
S013144	1990 JOHANNESSEN FAMILY TRUST	2,759.01	Pre-14	1880	Apr-Oct	Irrigation, Stockwater	Shasta	DEER CREEK
	<b>1990 Johannessen Family Trust Total</b>	3,212.73						
S012313	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	MARTIN CREEK
S012314	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	MARTIN CREEK
S012315	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	MARTIN CREEK
S012316	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	SOUTH FORK BATTLE CREEK
S012318	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	UNST
S012319	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	UNST
S012320	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	UNST
S012321	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	UNST
S012322	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	UNST
S012323	BATTLE CREEK MEADOWS RANCH INC	350.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Tehama	UNST
	<b>BATTLE CREEK MEADOWS RANCH INC Total</b>	3,500.00						
S000550	BUTTE SINK WATERFOWL ASSOCIATION	43,800.00	Riparian/Pre-14	1900	All	Irrigation, Habitat	Butte	BUTTE CREEK
	<b>BUTTE SINK WATERFOWL ASSOCIATION Total</b>	43,800.00						
S002387	CLINE C SOULE	3,200.00	Riparian/Pre-14	1885	Apr - Oct	Irrigation, Stockwater	Siskiyou	BUTTE CREEK
	<b>CLINE C SOULE Total</b>	3,200.00						
S000731	DEER CREEK IRRIGATION DISTRICT	20,400.00	Adjudication	1923	Feb-Nov	Irrigation	Tehama	DEER CREEK
	<b>DEER CREEK IRRIGATION DISTRICT Total</b>	20,400.00						
S010988	DOUGLAS H BOSCO	159.17	Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Shasta	NORTH FORK BATTLE CREEK
S010989	DOUGLAS H BOSCO	848.93	Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Shasta	NORTH FORK BATTLE CREEK
S010990	DOUGLAS H BOSCO	159.17	Pre-14	1900	Apr-Oct	Irrigation, Stockwater	Shasta	NORTH FORK BATTLE CREEK
	<b>DOUGLAS H BOSCO Total</b>	1,167.27						
S000736	E J LOUIE & SONS	1,545.60	Pre-14	1872	Apr-Oct	Irrigation	Siskiyou	BUTTE CREEK
S000739	E J LOUIE & SONS	1,932.00	Pre-14	1872	Apr-Oct	Irrigation	Siskiyou	BUTTE CREEK
S000740	E J LOUIE & SONS	1,200.00	Pre-14	1872	Apr-Oct	Irrigation	Siskiyou	BUTTE CREEK
S000748	E J LOUIE & SONS	386.40	Pre-14	1872	Apr-Oct	Irrigation	Siskiyou	BUTTE CREEK
	<b>E J LOUIE &amp; SONS Total</b>	5,064.00						
S009605	MAURICE JOHANNESSEN	2,759.01	Pre-14	1880	Apr-Oct	Irrigation, Stockwater	Shasta	DEER CREEK
	<b>MAURICE JOHANNESSEN Total</b>	2,759.01						
S008459	Paradise Irrigation District	9,251.00	Pre-14	1916	All	Domestic	Butte	LITTLE BUTTE CREEK
	<b>Paradise Irrigation District Total</b>	9,251.00						
S000729	STANFORD VINA RANCH IRRIGATION CO	9,676.50	Riparian/Pre-14	1900	May-Oct	Irrigation, Stockwater	Tehama	DEER CREEK
S000730	STANFORD VINA RANCH IRRIGATION CO	9,676.50	Riparian/Pre-14	1900	May-Oct	Irrigation, Stockwater	Tehama	DEER CREEK
	<b>STANFORD VINA RANCH IRRIGATION CO Total</b>	19,353.00						
S000732	U S BUREAU OF LAND MANAGEMENT	11,615.21	Pre-14	1870	Apr-Nov	Irrigation, Stockwater, Habitat	Tehama	BATTLE CREEK
	<b>U S BUREAU OF LAND MANAGEMENT Total</b>	11,615.21						

East Creeks Water Rights - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S009976	WESTERN CANAL WATER DISTRICT	5,045.00	Pre-14	1916	Apr-Jun	Irrigation	Butte	BUTTE CREEK
	<b>WESTERN CANAL WATER DISTRICT Total</b>	5,045.00						
	<b>Grand Total</b>	128,367.21						

## West Creeks (Cache and Stony) - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S015943	PAYNE FARMS - WA PAYNE <b>PAYNE FARMS - WA PAYNE</b>	1,800.00 1,800.00	Riparian	1990	May-Aug	Irrigation	Yolo	CACHE CREEK
S000608	YOLO COUNTY F C & W C DISTRICT	21,006.00	Riparian/Pre-14	1856	Mar-Dec	Irrigation, Domestic, Hydropower	Yolo	CACHE CREEK
S000609	YOLO COUNTY F C & W C DISTRICT	237,206.00	Riparian/Pre-14	1859	Mar-Dec	Irrigation, Domestic, Hydropower	Yolo	CACHE CREEK
S001063	YOLO COUNTY F C & W C DISTRICT	4,775.00	Riparian/Pre-14	1859	Apr-Oct	Irrigation, Domestic, Hydropower	Yolo	CACHE CREEK
S014986	YOLO COUNTY F C & W C DISTRICT  <b>YOLO COUNTY F C &amp; W C</b>	339,976.00  602,963.00	Riparian/Pre-14	1914	All	Irrigation, Municipal, Industrial, Recreation, Hydropower	Lake	CACHE CREEK
S006354	U.S. BUREAU OF RECLAMATION	114,300.00	Fed Adjudication	1910	Jan-Nov	Irrigation	Colusa	LITTLE STONY CREEK
S006353	U.S. BUREAU OF RECLAMATION  <b>U.S. BUREAU OF RECLAMATION</b>	56,000.00  170,300.00	Fed Adjudication	1910	Oct-Mar	Irrigation	Colusa	STONY CREEK
	<b>Grand Total</b>	<b>775,063.00</b>						

Sacramento River - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S012208	ANDERSON-COTTONWOOD IRRIGATION DISTRICT	162,788.00	Pre-14	1917	Apr-Oct	Irrigation, Stockwater	Shasta	SACRAMENTO RIVER
	<b>ANDERSON-COTTONWOOD IRRIGATION DISTRICT Total</b>	162,788.00						
S013880	CARTER MUTUAL WATER COMPANY	3,829.00	Riparian	1924	May-Feb	Irrigation, Stockwater, Domestic	Colusa	SACRAMENTO RIVER
	<b>CARTER MUTUAL WATER COMPANY Total</b>	3,829.00						
S005221	CHARLES W TUTTLE JR	1,550.00	Riparian	1968	Feb-Sep	Irrigation	Colusa	SACRAMENTO RIVER
S005222	CHARLES W TUTTLE JR	6,050.00	Riparian/Pre-14	1912	Mar-Jan	Irrigation	Colusa	SACRAMENTO RIVER
	<b>CHARLES W TUTTLE JR Total</b>	7,600.00						
S014834	CITY OF SACRAMENTO	74,036.91	Pre-14	1849	All	Municipal	Sacramento	SACRAMENTO RIVER
	<b>CITY OF SACRAMENTO Total</b>	74,036.91						
S017223	Dead Horse LP	348.80	Riparian/Pre-14	1800s	All	Irrigation	Yolo	SACRAMENTO RIVER
S017224	Dead Horse LP	174.40	Riparian/Pre-14	1800s	All	Irrigation	Yolo	SACRAMENTO RIVER
	<b>Dead Horse LP Total</b>	523.20						
S016908	Deadhorse LP	174.40	Riparian/Pre-14	1800s	All	Irrigation	Yolo	SACRAMENTO RIVER
S018494	Deadhorse LP	348.80	Riparian/Pre-14	1800s	All	Irrigation	Yolo	Sacramento River
	<b>Deadhorse LP Total</b>	523.20						
S020061	Edward McDowell	440.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	Sacramento River
S020612	Edward McDowell	605.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S020616	Edward McDowell	605.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Edward McDowell Total</b>	1,650.00						
S017096	Elliot Delta Orchards, LLC	376.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S018886	Elliot Delta Orchards, LLC	444.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	Sacramento River
	<b>Elliot Delta Orchards, LLC Total</b>	820.00						
S017093	Elliot Family Co., LLC	200.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S017383	Elliot Family Co., LLC	352.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S019707	Elliot Family Co., LLC	300.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Elliot Family Co., LLC Total</b>	852.00						
S016915	Elliot Family Revocable Trust	821.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S018859	Elliot Family Revocable Trust	394.00	Riparian/Pre-14	1800s	Apr-Oct	Irrigation	Sacramento	Sacramento River
	<b>Elliot Family Revocable Trust Total</b>	1,215.00						
S018613	Farmland Reserve, Inc.	1,800.00	Riparian	1950s	Apr-Oct	Irrigation	Butte	SACRAMENTO RIVER
	<b>Farmland Reserve, Inc. Total</b>	1,800.00						
S018603	Faye Properties, Inc.	3,200.00	Riparian	1800s	Mar-Sep	Irrigation	Yolo	SACRAMENTO RIVER
	<b>Faye Properties, Inc. Total</b>	3,200.00						
S007367	GLENN-COLUSA IRRIGATION DISTRICT	925,200.00	Pre-14	1906	All	Irrigation	Glenn	SACRAMENTO RIVER

Sacramento River - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
	<b>GLENN-COLUSA IRRIGATION DISTRICT Total</b>	925,200.00						
S018956	Greene & Hemly - Merritt Island Ranch- Greene & Hemly, Inc	137.05	Riparian/Pre-14	1850	Mar-Oct	Irrigation	Yolo	SACRAMENTO RIVER
S018959	Greene & Hemly - Merritt Island Ranch- Greene & Hemly, Inc	589.32	Riparian/Pre-14	1850	Mar-Oct	Irrigation	Yolo	SACRAMENTO RIVER
S020804	Greene & Hemly - Merritt Island Ranch- Greene & Hemly, Inc	370.04	Riparian/Pre-14	1850	Mar-Oct	Irrigation	Yolo	Sacramento River
	<b>Greene &amp; Hemly - Merritt Island Ranch- Greene &amp; Hemly, Inc Total</b>	1,096.41						
S017190	Greene & Hemly - Randall Ranch Greene & Hemly Inc.	354.05	Riparian/Pre-14	1850	Mar-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S017191	Greene & Hemly - Randall Ranch Greene & Hemly Inc.	5.00	Riparian/Pre-14	1850	Mar-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Greene &amp; Hemly - Randall Ranch Greene &amp; Hemly Inc. Total</b>	359.05						
S017193	Greene & Hemly - Wheeler Ranch Greene and Hemly, Inc	753.79	Riparian/Pre-14	1850	Mar-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Greene &amp; Hemly - Wheeler Ranch Greene and Hemly, Inc Total</b>	753.79						
S013264	HAROLD ARMSTRONG	2,200.00	Riparian	1895	Feb-Oct	Irrigation	Colusa	SACRAMENTO RIVER
	<b>HAROLD ARMSTRONG Total</b>	2,200.00						
S013717	JOSEPH BORGES RANCHES	1,400.00	Riparian	1922	Apr-Sep	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>JOSEPH BORGES RANCHES Total</b>	1,400.00						
S017264	Joseph T Sanchez	700.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019830	Joseph T Sanchez	600.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Joseph T Sanchez Total</b>	1,300.00						
S010294	LAUTRUP INVESTMENT PARTNERSHIP	1,000.00	Riparian	1965	Apr-Oct	Irrigation	Yolo	SACRAMENTO RIVER
	<b>LAUTRUP INVESTMENT PARTNERSHIP Total</b>	1,000.00						
S019846	Leary - Dennis Leary Trust 11/19/1990	0.00	Riparian	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Leary - Dennis Leary Trust 11/19/1990 Total</b>	0.00						
S018049	Leary - M G	349.00	Riparian/Pre-14	1800s	Apr-Nov	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Leary - M G Total</b>	349.00						
S018046	Leary (Dennis)	582.80	Riparian/Pre-14	1800s	Apr-Nov	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Leary (Dennis) Total</b>	582.80						
S019868	Leary etal	600.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Leary etal Total</b>	600.00						
S018146	MARY CRANE	1,055.66	Riparian	1907	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>MARY CRANE Total</b>	1,055.66						
S018012	MCCORMACK WILLIAMSON COMPANY	4,000.00	Riparian	1930	Apr-Sep	Irrigation	Sacramento	Sacramento River
S018018	MCCORMACK WILLIAMSON COMPANY	2,000.00	Riparian	1930	Apr-Sep	Irrigation	Sacramento	Sacramento River
S018021	MCCORMACK WILLIAMSON COMPANY	1,000.00	Riparian	1930	May-Aug	Irrigation	Sacramento	Sacramento River
	<b>MCCORMACK WILLIAMSON COMPANY Total</b>	7,000.00						
S018614	MYERS LAND COMPANY LLP	938.00	Riparian	1903	Apr-Sep	Irrigation	Yolo	SACRAMENTO RIVER
S018617	MYERS LAND COMPANY LLP	131.00	Riparian	1950	Apr-Sep	Irrigation	Yolo	SACRAMENTO RIVER
	<b>MYERS LAND COMPANY LLP Total</b>	1,069.00						
S002064	PACIFIC FRUIT FARMS	356.80	Riparian	1929	All	Irrigation	Sacramento	SACRAMENTO RIVER
S002065	PACIFIC FRUIT FARMS	356.80	Riparian	1929	All	Irrigation	Sacramento	SACRAMENTO RIVER
S002066	PACIFIC FRUIT FARMS	356.80	Riparian	1929	All	Irrigation	Sacramento	SACRAMENTO RIVER
S008159	PACIFIC FRUIT FARMS	356.80	Riparian	1929	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019372	PACIFIC FRUIT FARMS	436.00	Riparian	1929	All	Irrigation	Sacramento	SACRAMENTO RIVER



## Sacramento River - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S019375	PACIFIC FRUIT FARMS	85.02	Riparian	1929	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019464	PACIFIC FRUIT FARMS	85.02	Riparian	1929	All	Irrigation	Sacramento	Sacramento River
	<b>PACIFIC FRUIT FARMS Total</b>	2,033.24						
S009896	PARROTT INVESTMENT COMPANY	8,805.67	Riparian	1971	Apr-Oct	Irrigation	Butte	SACRAMENTO RIVER
S009897	PARROTT INVESTMENT COMPANY	8,805.67	Riparian	1918	Apr-Oct	Irrigation	Butte	SACRAMENTO RIVER
S009898	PARROTT INVESTMENT COMPANY	8,805.67	Riparian	1979	Apr-Oct	Irrigation	Butte	SACRAMENTO RIVER
	<b>PARROTT INVESTMENT COMPANY Total</b>	26,417.00						
S001905	Pylman - A & M PYLMAN FARMS	945.71	Riparian	1915	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S001908	Pylman - A & M PYLMAN FARMS	1,418.56	Riparian	1915	Mar-Sep	Irrigation	Sacramento	SACRAMENTO RIVER
S001909	Pylman - A & M PYLMAN FARMS	945.71	Riparian	1915	Mar-Sep	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Pylman - A &amp; M PYLMAN FARMS Total</b>	3,309.98						
S001237	PYLMAN VINEYARDS INC	338.07	Riparian/Pre-14	1910	Apr-Oct	Irrigation	Yolo	SACRAMENTO RIVER
S001867	PYLMAN VINEYARDS INC	338.07	Riparian/Pre-14	1910	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S020149	PYLMAN VINEYARDS INC	960.00	Riparian/Pre-14	1910	Apr-Oct	Irrigation	Yolo	Sacramento River
S020153	PYLMAN VINEYARDS INC	610.00	Riparian/Pre-14	1910	Apr-Oct	Irrigation	Yolo	Sacramento River
S020157	PYLMAN VINEYARDS INC	1,000.00	Riparian/Pre-14	1910	Apr-Oct	Irrigation	Yolo	Sacramento River
	<b>PYLMAN VINEYARDS INC Total</b>	3,246.14						
S020641	RECLAMATION DISTRICT #108	40,185.00	Riparian	1800s	Apr-Dec	Irrigation	Colusa	SACRAMENTO RIVER
S020645	RECLAMATION DISTRICT #108	118,058.00	Riparian	1800s	Apr-Dec	Irrigation	Colusa	SACRAMENTO RIVER
S020649	RECLAMATION DISTRICT #108	487.00	Riparian	1800s	Apr-Oct	Irrigation	Colusa	SACRAMENTO RIVER
S020653	RECLAMATION DISTRICT #108	169.00	Riparian	1800s	Apr-Oct	Irrigation	Colusa	SACRAMENTO RIVER
S020657	RECLAMATION DISTRICT #108	2,885.00	Riparian	1800s	May-Sep	Irrigation	Colusa	SACRAMENTO RIVER
S020661	RECLAMATION DISTRICT #108	10,414.00	Riparian	1800s	Apr-Jul	Irrigation	Yolo	SACRAMENTO RIVER
	<b>RECLAMATION DISTRICT #108 Total</b>	172,198.00						
S018031	RIVER GARDEN FARMS COMPANY	356.00	Riparian	1950	Mar-Sep	Irrigation	Yolo	SACRAMENTO RIVER
	<b>RIVER GARDEN FARMS COMPANY Total</b>	356.00						
S017210	Rivermaid Land Company	230.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S017213	Rivermaid Land Company	330.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S017222	Rivermaid Land Company	260.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S017225	Rivermaid Land Company	170.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S017226	Rivermaid Land Company	234.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S017228	Rivermaid Land Company	1,300.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER

## Sacramento River - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S019320	Rivermaid Land Company	191.84	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019360	Rivermaid Land Company	174.40	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019377	Rivermaid Land Company	174.90	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019606	Rivermaid Land Company	261.60	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	Sacramento River
	<b>Rivermaid Land Company Total</b>	3,326.74						
S009950	ROY MORRESCO JR	1,654.00	Riparian	1920	Apr-Jan	Irrigation	Sutter	SACRAMENTO RIVER
	<b>ROY MORRESCO JR Total</b>	1,654.00						
S020145	SACRAMENTO RIVER RANCH II LLC	3,834.40	Riparian	NA	NA	Irrigation	Yolo	Sacramento River
	<b>SACRAMENTO RIVER RANCH II LLC Total</b>	3,834.40						
S016992	Spinella (Art, Janelle)	269.20	Pre-14	1908	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>Spinella (Art, Janelle) Total</b>	269.20						
S016993	Spinella (Frankie)	2,642.30	Pre-14	1910	Apr-Oct	Irrigation	Yolo	SACRAMENTO RIVER
S017329	Spinella (Frankie)	350.00	Pre-14	1910	Apr-Oct	Irrigation	Yolo	SACRAMENTO RIVER
	<b>Spinella (Frankie) Total</b>	2,992.30						
S012858	THE ARCHES LTD	1,320.00	Riparian/Pre-14	1800s	May-Aug	Irrigation	Sacramento	SACRAMENTO RIVER
S012860	THE ARCHES LTD	1,000.00	Riparian/Pre-14	1800s	May-Aug	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>THE ARCHES LTD Total</b>	2,320.00						
S019793	TOWNE ENTERPRISES	942.00	Riparian	1996	Jan-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
S019796	TOWNE ENTERPRISES	2,024.00	Riparian	1914	Jan-Sep	Irrigation	Sacramento	SACRAMENTO RIVER
S019799	TOWNE ENTERPRISES	0.00	Riparian	1914	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019802	TOWNE ENTERPRISES	0.00	Riparian	1997	All	Irrigation	Sacramento	SACRAMENTO RIVER
S019808	TOWNE ENTERPRISES	5,942.00	Riparian	1914	Apr-Sep	Irrigation	Sacramento	SACRAMENTO RIVER
	<b>TOWNE ENTERPRISES Total</b>	8,908.00						
	<b>Grand Total</b>	<b>1,433,668.02</b>						

## Stanislaus River Watershed - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S014003	R J Gallo	6,000.00	Riparian	1940	All	Irrigation	Stanislaus	STANISLAUS RIVER
S009333	US Fish & Wildlife Service	2,040.00	Riparian	1950	All	Irrigation	Stanislaus	STANISLAUS RIVER
S004683	OAKDALE IRRIGATION DISTRICT	485,040.00	Pre-14	1913	All	Irrigation, Domestic	Calaveras	STANISLAUS RIVER
S010402	TUOLUMNE UTILITIES DISTRICT	3,668.00	Pre-14	1852	All	Irrigation, Domestic	Tuolumne	MORMON CREEK
S013888	JOSEPH J FRAGUERO	2,850.00	Pre-14	1884	All	Irrigation, Stockwater	Calaveras	ANGELS CREEK
		499,598.00						

## Tuolumne River Watershed - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S002635	CITY AND COUNTY OF SAN FRANCISCO PUC AGM WATER ENTERPRISE	581,280.00	Pre-14	1922	All	Municipal/ Industrial, Hydropower, Fish & Wildlife, Recreation	Tuolumne	TUOLUMNE RIVER
S002637	CITY AND COUNTY OF SAN FRANCISCO PUC AGM WATER ENTERPRISE	541,652.00	Pre-14	1925	All	Municipal/ Industrial, Hydropower, Fish & Wildlife, Recreation	Tuolumne	TUOLUMNE RIVER
S014379	CITY AND COUNTY OF SAN FRANCISCO PUC AGM WATER ENTERPRISE	258,778.00	Pre-14	1918	All	Municipal/ Industrial, Hydropower, Fish & Wildlife, Recreation	Tuolumne	CHERRY CREEK
S014004	<b>CITY AND COUNTY OF SAN FRANCISCO</b> Gallo Vineyards Inc	1,381,710.00 268.22	Riparian	1960	Apr-Oct	Irrigation	Stanislaus	TUOLUMNE RIVER
S011103	<b>Gallo Vineyards Inc Total</b> James E Coleman	268.22 1,520.00	Riparian	1917	Apr-Oct	Irrigation	Stanislaus	TUOLUMNE RIVER
S009161	<b>James E Coleman Total</b> Joseph E Gallo	1,520.00 329.51	Riparian	1978	Mar-Oct	Irrigation	Stanislaus	TUOLUMNE RIVER
S011191	Joseph E Gallo	66.42	Riparian	1976	Mar-Oct	Irrigation	Stanislaus	TUOLUMNE RIVER
	<b>Joseph E Gallo Total</b>	395.93						
S000996	TUOLUMNE UTILITIES DISTRICT	10,167.00	Pre-14	1851	All	Irrigation, Stockwater, Domestic	Tuolumne	SULLIVAN CREEK
S000997	TUOLUMNE UTILITIES DISTRICT	4,815.00	Pre-14	1852	All	Irrigation, Stockwater, Domestic	Tuolumne	SULLIVAN CREEK
S001006	TUOLUMNE UTILITIES DISTRICT	3,808.00	Pre-14	1852	All	Irrigation, Stockwater, Domestic	Tuolumne	UNST (AKA POWER CREEK)
S001007	TUOLUMNE UTILITIES DISTRICT	893.00	Pre-14	1852	All	Irrigation, Stockwater, Domestic	Tuolumne	CURTIS CREEK
S010403	TUOLUMNE UTILITIES DISTRICT	730.00	Pre-14	1852	All	Irrigation, Stockwater, Domestic	Tuolumne	CURTIS CREEK
S013848	<b>TUOLUMNE UTILITIES DISTRICT Total</b> TURLOCK IRRIGATION DISTRICT	20,413.00 1,196,100.00	Pre-14	1900	All	Irrigation, Domestic	Stanislaus	TUOLUMNE RIVER
	<b>TURLOCK IRRIGATION DISTRICT Total</b>	1,196,100.00						
	<b>Grand Total</b>	2,600,407.15						

## Merced River Watershed - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S007654	Gallo Vineyards Inc	360.00	Riparian	1910	Mar-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007655	Gallo Vineyards Inc	170.00	Riparian	1910	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007656	Gallo Vineyards Inc	1,275.00	Riparian	1910	Mar-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007657	Gallo Vineyards Inc	150.00	Riparian	1910	Mar-Dec	Irrigation, Frost Protection	Merced	MERCED RIVER
S007658	Gallo Vineyards Inc	135.00	Riparian	1910	Mar-Dec	Irrigation, Frost Protection	Merced	MERCED RIVER
S007661	Gallo Vineyards Inc	175.00	Riparian	1910	Mar-Dec	Irrigation, Frost Protection	Merced	MERCED RIVER
S007662	Gallo Vineyards Inc	155.00	Riparian	1910	Mar-Dec	Irrigation, Frost Protection	Merced	MERCED RIVER
S007663	Gallo Vineyards Inc	150.00	Riparian	1910	Mar-Dec	Irrigation, Frost Protection	Merced	MERCED RIVER
S007664	Gallo Vineyards Inc	230.00	Riparian	1910	Apr-Dec	Irrigation, Frost Protection	Merced	MERCED RIVER
S007665	Gallo Vineyards Inc	1,028.00	Riparian	1910	All	Irrigation, Frost Protection, Industrial	Merced	MERCED RIVER
S007666	Gallo Vineyards Inc	115.00	Riparian	1910	All	Irrigation, Frost Protection	Merced	MERCED RIVER
S007667	Gallo Vineyards Inc	180.00	Riparian	1910	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007668	Gallo Vineyards Inc	300.00	Riparian	1910	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007669	Gallo Vineyards Inc	200.00	Riparian	1910	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007670	Gallo Vineyards Inc	270.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007671	Gallo Vineyards Inc	210.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007672	Gallo Vineyards Inc	375.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007673	Gallo Vineyards Inc	210.00	Riparian/Pre-14	1900	Apr-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007710	Gallo Vineyards Inc	375.00	Riparian/Pre-14	1900	Mar-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007711	Gallo Vineyards Inc	5,500.00	Riparian/Pre-14	1900	Mar-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007712	Gallo Vineyards Inc	2,240.00	Riparian/Pre-14	1900	Mar-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
S007713	Gallo Vineyards Inc	1,050.00	Riparian/Pre-14	1900	Mar-Oct	Irrigation, Frost Protection	Merced	MERCED RIVER
	<b>Gallo Vineyards Inc Total</b>	14,853.00						
S007674	Henry Te Velde	1,205.00	Riparian	1900	Mar-Sep	Irrigation	Merced	MERCED RIVER
	<b>Henry Te Velde Total</b>	1,205.00						
S001496	Kelsey Ranch LP	5,496.00	Pre-14	1858	Apr-Oct	Irrigation, Stockwater, Domestic, Recreation	Merced	MERCED RIVER
S002055	Kelsey Ranch LP	2,649.00	Riparian/Pre-14	1858	All	Irrigation, Domestic	Merced	MERCED RIVER
	<b>Kelsey Ranch LP Total</b>	8,145.00						
S012547	MADERA IRRIGATION DISTRICT	21,457.00	Pre-14	1875	All	Irrigation	Madera	BIG CREEK
	<b>MADERA IRRIGATION DISTRICT Total</b>	21,457.00						
S004718	MERCED IRRIGATION DISTRICT	571,000.00	Pre-14	1911	All	Irrigation	Merced	MERCED RIVER
S004719	MERCED IRRIGATION DISTRICT	3,336.00	Riparian/Pre-14	1888	Apr-Oct	Irrigation	Merced	MERCED RIVER
	<b>MERCED IRRIGATION DISTRICT Total</b>	574,336.00						
	<b>Grand Total</b>	619,996.00						

## San Joaquin River Watershed - Statements of Diversion and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
S005469	ARNOLD SOUZA & SONS	1,242.00	Riparian	1963	Apr-Sep	Irrigation	Stanislaus	SAN JOAQUIN RIVER
	<b>ARNOLD SOUZA &amp; SONS Total</b>	1,242.00						
S001073	COLUMBIA CANAL COMPANY	62,879.00	Pre-14	1872	Feb-Dec	Irrigation	Madera	SAN JOAQUIN RIVER
	<b>COLUMBIA CANAL COMPANY Total</b>	62,879.00						
S005005	COSTA VIEW FARMS #2, A CA GEN PARTNERSHIP	19,000.00	Riparian/Pre-14	1903	All	Irrigation, Stockwater	Madera	FRESNO RIVER
	<b>COSTA VIEW FARMS #2, A CA GEN</b>	19,000.00						
S010411	LONE TREE MUTUAL WATER COMPANY	18,376.00	Riparian	1955	All	Irrigation	Merced	SAN JOAQUIN RIVER
	<b>LONE TREE MUTUAL WATER COMPANY Total</b>	18,376.00						
S004978	MADERA IRRIGATION DISTRICT	51,741.00	Pre-14	1873	All	Irrigation	Madera	FRESNO RIVER
S014187	MADERA IRRIGATION DISTRICT	18,148.00	Pre-14	1873	Oct-Jul	Irrigation	Madera	NORTH FORK WILLOW CREEK
	<b>MADERA IRRIGATION DISTRICT Total</b>	69,889.00						
S001915	Mark D McKean	945.00	Riparian/Pre-14	1908	Apr-Oct	Irrigation	Fresno	FRESNO SLOUGH
S001916	Mark D McKean	770.00	Riparian	1908	Mar-Sep	Irrigation	Fresno	FRESNO SLOUGH
S001917	Mark D McKean	860.00	Riparian/Pre-14	1908	Feb-Oct	Irrigation	Fresno	FRESNO SLOUGH
	<b>Mark D McKean Total</b>	2,575.00						
S006296	MENEFEE RIVER RANCH COMPANY	2,105.00	Riparian	1952	Mar-Oct	Irrigation	Merced	FRESNO RIVER
	<b>MENEFEE RIVER RANCH COMPANY Total</b>	2,105.00						
S009320	PATTERSON IRRIGATION DISTRICT	60,200.00	Pre-14	1910	Mar-Sep	Irrigation	Stanislaus	SAN JOAQUIN RIVER
	<b>PATTERSON IRRIGATION DISTRICT Total</b>	60,200.00						
S015523	POINT MILLERTON RANCH LLC	2,100.00	Riparian/Pre-14	2002	All	Irrigation, Stockwater	Madera	FINE GOLD CREEK
	<b>POINT MILLERTON RANCH LLC Total</b>	2,100.00						
S014001	R J GALLO	5,304.00	Riparian	1950	All	Irrigation	Stanislaus	SAN JOAQUIN RIVER
S014002	R J GALLO	813.00	Riparian	1950	All	Irrigation, Stockwater	Stanislaus	SAN JOAQUIN RIVER
	<b>R J GALLO Total</b>	6,117.00						
S001116	ROBERT F FLYNN	4,200.00	Riparian	1926	All	Irrigation, Stockwater	Merced	DUCK SLOUGH
	<b>ROBERT F FLYNN Total</b>	4,200.00						
S009575	U S FISH & WILDLIFE SERVICE	12,976.00	Pre-14	1900	All	Irrigation, Wildlife Management	Merced	DEADMAN CREEK
	<b>U S FISH &amp; WILDLIFE SERVICE Total</b>	12,976.00						
	<b>Grand Total</b>	261,659.00						

## **Appendix D**

### **Section D.5 Other Pre-1914 Consumptive Water Rights Claims**

**1) South Feather Water & Power Agency (Formerly Oroville-Wyandotte Irrigation District) Claims:**

Notice Date	Priority Date	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
	9/25/1852		All water		South Fork Feather River
	4/19/1854		All water		South Fork Feather River
	11/29/1854		All water		South Fork Feather River
	6/21/1862	240	5	3,477	South Fork Feather River
	8/15/1889	3,000	60	43,468	South Fork Feather River at LG Valley
	11/23/1908	5,000	100	72,446	Lost Creek
	11/23/1908	1,000	20	14,489	Lost Creek
	9/10/1910	10,000	200	144,893	South Fork Feather River at LG Valley
	9/10/1910	10,000	200	144,893	South Fork Feather River at LG Valley
	9/10/1910	10,000	200	144,893	South Fork Feather River at LG Valley
	9/29/1910	10,000	200	144,893	South Fork Feather River at LG Valley
	9/29/1910	10,000	200	144,893	South Fork Feather River at LG Valley
	4/22/1911	100	2	1,449	McCabe Creek
	4/22/1911	5,000	100	72,446	South Fork Feather River
	10/22/1914	7,500	150	108,669	Near Rock Creek, South Fork Feather River
	10/26/1914	5,000	100	72,446	Lower South Fork Feather River
			<b>Total Face Value</b>	<b>533,784</b>	(Less redundant claims in 1910 on South Fork Feather in LG Valley)

**2) Western Canal Water District**

County/Decree	Priority Date	Cubic Feet Per Second	Acre-feet	Source
Sutter/No. 2360	12/15/1924		150,000	Year-round Feather River
			145,000	Below Centerville PowerHouse
		<b>Total Face Value</b>	<b>295,000</b>	

**3) Joint Water Districts of Feather River**

Priority Date	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
7/29/1902	100,000	2,000	1,448,926	Feather River
5/12/1903	100,000	2,000	1,448,926	Feather River
3/29/1904	100,000	2,000	1,448,926	Feather River
3/3/1909		500	362,231	Feather River
		<b>Total Face Value</b>	<b>1,811,157</b>	(less redundant claims on Feather River)

Sutter Decree No. 2360, 12/15/1924

	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
Sutter Butte Canal Company first right		1,200	869,355	Feather River
Great Western Power Company (later PG&E) second right		300	217,339	Feather River
Above 1500 cfs, SBCC's second right is 2/3 of flow between 1500 and 2700 cfs (1200 cfs difference)		800	579,570	Feather River
Above 1500 cfs, Great Western's second right is 1/3 of flow between 1500 and 2700 cfs		400	289,785	Feather River
Above 2700 cfs, Great Western and Western Canal Company receive the next 500 cfs		500	362,231	Feather River
Above 3200 cfs, SBCC has right to divert the next 500 cfs, including all accretions, whatever the source.		500	362,231	Feather River
		<b>SBCC Total Face Value</b>	<b>1,811,157</b>	
		<b>Western Canal Company's total claims</b>	<b>869,355</b>	
		=		

**Water Right Shares of Sutter Butte Canal Company's Decreed Water Rights allocated to Joint Water Districts**

Biggs-West Gridley Water District	29.0%	525,236
Butte Water District	24.0%	434,678
Richvale Irrigation District	27.0%	489,012
Sutter Extension Water District	20.0%	362,231



Yuba River Pre-1914 Consumptive Water Rights

**1) Browns Valley Irrigation District**

Priority Date	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
3/21/1890	10,000	200	<b>144,893</b>	North Yuba River

**2) Yuba County Water Agency**

Priority Date	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
1890		50	36,223	Colgate Head Dam, year-round - North Yuba River and its tributaries
		200	144,893	Hydropower only - Colgate Head Dam on North Yuba River
		60	43,468	Hydropower only - Colgate Head Dam on North Yuba River
<b>Total Face Value, Consumptive Rights</b>			<b>36,223</b>	

## Sacramento River Pre-1914 Consumptive Water Rights

**1) Right Bank of Sacramento River at Wheel Ditch in Redding:**

Shasta County Water Rights Book 2, p. 391, notice dated 11/21/1914

Deeded by McCoy Fitzgerald to Anderson-Cottonwood Irrigation District, 12/30/1914

Notice Date	Priority Date	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
11/21/1914	11/21/1914	20,000	400	289,785	Wheel Ditch - Sacramento River

**2) Glenn-Colusa Irrigation District**

Notice Date	Priority Date	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
4/16/1903	4/15/1903	500,000	10,000	7,244,628	Sacramento River
2/26/1903	2/25/1903	150,000	3,000	2,173,388	Sacramento River
2/26/1903	2/25/1903	150,000	3,000	2,173,388	Sacramento River
12/7/1901	11/30/1901		5,000	3,622,314	Sacramento River
12/7/1901	11/30/1901		5,000	3,622,314	Sacramento River
12/21/1883	12/18/1883		5,000	3,622,314	Sacramento River
11/19/1903	11/13/1903		5,000	3,622,314	Sacramento River
				26,080,661	<b>Sacramento River Total</b>
8/1/1907	8/1/1907		5,000	3,622,314	Stony Creek
			5,000	3,622,314	Stony Creek
5/4/1905	4/26/1905		5,000	3,622,314	Stony Creek
				10,866,942	<b>Stony Creek Total</b>
11/23/1904	11/21/1904		2,000	1,448,926	Willow Creek
				1,448,926	<b>Willow Creek Total</b>
				<b>38,396,529</b>	<b>Grand Total</b>

**3) City of Sacramento****Source: State Water Board Notice of Petitions for Extensions of Time to Complete Construction Under Permits 11358, 11359, 11360, and 11361, November 3, 1988**

Notice Date	Priority Date	Miners' Inches	Cubic Feet Per Second	Acre-feet	Source
	1854		75	54,335	Sacramento River

Turlock and Modesto Irrigation Districts' Pre-1914 Consumptive Water Rights

Holder Name	Date	Point of Diversion	Facility Name	Comment	Diversion	Diversion Units	Storage	Storage Units	Irrigation Season Face Amount, AF (246 days)
Turlock and Modesto Irrigation Districts and La Grange	5/18/1871	La Grange Dam	La Grange Dam	Acquired from F. Green and A.D. Allen	66	cubic feet per second			66 cfs max
Modesto Irrigation District	2/27/1913	La Grange Dam	La Grange Dam	Acquired from J.M. Finley	13,000	miner's inches			Not to exceed 250 cfs, among these first three water rights claims for a total of: 121,983.47
Modesto Irrigation District	11/13/1913	La Grange Dam	La Grange Dam	Acquired from Waterford Irrigation District	16,000	miner's inches			
Turlock and Modesto Irrigation Districts	1/16/1855	La Grange Dam	La Grange Dam	Acquired from Franklin Water Company					
Turlock and Modesto Irrigation Districts	1/18/1862	La Grange Dam	La Grange Dam	Acquired from Elam Dye					The sum of these water rights may not exceed 4,500 cfs diversion; Franklin Water Co and Elam Dye have no diversion amounts; all rights associated with this limit are converted to acre-feet:
Turlock and Modesto Irrigation Districts	5/18/1872	La Grange Dam	La Grange Dam	Acquired from John Burcham, M.A. Wheaton, and Charles Elliott	500,000	miner's inches			
Turlock Irrigation District	1/5/1889	La Grange Dam	La Grange Dam	Posted by TID	225,000	miner's inches			
Modesto Irrigation District	6/21/1890	La Grange Dam	La Grange Dam	Posted by MID	250,000	miner's inches			
Modesto Irrigation District	10/1/1908	La Grange Dam, Modesto Reservoir	La Grange Dam, Modesto Reservoir	Posted by MID	50,000	miner's inches	40,000	acre-feet	
Turlock Irrigation District	8/31/1911	La Grange Dam, Turlock Lake	La Grange Dam, Turlock Lake	Posted by TID	200,000	miner's inches	100,000	acre-feet	3,260,082.64
Estimated Total Face Amount =									3,382,066.12
Source: Letter from Kenneth Petruzzelli, O'Laughlin and Paris LLP, attorneys for the Modesto Irrigation District, "Public Records Act Request for Pre-1914 Water Rights," dated January 14, 2011; California Water Impact Network. There are 50 miner's inches to 1 cubic foot per second.									

## Pre-1914 Appropriative Water Rights Claims of the City and County of San Francisco

Appropriation ID	Date	Point of Diversion	Facility Name	Face Amt (cfs)	Source
151(6)	7/22/1902	Stanislaus National Forest, Cherry Valley Reservoir Site, NE 1/4 Section 5, T1N R19E MDB&M	Cherry Valley Reservoir Site	1,000.00	Cherry Creek
151(4)	7/20/1902	Junction Eleanor & Cherry Creek, Section 16, T1N R19E MDB&M	Cherry Valley Reservoir Site	240.00	Eleanor & Cherry Creek
158	2/27/1911	Stanislaus National Forest, just north of S 1/4 corner of Section 32, T2N R19E	Cherry Valley Reservoir Site	500.00	Cherry Creek
153(1)	10/24/1909	Stanislaus National Forest, just west of E 1/4 corner of Section 8, T2N R19E MDB&M	Cherry Valley Reservoir Site	1,000.00	Cherry Creek
151(21)	10/11/1909	Junction Eleanor & Cherry Creek, Section 16, T1N R19E MDB&M	Cherry Valley Reservoir Site	240.00	Eleanor & Cherry Creek
			<b>Cherry Valley Reservoir Site Total</b>	2,980.00	
160	2/18/1911	Yosemite National Park, NW 1/4 of Section 16, T1N R20E MDB&M	Hetch Hetchy Reservoir Site	500.00	Tuolumne River
155(2)	10/4/1908	Stanislaus National Forest near mouth of Jawbone Creek	Hetch Hetchy Reservoir Site	200.00	Tuolumne River
156(3)	9/29/1908	Yosemite National Park, NE 1/4 Section 17, T1N R20E MDB&M	Hetch Hetchy Reservoir Site	200.00	Tuolumne River
			<b>Hetch Hetchy Reservoir Site Total</b>	700.00	
154(6)	7/29/1901	Yosemite National Park, Lake Eleanor Reservoir Site (1/4 mile below Lake Eleanor) SE 1/4 Section 34, T2N R19E MDB&M NW 1/4 within SE 1/4.	Lake Eleanor Reservoir Site	1,000.00	Eleanor Creek
155(1)	7/29/1901	Yosemite National Park NW 1/4 Section 3, T1N R19E MDB&M	Lake Eleanor Reservoir Site	100.00	Eleanor Creek
159	2/27/1911	Yosemite National Park, NW 1/4 Section 3, T1N R19E MDB&M	Lake Eleanor Reservoir Site	All the waters of Eleanor Creek	Eleanor Creek
154(14)	11/17/1909	Stanislaus National Park, West Bank NE 1/4 of NE 1/4 Section 9 T1N R19E, MDB&M	Lake Eleanor Reservoir Site	100.00	Eleanor Creek
156(1)	10/1/1908	Yosemite National Park, NW 1/4 Section 3, T1N R19E	Lake Eleanor Reservoir Site	100.00	Eleanor Creek
			<b>Lake Eleanor Reservoir Site Total</b>	1,100.00	
163	2/28/1911	Stanislaus National Forest near mouth of Jawbone Creek	Tuolumne River at and Near Early Intake	500.00	Tuolumne River
161	2/21/1911	Stanislaus National Forest 1 1/4 miles upstream from Range Line between R18E and R19E	Tuolumne River at and Near Early Intake	500.00	Tuolumne River
162	2/20/1911	Stanislaus Forest near west line of new park boundary	Tuolumne River at and Near Early Intake	500.00	Tuolumne River
153(5)	10/15/1909	Stanislaus National Forest 1 1/4 miles upstream from Range Line between R18E and R19E	Tuolumne River at and Near Early Intake	1,000.00	Tuolumne River
151(22)	10/12/1909	Stanislaus National Forest, above junction with Cherry River	Tuolumne River at and Near Early Intake	240.00	Tuolumne River
156(2)	10/4/1908	Near mouth of Jawbone Creek	Tuolumne River at and Near Early Intake	300.00	Jawbone Creek Tuolumne River
			<b>Tuolumne River at and Near Early Intake Total</b>	3,040.00	
			<b>Grand Total</b>	7,820.00	
			<b>Tuolumne River at and Near Early Intake Total in Acre-feet originally claimed</b>	<b>2,202,366.94</b>	

Source: R.B. Hansen, *San Francisco's Water Rights on the Tuolumne River Watershed*, prepared under the direction of A.O. Olson, Manager and Chief Engineer, Hetch Hetchy Water Supply, Power and Utilities Engineering Bureau, City and County of San Francisco Public Utilities Commission, July 1951. Available from the UC Riverside Water Resources Collections and Archives, Call No. G4794 H1.

## Merced River Riparian Pre-1914 Consumptive Water Rights

<b>Water Right Type</b>	<b>Status</b>	<b>Holder Name</b>	<b>Date</b>	<b>Point of Diversion</b>	<b>Comment</b>	<b>Face Amount, AF</b>
Appropriative	Pre-1914	Farmer's Canal Company	1876	Originally that of the Robla Ditch	2500 cfs, with no apparent seasonal limitations.	1,811,157
Appropriative	Pre-1914	Crocker-Huffman Land & Water Company	1883	Crocker-Huffman Dam	2500 cfs; this right was originally filed by C.H. Huffman personally, acquired by Huffman and Crocker's Merced Canal & Irrigation Company, later taken over by Crocker Huffman Land & Water Company in late 1880s. This water right was acquired by Merced Irrigation District in 1919 after the District was formed.	1,811,157
Riparian		Upton et al	1895	Various - along Merced River below Crocker-Huffman Dam	Maximum diversion of 225 cfs pursuant to the Upton Decree of 1895	163,004
Riparian		Dale & Cook Ranch owners	1876	Various individuals associated with ownership of the Dale and Cook Ranch	24 cfs amount to a total diversion of 1,900 AF during diversion season	1,900
Riparian		J.J. Stevinson	1930	Merced ID's boundary intersecting with McCoy Spillway, Arena Spillway, or Bear Creek	Diversion season is from April 1 through September 30 with varying flow rates each month therein, according to the Stevinson Decree. Merced ID agreed with Stevinson to exchange delivery of water from Lake McClure up to 24,000 acre-feet annually, in exchange for an easement for the District to incorporate Stevinson's riparian water into District operations at Lake McClure."The rights hereby conveyed by the Company to the District shall be an easement in all the right title, interest, estate, and claims of the Company in and to the lands...in which it has an interest, and as against any right which the Company may now have in and to the waters of said Merced River."	24,000
Riparian		Parties to the Cowell Agreement	1926	Crocker-Huffman Dam	Merced Irrigation District is required to provide releases from New Exchequer Dam to meet riparian right holders requirements.	93,793
<b>Pre-1914 and Riparian Water Rights, Merced River</b>						<b>3,905,012</b>

## San Joaquin River Riparian and Pre-1914 Consumptive Water Rights Claims

San Joaquin River Irrigation Uses	Estimated Face Amount	Point of Diversion	Other Description
USBR Purchase Rights from Miller & Lux Inc.	624,200	Friant Dam, rediverted at Madera and Friant-Kern Canals	Subject of a water rights purchase contract with US Bureau of Reclamation, and appraised at this quantity of water (Etcheverry, 1936; California Water Project Authority, 1936). Originally grassland and "uncontrolled" riparian flood flows. Grassland flows were pre-1914 appropriative rights of the Miller & Lux canal company; "uncontrolled" flows were riparian rights associated with lands adjacent to the San Joaquin River owned by Miller & Lux cattle business for grazing.
San Joaquin River Exchange Contractors Rights - exchange/easement on cropland water rights	840,000	USBR diverts these flows from the San Joaquin River into Madera and Friant-Kern Canals	Subject of a water rights exchange contract with US Bureau of Reclamation (Engle, Part Two, 1957). Originally "cropland" rights owned by Miller & Lux Inc. on which permanent and other crops were cultivated with highly reliable senior appropriative and riparian water rights. The Exchange Contractors having provided USBR with an easement for these rights receives in their place flows from Shasta Reservoir via Delta Mendota Canal.
Chowchilla Farms/Water District	49,300	Chowchilla Canal diversion from San Joaquin River upstream of Mendota Pool, east side of the river.	Subject of a water rights purchase contract with US Bureau of Reclamation for appropriative rights via Chowchilla Canal and under appropriative and riparian rights through the Blythe Canal, acquisition of which would be used in storage at Friant Dam and diversion into Madera Canal (California Water Project Authority, No. 6, 1937). The lands from which these rights were purchased lie between Fresno and Chowchilla rivers along the east bank of the San Joaquin River.
Lands Between Chowchilla Farms and Stevinson Colony	40,281	Between Chowchilla River and Merced River along east side of San Joaquin River.	Subject to water rights purchase contracts with US Bureau of Reclamation (including lands of Bloss, Hatfield, Crane, Turner, Erreca and Hansen) (California Water Project Authority, No. 7, 1937). Includes lands formerly owned by Miller & Lux, Inc., conveyed with reservations of easements in and to use of water and upstream storage rights reserved to Miller & Lux. Estimate of water rights shown are for uncontrolled flood and riparian rights as described in 1936, subordinate only to prior appropriative, prescriptive and contractual rights held by Miller & Lux and associated companies.
Stevinson/East Side Canal	20,168	Pre-1914 appropriative and riparian diversions upstream on San Joaquin River from Merced River confluence.	Unclear whether US Bureau of Reclamation entered into a water rights purchase contract with Stevinson. Stevinson's diversion rights were considered subordinated to Edison Securities and Miller & Lux (California Water Project Authority, No. 8, 1939, 18), and Stevinson instead was able to arrange a supply of water for its lands via the Merced River from Merced Irrigation District under the Stevinson Contract. East Side Canal appropriation from the San Joaquin River was found to average 14,268 AF, while residual riparian rights to the San Joaquin averaged 5,900 AF.
Tranquillity & James Irrigation Districts - Fresno Slough	29,300	Riparian diversions along Fresno Slough upstream of Mendota Pool.	Diversions were subordinated to Miller & Lux rights and allowed only when San Joaquin River reached 1,360 cfs and then the districts could take just 12 percent up to a maximum of 140 cfs. Estimated face amount for these districts obtained from Table 5 of California Water Project Authority, 1936.
Edison Securities	33,127	Riparian diversions just upstream of Mendota Pool and Fresno Slough along left (south) bank of San Joaquin River	Subject of a water rights purchase contract with US Bureau of Reclamation for uncontrolled overflow riparian rights from the San Joaquin River and associated sloughs upstream of Mendota Pool, along south bank (California Water Project Authority, No. 8, 1938). Edison Securities purchased these riparian lands from the Herminghaus Estate in January 1928.
Friant to Gravelly Ford right holders	116,741	As many as 198 diversions and/or pumps of water from lands adjacent to the San Joaquin River	Rights of most of these landowners were acquired by USBR, but some of those not immediately acquired by 1939 became plaintiffs in Rank v. Krug, a suit by water right holders and groundwater pumpers in this area against Friant Dam. Case decided by U.S. Supreme Court in 1957. The court determined that these water right holders collectively used about 200,000 acre-feet per year in this area of the San Joaquin River. This was the section of the river that received releases from Friant under D-990, and below Gravelly Ford, the river dried up through to the confluence with the Merced River. San Joaquin River Restoration Program Settlement Agreement states that riparian releases are now 117,000 to 126,000 acre-feet per year, consistent with "Steiner declaration."
Total Pre-1914 and Riparian Water Rights, Upper San Joaquin River	1,753,117		

Sources: State of California Water Project Authority, 1936-1939; Rank v. Krug; San Joaquin River Settlement Agreement, 2006.

## San Joaquin River Riparian and Pre-1914 Consumptive Water Rights Claims

<b>Lands east of San Joaquin River, Between Chowchilla Farms and Stevinson Colony Assumed Riparian to that Stream or its Branch Channels</b>	<b>Area in Acres</b>	<b>Estimated Average Uncontrolled Diversions, based on 1.65 acre-feet per acre</b>
A.J. Turner	158	261
George J. Hatfield	1,293	2,133
Charles S. Howard	5,514	9,098
Charles A. Crane	2,400	3,960
Ed P. Waltz	2,640	4,356
Fred A Solari and J.A. Turner	861	1,421
Dan L McNamara	1,236	2,039
Dan L McNamara	957	1,579
Martin Erreca	520	858
Nell E Hanson	527	870
Jessie S Potter(1)	2,270	3,746
Jessie S Potter(2)	6,037	9,961
<b>Totals</b>	<b>24,413</b>	<b>40,281</b>

Source: California Water Project Authority, 1937b, 1937c.

## **Appendix D**

### **Section D.6 Post-1914 Consumptive Water Rights Claims**



## Trinity River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A029129	20341		BLUE JAY WATER ASSOCIATION <b>BLUE JAY WATER ASSOCIATION Total</b>	10/19/1987	20.80	Trinity	TRINITY RIVER UNDERFLOW
A027206	18568	12081	BRUCE G HANEY <b>BRUCE G HANEY Total</b>	2/5/1982	0.60	Trinity	TRINITY RIVER
A021330	14347	10037	Chad Blevins <b>Chad Blevins Total</b>	6/10/1963	5.20	Trinity	TRINITY RIVER
A017749	11255	6749	CHARLES HIGGS <b>CHARLES HIGGS Total</b>	7/31/1957	16.80	Trinity	TRINITY RIVER
A027969	19275	12725	CHRISTOPHER T CROSS <b>CHRISTOPHER T CROSS Total</b>	2/3/1984	0.20	Trinity	TRINITY RIVER
A010791	6398	4625	COVINGTON MUTUAL WATER COMPANY <b>COVINGTON MUTUAL WATER COMPANY Total</b>	3/24/1944	2,171.90	Trinity	EAST FORK STUART FORK TRINITY RIVER
A017743	11178	6988	DAVID COVINGTON <b>DAVID COVINGTON Total</b>	1/28/1964	33.30	Trinity	TRINITY RIVER
A026530	18389	12111	DAVID L SULLIVAN <b>DAVID L SULLIVAN Total</b>	9/24/1980	1.10	Trinity	TRINITY RIVER UNDERFLOW
A026529A	18429	12935	GARTH R SUNDBERG <b>GARTH R SUNDBERG Total</b>	1/22/1982	0.50	Trinity	TRINITY RIVER UNDERFLOW
A021142	14094	8656	GEORGE PAINTER <b>GEORGE PAINTER Total</b>	1/28/1963	0.30	Trinity	TRINITY RIVER
A029111	20233	13386	GERARD A KAZ <b>GERARD A KAZ Total</b>	9/16/1987	1.20	Trinity	TRINITY RIVER UNDERFLOW
A029183	20269	13322	HAZEL J SCHOTT <b>HAZEL J SCHOTT Total</b>	2/3/1988	2.30	Trinity	TRINITY RIVER
A029336	20343	13616	James Lee and Billie Jo Bonk Revocable Trust <b>James Lee and Billie Jo Bonk Revocable Trust Total</b>	11/9/2005	0.30	Trinity	TRINITY RIVER
A026660	18369	12082	JEFFREY J BUTLER <b>JEFFREY J BUTLER Total</b>	12/10/1980	0.60	Trinity	TRINITY RIVER
A029302	20344	13485	KATHERINE L RIDENOUR <b>KATHERINE L RIDENOUR Total</b>	7/18/1988	1.80	Trinity	TRINITY RIVER UNDERFLOW
A024059	16579	10904	KATHY WATSON <b>KATHY WATSON Total</b>	5/3/1972	1.40	Trinity	TRINITY RIVER UNDERFLOW
A027867	19134	12721	Ken Tamplen <b>Ken Tamplen Total</b>	9/14/1983	1.10	Trinity	TRINITY RIVER UNDERFLOW
A017669	11106	6566	Lewiston Community Service District <b>Lewiston Community Service District Total</b>	6/21/1957	543.00	Trinity	TRINITY RIVER
A018177	11654	6612	LEWISTON PARK MUTUAL WATER COMPANY, INC <b>LEWISTON PARK MUTUAL WATER COMPANY, INC Total</b>	6/11/1958	311.30	Trinity	ALDER GULCH, TRINITY RIVER
A027639	18898	12674	MADIELINA CORONA <b>MADIELINA CORONA Total</b>	1/24/1983	0.30	Trinity	TRINITY RIVER

## Trinity River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A020923	13998	8410	MARCIA OSA COATES <b>MARCIA OSA COATES Total</b>	9/4/1962	0.30 0.30	Humboldt	TRINITY RIVER
A023097	15783	10384	MARK GIBERSON <b>MARK GIBERSON Total</b>	7/25/1968	5.60 5.60	Trinity	TRINITY RIVER
A028907	20081	13096	NOELLE ROGET <b>NOELLE ROGET Total</b>	9/25/1986	2.00 2.00	Trinity	TRINITY RIVER
A015365	9527	5059	NORMAN EVANS	6/3/1953	0.80	Trinity	TRINITY RIVER
A015366	9528	5060	NORMAN EVANS <b>NORMAN EVANS Total</b>	6/3/1953	0.30 1.10	Trinity	TRINITY RIVER
A027855	19198	12716	RALPH M MCCOMB <b>RALPH M MCCOMB Total</b>	8/31/1983	0.50 0.50	Trinity	TRINITY RIVER UNDERFLOW
A020084	13120	7920	ROGER F KENDELL <b>ROGER F KENDELL Total</b>	4/13/1961	2.20 2.20	Trinity	TRINITY RIVER
A016087	10146	5302	RONALD JURIN <b>RONALD JURIN Total</b>	10/13/1954	1,642.50 1,642.50	Humboldt	TRINITY RIVER
A015227	9531	5145	RUSSELL H HAGEN JR <b>RUSSELL H HAGEN JR Total</b>	3/9/1953	2.30 2.30	Humboldt	TRINITY RIVER
A026531	18390	12060	STAN POFF <b>STAN POFF Total</b>	9/24/1980	0.40 0.40	Trinity	TRINITY RIVER UNDERFLOW
A022840	15541	10386	STEPHEN DUTTON <b>STEPHEN DUTTON Total</b>	6/30/1967	3.40 3.40	Trinity	TRINITY RIVER
A021166	14149	8631	STEVEN B PETERSON <b>STEVEN B PETERSON Total</b>	2/18/1963	7.60 7.60	Trinity	TRINITY RIVER
A024462	17650		TRINITY VILLAGE WATER COMPANY <b>TRINITY VILLAGE WATER COMPANY Total</b>	9/19/1973	360.00 360.00	Trinity	TRINITY RIVER
A011927	7140	3513	U S SHASTA-TRINITY NATL FOREST <b>U S SHASTA-TRINITY NATL FOREST Total</b>	6/9/1947	852.90 852.90	Trinity	EAST FORK STUART FORK TRINITY RIVER
A021019	14077	8386	U S SIX RIVERS NATL FOREST <b>U S SIX RIVERS NATL FOREST Total</b>	11/16/1962	29.00 29.00	Trinity	TRINITY RIVER
A005628	11967		U.S. BUREAU OF RECLAMATION	7/30/2027	3,349,943.80	Contra Costa, Trinity	OLD RIVER, TRINITY RIVER
A015374	11968		U.S. BUREAU OF RECLAMATION	7/29/2002	417,193.30	Contra Costa, Trinity	OLD RIVER, TRINITY RIVER
A015375	11969		U.S. BUREAU OF RECLAMATION	9/16/1959	3,030,761.80	Contra Costa, Trinity	Old River, TRINITY RIVER
A016767	11971		U.S. BUREAU OF RECLAMATION	7/29/2002	700,000.00	Contra Costa, Trinity	TRINITY RIVER
A017374	11973		U.S. BUREAU OF RECLAMATION <b>U.S. BUREAU OF RECLAMATION Total</b>	7/29/2002	1,085,966.30 8,583,865.20	Contra Costa, Trinity	TRINITY RIVER
A023882	16413	10503	WADE AMMON SR <b>WADE AMMON SR Total</b>	10/1/1971	4.00 4.00	Trinity	SOUTH FORK TRINITY RIVER

## Trinity River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A029410	20757		WEAVERVILLE COMMUNITY SERVICES DISTRICT	2/14/1989	870.00	Trinity	TRINITY RIVER
			<b>WEAVERVILLE COMMUNITY SERVICES DISTRICT Total</b>		870.00		
A028537	19864	12946	WILLIAM E HOYER	8/14/1985	0.10	Trinity	TRINITY RIVER UNDERFLOW
			<b>WILLIAM E HOYER Total</b>		0.10		
			<b>Grand Total</b>		8,590,763.10		

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A001300	1360	2302	1994 ORAL BABCOCK LIVING TRUST	05/29/19	3,600.00	Lassen	EAST FORK JUNIPER CREEK
A001696	1361	2595	1994 ORAL BABCOCK LIVING TRUST	03/01/20	892.60	Lassen	DARK CANYON CREEK
			<b>1994 ORAL BABCOCK LIVING TRUST Total</b>		4,492.60		
A005549	2891	1366	AGENCY 5	06/28/27	282.40	Siskiyou	SOUTH FORK BEAR CREEK
			<b>AGENCY 5 Total</b>		282.40		
A004554	2316	1602	Alan K. Nelson	11/14/35	185.00	Modoc	DUTCH FLAT CREEK
			<b>Alan K. Nelson Total</b>		185.00		
A002383	1170	2169	ALTURAS RANCHES LLC	06/07/21	900.00	Modoc	JUNIPER GULCH
A010079	8453	4291	ALTURAS RANCHES LLC	12/05/40	745.00	Modoc	CROOKS CANYON
A013339	7970	6443	ALTURAS RANCHES LLC	09/07/49	470.00	Modoc	BIG JUNIPER CREEK
A013526	8456	4294	ALTURAS RANCHES LLC	12/29/49	113.80	Modoc	CROOKS CANYON
A014759	9219	6071	ALTURAS RANCHES LLC	04/17/52	93.50	Modoc	CROOKS CANYON
A016047	10304	6951	ALTURAS RANCHES LLC	09/15/54	204.00	Modoc	CROOKS CANYON
A016048	10305	6952	ALTURAS RANCHES LLC	09/15/54	204.00	Modoc	CROOKS CANYON
A021557	14924	9579	ALTURAS RANCHES LLC	11/27/63	1,370.00	Modoc	UNST, UNXX
			<b>ALTURAS RANCHES LLC Total</b>		4,100.30		
A020606	13624	8511	ANTHONY BOKARES	02/13/62	15.00	Lassen	UNST
A022408	15210	9918	ANTHONY BOKARES	02/28/66	14.00	Lassen	UNST, UNST (2)
			<b>ANTHONY BOKARES Total</b>		29.00		
A027640	18903	12948	AUGUSTINO DE MARIA	01/27/83	4.20	Modoc	UNST
			<b>AUGUSTINO DE MARIA Total</b>		4.20		
A021194	14258	9878	BECKETT TRUST	03/14/63	0.10	Siskiyou	LAVA CRACK SPRINGS
			<b>BECKETT TRUST Total</b>		0.10		
A011646	8075	4939	BETTY ANN CARROLL	12/04/46	750.00	Lassen	HOLBROOK CANYON STREAM
A015526	9636	4938	BETTY ANN CARROLL	09/03/53	215.00	Lassen	HOLBROOK CANYON STREAM
			<b>BETTY ANN CARROLL Total</b>		965.00		
A002093	872	4360	BIG VALLEY MUTUAL WATER COMPANY	11/22/20	2,635.00	Modoc	ANTELOPE FLAT DRAINAGE AREA
A010109	6084	4361	BIG VALLEY MUTUAL WATER COMPANY	02/05/41	100.00	Modoc	ANTELOPE FLAT DRAINAGE
A010407	6083	4362	BIG VALLEY MUTUAL WATER COMPANY	03/17/42	2,865.00	Modoc	LAST CHANCE CREEK, WHALEN CREEK
			<b>BIG VALLEY MUTUAL WATER COMPANY Total</b>		5,600.00		
A010866	6319	4442	Black Ranch, LLC	08/22/44	184.50	Shasta	BURNEY CREEK
			<b>Black Ranch, LLC Total</b>		184.50		
A014605	9028	4968	BO THORENFELT	12/18/51	200.00	Lassen	UNST
			<b>BO THORENFELT Total</b>		200.00		
A026030	17951	11911	BRIAN J VANVORIS	06/20/79	1.90	Shasta	UNST
			<b>BRIAN J VANVORIS Total</b>		1.90		
A014689	9035	5250	BRYON E GIBBONS	02/27/52	30.00	Modoc	NORTH FORK GLEASON CREEK
			<b>BRYON E GIBBONS Total</b>		30.00		
A012845	7485	4429	CALIF DEPT OF FORESTRY & FIRE PROTECTION	12/03/48	72.40	Shasta	HATCHET CREEK
			<b>CALIF DEPT OF FORESTRY &amp; FIRE PROTECTION Total</b>		72.40		
A022921	15644	9980	CALIFORNIA PINES PROPERTY OWNERS' ASSOCIATION	10/09/67	16.00	Modoc	SOUTH FORK FITZHUGH CREEK
A022922	15645	9979	CALIFORNIA PINES PROPERTY OWNERS' ASSOCIATION	10/09/67	11.00	Modoc	MIDDLE FORK FITZHUGH CREEK
			<b>CALIFORNIA PINES PROPERTY OWNERS' ASSOCIATION Total</b>		27.00		
A015331	9762	7286	CHARLENE E STONE	05/04/53	353.50	Shasta	HALL CREEK

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A029440	20654		<b>CHARLENE E STONE Total</b>		353.50		
			CHARLES A ORWICK	03/17/89	49.00	Lassen	UNST
			<b>CHARLES A ORWICK Total</b>		49.00		
A011102	6482	3952	CLARK FRONTIN	07/09/45	325.80	Shasta	LITTLE ROARING CREEK
			<b>CLARK FRONTIN Total</b>		325.80		
A026068	18571		CLEO V HUNT	08/21/79	49.00	Lassen	WILLOW CREEK
			<b>CLEO V HUNT Total</b>		49.00		
A025835	18599	12335	CLIFFORD DE WITT	09/27/78	38.00	Modoc	UNST
			<b>CLIFFORD DE WITT Total</b>		38.00		
A020320	13198	8334	CORY BOSCHEE	07/24/61	5.00	Lassen	UNST
A025713	17569	12905	CORY BOSCHEE	04/07/78	9.00	Lassen	UNST
			<b>CORY BOSCHEE Total</b>		14.00		
A029694	20696		CRAIG HERMSMEYER	06/03/02	27.00	Lassen	UNSP
			<b>CRAIG HERMSMEYER Total</b>		27.00		
A014927	9196	5036	DANIEL TANKERSLEY	07/28/52	190.00	Lassen	UNST
			<b>DANIEL TANKERSLEY Total</b>		190.00		
A021750	14649	9048	DANIEL K DAVIS	04/21/64	25.00	Shasta	UNST
			<b>DANIEL K DAVIS Total</b>		25.00		
A016506	10376	9234	DARAN V MYERS	08/08/55	279.00	Lassen	UNST, WILLOW CREEK
			<b>DARAN V MYERS Total</b>		279.00		
A020366	13402	9254	DAVID CRAWFORD	08/22/61	49.00	Lassen	UNST
			<b>DAVID CRAWFORD Total</b>		49.00		
A021064	14089	8630	David Hunt	12/06/62	24.00	Lassen	UNST
			<b>David Hunt Total</b>		24.00		
A022637	15852	10320	David King	11/14/66	10.00	Lassen	UNST
			<b>David King Total</b>		10.00		
A022762	15472	9137	DAVID E LLOYD	04/06/67	3.00	Modoc	UNST
			<b>DAVID E LLOYD Total</b>		3.00		
A022887	15562	10015	DELBERT GOULD	08/22/67	12.00	Modoc	UNST
			<b>DELBERT GOULD Total</b>		12.00		
A028571	20220		DENNIS DAUGHERTY	10/02/85	1,237.50	Lassen	CEDAR CREEK
			<b>DENNIS DAUGHERTY Total</b>		1,237.50		
A025231	18834	13011	DIXIE VALLEY RANCH	01/04/77	49.90	Lassen	RUSSELL DAIRY CREEK, UNST
			<b>DIXIE VALLEY RANCH Total</b>		49.90		
A025522	17921	11827	DON A GORDON	10/11/77	6.60	Shasta	UNST
A026108	17978	11826	DON A GORDON	10/09/79	8.00	Shasta	UNST
			<b>DON A GORDON Total</b>		14.60		
A021059	14056	8335	DONALD B MCKERN	12/03/62	49.00	Lassen	UNST
			<b>DONALD B MCKERN Total</b>		49.00		
A001503	660	531	DONALD J MARTIN	04/29/26	158.80	Shasta	FALL RIVER
			<b>DONALD J MARTIN Total</b>		158.80		
A013095	8315	4236	EDWARD MOHR	05/16/49	22.10	Modoc	PIT RIVER
			<b>EDWARD MOHR Total</b>		22.10		
A018923	12202	6637	EDWARD F BRUCE	08/19/59	4.00	Shasta	UNST
			<b>EDWARD F BRUCE Total</b>		4.00		

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A022804	15612	9565	ELLEN E TAYLOR	06/06/67	228.00	Shasta	UNST
			<b>ELLEN E TAYLOR Total</b>		228.00		
A026243	18595	13611	ELWOOD FORD	09/13/05	3.80	Shasta	UNST
			<b>ELWOOD FORD Total</b>		3.80		
A017857	11414	6589	ERNEST W BRUCE	10/23/57	135.00	Shasta	PIT RIVER
			<b>ERNEST W BRUCE Total</b>		135.00		
A020025	13599	10798	EUGENE M BREZNOCK	03/09/61	198.00	Lassen	UNST
A020085	13600	8348	EUGENE M BREZNOCK	04/13/61	3.50	Lassen	UNST
			<b>EUGENE M BREZNOCK Total</b>		201.50		
A025806A	018103 A	13107	FRED A COLLINS	07/29/91	3.80	Shasta	UNST
			<b>FRED A COLLINS Total</b>		3.80		
A013659	8943	6444	FREDRICK ANKLIN	03/29/50	840.00	Modoc	HILTON DAIRY CREEK
A014070	8975	9266	FREDRICK ANKLIN	11/22/50	22.50	Modoc	HILTON CREEK
			<b>FREDRICK ANKLIN Total</b>		862.50		
A011557	7210	6446	FROSTY ACRES INCORPORATED	09/18/46	200.00	Lassen	UNST
A011736	7052	4435	FROSTY ACRES INCORPORATED	02/18/47	40.00	Lassen	UNST, WILLOW CREEK
A011737	7053	4436	FROSTY ACRES INCORPORATED	02/18/47	3.00	Lassen	UNST
A019491	13360	8102	FROSTY ACRES INCORPORATED	06/16/60	50.00	Lassen	UNST
A021478	14999	10108	FROSTY ACRES INCORPORATED	09/26/63	230.00	Lassen	WILLOW CREEK
			<b>FROSTY ACRES INCORPORATED Total</b>		523.00		
A025856	20266		GENELLE VOORHEES	10/16/78	14.40	Shasta	UNST, WILLOW CREEK
			<b>GENELLE VOORHEES Total</b>		14.40		
A022399	15231	9037	GEORGE SHEPHERD	02/21/66	15.00	Modoc	UNST
			<b>GEORGE SHEPHERD Total</b>		15.00		
A023826	16662	10945	GEORGE R WRIGHT	07/27/71	17.00	Modoc	CROOKS CANYON, UNST
			<b>GEORGE R WRIGHT Total</b>		17.00		
A000930	428	330	GERALDINE SILVA	02/18/18	142.00	Modoc	UNST
			<b>GERALDINE SILVA Total</b>		142.00		
A025073	17557		GL JOHNS 2002 LIVING TRUST	05/24/76	49.00	Lassen	UNST
			<b>GL JOHNS 2002 LIVING TRUST Total</b>		49.00		
A019145	12799	8943	GOOSE VALLEY RANCH	04/04/07	4,000.00	Shasta	GOOSE CREEK
			<b>GOOSE VALLEY RANCH Total</b>		4,000.00		
A013524	8454	4292	GREEN VALLEY ENTERPRISES	12/29/49	227.50	Modoc	CROOKS CANYON
A014757	9217	4295	GREEN VALLEY ENTERPRISES	04/17/52	187.00	Modoc	CROOKS CANYON
A016046	10303	6950	GREEN VALLEY ENTERPRISES	07/18/63	408.00	Modoc	CROOKS CANYON
			<b>GREEN VALLEY ENTERPRISES Total</b>		822.50		
A026116	17974	13640	GREGORY R CALDWELL	04/11/06	20.00	Shasta	UNST
			<b>GREGORY R CALDWELL Total</b>		20.00		
A015339	9569	7237	HALCUMB CEMETERY DISTRICT	05/12/53	21.30	Shasta	MONTGOMERY CREEK
A021917	15596	10655	HALCUMB CEMETERY DISTRICT	09/25/64	22.00	Shasta	MONTGOMERY CREEK
			<b>HALCUMB CEMETERY DISTRICT Total</b>		43.30		
A019724	12980	9231	HAROLD W SIEMER	09/01/60	49.00	Lassen	UNCR
			<b>HAROLD W SIEMER Total</b>		49.00		
A029085	20238	13367	HARRY C BRAFF	08/10/87	1.10	Modoc	UNST

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>HARRY C BRAFF Total</b>		1.10		
A017256	10861	6858	HARRY J & MILI TURIELLO TRUST	08/27/56	13.50	Shasta	PEACOCK CREEK
A022452	15675	10435	HARRY J & MILI TURIELLO TRUST	04/25/66	36.00	Shasta	PEACOCK CREEK
			<b>HARRY J &amp; MILI TURIELLO TRUST Total</b>		49.50		
A025783	17641	12731	Henrich 2002 Trust	07/13/78	14.90	Shasta	UNSP
A028219	19379	12733	Henrich 2002 Trust	08/15/84	3.60	Shasta	UNSP
A025784A	017642 A	12732	Henrich 2002 Trust	09/16/86	5.00	Shasta	UNST
			<b>Henrich 2002 Trust Total</b>		23.50		
A018783	12140	8414	HOMER J ROBERTS	06/11/59	85.00	Modoc	UNST
A021280	14409	8415	HOMER J ROBERTS	05/13/63	85.00	Modoc	UNST
			<b>HOMER J ROBERTS Total</b>		170.00		
A003353	1768	9722	HOT SPRINGS VALLEY IRRIGATION DISTRICT	04/12/23	48,400.00	Modoc	RATTLESNAKE CREEK
A022427	15227	9723	HOT SPRINGS VALLEY IRRIGATION DISTRICT	03/17/66	20,000.00	Modoc	RATTLESNAKE CREEK
			<b>HOT SPRINGS VALLEY IRRIGATION DISTRICT Total</b>		68,400.00		
A021252	14278	8912	J A CONNER LIVING TRUST	04/23/63	49.00	Lassen	UNST
			<b>J A CONNER LIVING TRUST Total</b>		49.00		
A008627	4736	2378	J SCOTT & ELEANOR J VERMILYEA REVOCABLE TRUST 2000	04/03/36	457.00	Shasta	SHOTGUN CREEK
A021240	14262	9047	J SCOTT & ELEANOR J VERMILYEA REVOCABLE TRUST 2000	04/15/63	42.30	Shasta	UNSP, UNST
			<b>J SCOTT &amp; ELEANOR J VERMILYEA REVOCABLE TRUST 2000 Total</b>		499.30		
A025000	17278	11664	JAMES H BICKFORD	02/23/76	200.00	Lassen	BEAVER CREEK, UNST
			<b>JAMES H BICKFORD Total</b>		200.00		
A002878	2026	1196	JANET PERRY	04/27/32	232.70	Shasta	HAT CREEK
			<b>JANET PERRY Total</b>		232.70		
A009609	5445	4437	JOE RUSS	06/06/39	100.00	Modoc	FRANKLIN CREEK
A009610	5446	4438	JOE RUSS	06/06/39	400.00	Siskiyou	FRANKLIN CREEK
A012005	7349	5491	JOE RUSS	07/24/47	120.00	Modoc	DRY CREEK
A020109	13413	8895	JOE RUSS	05/04/61	110.00	Modoc	UNST
A020936	14192	8896	JOE RUSS	09/11/62	20.00	Modoc	UNST
A021454	14575	8985	JOE RUSS	09/06/63	619.00	Modoc	LINNVILLE CREEK
A024016	16809	12904	JOE RUSS	04/03/72	568.00	Modoc	LINNVILLE CREEK
			<b>JOE RUSS Total</b>		1,937.00		
A022761	15471	9136	JOHN KAHL	04/06/67	2.00	Modoc	UNST
			<b>JOHN KAHL Total</b>		2.00		
A023950	16457	10697	JOHN A YOUNGER	12/16/71	680.00	Modoc	UNDR
			<b>JOHN A YOUNGER Total</b>		680.00		
A016857	10677	5720	JOHN ASKEW	01/27/56	2.00	Lassen	UNST
A026194	18410	13346	JOHN ASKEW	02/01/80	0.80	Lassen	UNST
			<b>JOHN ASKEW Total</b>		2.80		
A002227	1893	4940	JOHN B CROOK	02/23/21	5,250.00	Lassen	COYOTE FLAT DRAINAGE AREA
			<b>JOHN B CROOK Total</b>		5,250.00		
A004700	2608	2083	JOHN F PARRISH	09/04/40	381.80	Shasta	HAT CREEK
			<b>JOHN F PARRISH Total</b>		381.80		
A029321	20792		JOHN W CAPIK	08/19/88	45.00	Modoc	LINNVILLE CREEK, UNST

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A030251	21250		<b>JOHN W CAPIK Total</b>		45.00		
			JOHNSON CREEK DITCH USER'S ASSOCIATION	10/19/09	181.00	Shasta	UNST
			<b>JOHNSON CREEK DITCH USER'S ASSOCIATION Total</b>		181.00		
A025931	18350	13252	JOSEPH LOUIS OSA	02/28/79	27.00	Shasta	UNST
			<b>JOSEPH LOUIS OSA Total</b>		27.00		
A009761	5494	3318	JUANITA C GARDNER TRUST	11/04/39	492.50	Modoc	UNST
			<b>JUANITA C GARDNER TRUST Total</b>		492.50		
A021664	14735	10181	JUNIPER ACRES WATER ASSOCIATION	03/02/64	2.80	Modoc	UNSP
			<b>JUNIPER ACRES WATER ASSOCIATION Total</b>		2.80		
A026244	18418	12315	KEITH MACDONALD	03/03/80	1.10	Shasta	UNST
			<b>KEITH MACDONALD Total</b>		1.10		
A005812	3592	2179	KRAMER RANCH LLC	01/28/28	2,563.40	Lassen, Modoc	WIDOW VALLEY CREEK
A017267	10726	5192	KRAMER RANCH LLC	09/07/56	27.80	Modoc	WIDOW VALLEY CREEK
			<b>KRAMER RANCH LLC Total</b>		2,591.20		
A000245	190	250	LARRY R WILLMORE	02/03/16	181.00	Shasta	CLARK CREEK
			<b>LARRY R WILLMORE Total</b>		181.00		
A026038	18018	11918	LASSEN GOLD MINING INC	06/29/79	55.00	Lassen	UNST
A027034	18637	11923	LASSEN GOLD MINING INC	10/05/81	20.00	Lassen	UNST
			<b>LASSEN GOLD MINING INC Total</b>		75.00		
A024977	17063	11560	LEON URRUTIA	01/20/76	49.00	Modoc	UNST
			<b>LEON URRUTIA Total</b>		49.00		
A013207	8000	5072	LOOKOUT RANCH & LODGE LP	07/05/49	1,500.00	Modoc	TAYLOR CREEK
			<b>LOOKOUT RANCH &amp; LODGE LP Total</b>		1,500.00		
A028610	20217		LOWELL L NOVY	10/31/85	2,790.00	Lassen	CEDAR CREEK
			<b>LOWELL L NOVY Total</b>		2,790.00		
A010820	6290	4188	M D & N L MYERS FAMILY 1986 REVOCABLE TR	05/18/44	90.00	Lassen	CHACE VALLEY CREEK
A013504	8430	6063	M D & N L MYERS FAMILY 1986 REVOCABLE TR	12/09/49	50.00	Lassen	UNST
			<b>M D &amp; N L MYERS FAMILY 1986 REVOCABLE TR Total</b>		140.00		
A022750	15460	9138	MANUEL SOUZA	04/06/67	3.00	Modoc	UNST
A022751	15461	9169	MANUEL SOUZA	04/06/67	3.00	Modoc	UNST
A022752	15462	9172	MANUEL SOUZA	04/06/67	2.50	Modoc	UNST
A022753	15463	9212	MANUEL SOUZA	04/06/67	2.00	Modoc	UNST
A022754	15464	9131	MANUEL SOUZA	04/06/67	1.50	Modoc	UNST
A022755	15465	9139	MANUEL SOUZA	04/06/67	1.70	Modoc	UNST
A022756	15466	9128	MANUEL SOUZA	04/06/67	0.60	Modoc	UNST
A022757	15467	9168	MANUEL SOUZA	04/06/67	2.40	Modoc	UNST
A022758	15468	9175	MANUEL SOUZA	04/06/67	1.00	Modoc	UNST
A022759	15469	9135	MANUEL SOUZA	04/06/67	1.40	Modoc	UNST
A022760	15470	9134	MANUEL SOUZA	04/06/67	1.60	Modoc	UNST
			<b>MANUEL SOUZA Total</b>		20.70		
A020398	13622	9332	MANUEL A MORRIS	09/14/61	38.00	Modoc	KRESGE CANYON
			<b>MANUEL A MORRIS Total</b>		38.00		
A006398	3672	1554	MAPES RANCH, INC	08/07/29	4.30	Lassen	UNST
A019286	12548	7836	MAPES RANCH, INC	03/07/60	1.00	Lassen	UNST
			<b>MAPES RANCH, INC Total</b>		5.30		



## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A013525	8455	4293	MCGARVA RANCH	12/29/49	113.80	Modoc	CROOKS CANYON
A014758	9218	6070	MCGARVA RANCH	04/17/52	93.50	Modoc	CROOKS CANYON
			<b>MCGARVA RANCH Total</b>		207.30		
A019743	13039	10035	MELVIN D MYERS	09/19/60	142.00	Lassen	BUTTE CREEK
			<b>MELVIN D MYERS Total</b>		142.00		
A028518	20218		MERRILL DAUGHERTY	04/14/88	315.00	Lassen	CEDAR CREEK
			<b>MERRILL DAUGHERTY Total</b>		315.00		
A000772	384	67	MICHAEL L SPAETH	10/09/19	22.30	Shasta	BY GONNY CREEK
			<b>MICHAEL L SPAETH Total</b>		22.30		
A026520	18999	13439	MILANO LAND AND CATTLE CO LLC	09/13/99	49.00	Modoc	BLACKS CANYON
A026521	19000	13440	MILANO LAND AND CATTLE CO LLC	09/13/99	142.00	Modoc	BLACKS CANYON
			<b>MILANO LAND AND CATTLE CO LLC Total</b>		191.00		
A021448	14429	10822	MONTGOMERY CREEK COMMUNITY CHURCH	09/03/63	0.20	Shasta	MONTGOMERY CREEK
			<b>MONTGOMERY CREEK COMMUNITY CHURCH Total</b>		0.20		
A016216	10191	5073	MORGAN RANCH COMPANY INC	01/24/55	200.00	Modoc	UNST
			<b>MORGAN RANCH COMPANY INC Total</b>		200.00		
A026197	18187	12069	NELLIE M DUNBAR	02/11/80	1.00	Shasta	UNST
			<b>NELLIE M DUNBAR Total</b>		1.00		
A015902	9988	5233	NELSON RANCHES	06/10/54	515.00	Modoc	JIM CREEK
A021318	14730	9346	NELSON RANCHES	05/31/63	215.00	Modoc	JIM CREEK
			<b>NELSON RANCHES Total</b>		730.00		
A016855	10715	5989	NOR CAL LAND & CATTLE CO	01/26/56	2.00	Lassen	UNST
			<b>NOR CAL LAND &amp; CATTLE CO Total</b>		2.00		
A030720	20995		OAK RUN LUMBER CO LLC	06/23/98	3.00	Shasta	UNST
			<b>OAK RUN LUMBER CO LLC Total</b>		3.00		
A003566	1567	627	PARKS FAMILY 1995 REVOCABLE TRUST	08/04/23	3.00	Lassen	UNXX
			<b>PARKS FAMILY 1995 REVOCABLE TRUST Total</b>		3.00		
A008649	4793	2440	Patricia H Bushey	04/27/36	0.60	Modoc	UNSP
			<b>Patricia H Bushey Total</b>		0.60		
A027005	19072	12821	PAUL R JOLLY	09/15/81	3.90	Shasta	UNST
			<b>PAUL R JOLLY Total</b>		3.90		
A028892	20279		Peter D Stent	06/11/91	25.00	Shasta	BEAR CREEK
			<b>Peter D Stent Total</b>		25.00		
A026239	18761		PHILIP R GUNSAULS	02/28/80	35.00	Modoc	HALLS CANYON
			<b>PHILIP R GUNSAULS Total</b>		35.00		
A008194	4668	2076	PHYLLIS A HARRIS	12/22/34	200.00	Modoc	CLEAR LAKE
			<b>PHYLLIS A HARRIS Total</b>		200.00		
A001538	697	353	Pickering Family Trust	05/12/24	456.20	Shasta	FALL RIVER
			<b>Pickering Family Trust Total</b>		456.20		
A028570	20219		Pine Creek Cattle Company	10/02/85	157.50	Lassen	CEDAR CREEK
			<b>Pine Creek Cattle Company Total</b>		157.50		
A024696	18118	11874	R A STANFORD	10/17/74	23.00	Modoc	THOMAS & BAYNES DITCH, UNST
			<b>R A STANFORD Total</b>		23.00		
A014474	8866	6313	RAMIRO CHAVEZ	09/11/51	14.00	Lassen, Modoc	KELLY DRAW, UNKNOWN
			<b>RAMIRO CHAVEZ Total</b>		14.00		

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A000992	2307	1711	RAY BREINER	05/29/18	837.00	Modoc	FITZHUGH CREEK
A000993	2308	1712	RAY BREINER	05/29/18	457.00	Modoc	FITZHUGH CREEK
A000994	2309	1713	RAY BREINER	05/29/18	157.00	Modoc	FITZHUGH CREEK
A001252	2310	1714	RAY BREINER	04/21/19	400.00	Modoc	UNST
A007458	4506	4879	RAY BREINER	12/08/32	706.00	Modoc	FITZHUGH CREEK
			<b>RAY BREINER Total</b>		2,557.00		
A027787	19030	11857	REDWOOD ROD & GUN CLUB	06/30/83	3.30	Modoc	BOWMAN SPRINGS
			<b>REDWOOD ROD &amp; GUN CLUB Total</b>		3.30		
A025806B	018103 B	13132	RICHARD D WILLARD	08/11/78	2.50	Shasta	UNST
			<b>RICHARD D WILLARD Total</b>		2.50		
A019517	13969	9567	RICHARD E SHOEMAKER	07/06/60	44.00	Lassen	FRAZIER CREEK
			<b>RICHARD E SHOEMAKER Total</b>		44.00		
A000135	69	284	RICHARD L JENNINGS	09/16/15	1,428.00	Modoc	PORTUGE FLAT DRAINAGE
A000486	202	53	RICHARD L JENNINGS	09/27/16	146.00	Modoc	RALSTON CREEK
A010835	6340	3101	RICHARD L JENNINGS	07/07/44	149.00	Modoc	RALSTON GULCH
			<b>RICHARD L JENNINGS Total</b>		1,723.00		
A019209	13968	8686	RICHARD W CALLISON	02/02/60	126.30	Lassen	FRAZIER CREEK
			<b>RICHARD W CALLISON Total</b>		126.30		
A014321	8871	5241	ROBERT HEATON	07/01/58	47.10	Shasta	ROARING CREEK
			<b>ROBERT HEATON Total</b>		47.10		
A022203	15185	9750	ROBERT C MCDONALD	06/23/65	20.00	Lassen	UNST
			<b>ROBERT C MCDONALD Total</b>		20.00		
A013466	8323	6293	ROBERT C PEDOTTI	11/16/49	565.00	Modoc	RYE GRASS SWALE
A018851	12597	9869	ROBERT C PEDOTTI	07/10/59	669.00	Modoc	RYE GRASS SWALE
			<b>ROBERT C PEDOTTI Total</b>		1,234.00		
A002237	987	444	Robert C. Mann	01/11/26	153.30	Modoc	PIT RIVER
			<b>Robert C. Mann Total</b>		153.30		
A021090	14039	8599	ROBERT H MACKEY & SONS INC	12/21/62	3.50	Modoc	UNST
A021091	14040	8600	ROBERT H MACKEY & SONS INC	12/21/62	11.00	Modoc	UNST
			<b>ROBERT H MACKEY &amp; SONS INC Total</b>		14.50		
A026159	18367	12239	ROGER ERICKSON	12/28/79	0.50	Modoc	CANTRELL CREEK
			<b>ROGER ERICKSON Total</b>		0.50		
A001164	573	318	ROLLIE L GILLIAM	02/03/19	400.00	Modoc	RYE GRASS SWALE
A003398	1769	1813	ROLLIE L GILLIAM	05/04/23	130.00	Modoc	RYE GRASS SWALE
			<b>ROLLIE L GILLIAM Total</b>		530.00		
A021444	14410	10692	Ronald M LaGrande	08/27/63	93.00	Modoc	COOLEY GULCH
			<b>Ronald M LaGrande Total</b>		93.00		
A025784B	017642 B	12412	RONALD STICE	09/16/86	3.40	Shasta	UNST
			<b>RONALD STICE Total</b>		3.40		
A022562	15288	9753	RONALD VIERRA	08/29/66	24.00	Lassen	UNST
			<b>RONALD VIERRA Total</b>		24.00		
A000596	346	252	RONALD L SCHLUTER	02/24/17	563.00	Modoc	EMIGRANT CREEK
A003050	1396	1039	RONALD L SCHLUTER	09/22/22	295.00	Modoc	UNST

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>RONALD L SCHLUTER Total</b>		858.00		
A020754	14061	9326	RONALD WESLEY KETLER	04/24/62	180.60	Modoc	UNST
A021405	14789	9325	RONALD WESLEY KETLER	07/23/63	55.00	Modoc	UNST, UNXX
A021908	15045	9336	RONALD WESLEY KETLER	09/17/64	45.00	Modoc	UNST
			<b>RONALD WESLEY KETLER Total</b>		280.60		
A000065	630	1146	SARAH WADE	03/15/32	30.70	Lassen	WILLOW CREEK
			<b>SARAH WADE Total</b>		30.70		
A021346	14382	8764	SHIRLEY A HUGHES TRUSTOR	06/18/63	18.00	Modoc	UNST
			<b>SHIRLEY A HUGHES TRUSTOR Total</b>		18.00		
A003220	1453	411	SIERRA PACIFIC INDUSTRIES	01/12/23	135.80	Shasta	NELSON CREEK
			<b>SIERRA PACIFIC INDUSTRIES Total</b>		135.80		
A014477	9129	4385	SL RANCH	05/21/56	200.00	Modoc	CROOKS CANYON
			<b>SL RANCH Total</b>		200.00		
A007860	4477	2474	SOUTH FORK IRRIGATION DISTRICT	03/05/34	17,000.00	Modoc	SOUTH FORK PIT RIVER, WEST VALLEY CREEK
A019309	12963	10603	SOUTH FORK IRRIGATION DISTRICT	03/14/60	2,240.00	Modoc	SOUTH FORK PIT RIVER, WEST VALLEY CREEK
			<b>SOUTH FORK IRRIGATION DISTRICT Total</b>		19,240.00		
A026955	18635	13409	Stephen Lyon	08/11/81	0.40	Shasta	UNSP
			<b>Stephen Lyon Total</b>		0.40		
A026795	18852	12922	STEPHEN C NELSON	04/20/81	49.00	Modoc	UNST
			<b>STEPHEN C NELSON Total</b>		49.00		
A016526	10828	8665	Steven Barber	08/15/55	5.40	Modoc	UNSP
A021923	14862	9173	Steven Barber	10/06/64	20.00	Modoc	UNSP
			<b>Steven Barber Total</b>		25.40		
A000338	137	54	SX Lowry Ranch	05/15/16	550.00	Modoc	GOVERNMENT CORRALS FLAT
A000421	885	1401	SX Lowry Ranch	08/03/16	1,550.00	Modoc	ANTELOPE PLAINS
A001108	568	4410	SX Lowry Ranch	10/05/18	380.00	Modoc	UNST
A023280	16046	10913	SX Lowry Ranch	05/15/79	2,000.00	Modoc	DOBE SWALE
A020904	14743	12437	SX Lowry Ranch	04/24/89	970.00	Modoc	UNST
			<b>SX Lowry Ranch Total</b>		5,450.00		
A006291	3873		TERRAL C YORK	05/17/29	500.00	Modoc	PARKER CREEK
			<b>TERRAL C YORK Total</b>		500.00		
A006290	3872		TERRY YORK	05/17/29	180.00	Modoc	PARKER CREEK
			<b>TERRY YORK Total</b>		180.00		
A021455	14781	11127	THE DENIS M ROUSE 1993 TRUST	09/10/63	34.00	Lassen	UNST (AKA HOMER JACK DITCH)
			<b>THE DENIS M ROUSE 1993 TRUST Total</b>		34.00		
A030197	20842	13614	THE HUNT FAMILY TRUST	11/08/05	4.50	Modoc	UNST
			<b>THE HUNT FAMILY TRUST Total</b>		4.50		
A020916	14574	10783	THE MCARTHUR 1989 TRUST	08/29/62	1,800.00	Lassen	EAST FORK JUNIPER CREEK, UNST
			<b>THE MCARTHUR 1989 TRUST Total</b>		1,800.00		
A025081	16924	11432	THOMAS M ORIGER	06/08/76	0.90	Modoc	UNST
			<b>THOMAS M ORIGER Total</b>		0.90		
A022935	15594	9632	TIM D BABCOCK	10/23/67	10.50	Lassen	UNST
			<b>TIM D BABCOCK Total</b>		10.50		
A028656	20237	13590	TIMOTHY W SKALLAND	03/19/04	6.00	Shasta	UNST (AKA INDIAN CREEK)
			<b>TIMOTHY W SKALLAND Total</b>		6.00		

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A020062	13147	8361	TOM GIFFORD	03/31/61	30.00	Modoc	UNST
A020063	13148	9260	TOM GIFFORD	03/31/61	42.00	Modoc	TURNER CREEK
			<b>TOM GIFFORD Total</b>		72.00		
A019862	13061	9279	TOMMY B. ESPERANCE	04/09/70	30.00	Lassen	UNST
			<b>TOMMY B. ESPERANCE Total</b>		30.00		
A000420	188	298	TRINITY MEADOWS LP	11/13/23	553.40	Shasta	HATCHET CREEK
			<b>TRINITY MEADOWS LP Total</b>		553.40		
A000760	852	465	U S FISH & WILDLIFE SERVICE	12/29/03	2,709.00	Modoc	PINE CREEK
A001042	853	466	U S FISH & WILDLIFE SERVICE	12/29/03	1,191.00	Modoc	PINE CREEK, STOCKDILL SLOUGH
A001321	854	13528	U S FISH & WILDLIFE SERVICE	12/29/03	6,100.00	Modoc	PARKER CREEK, STOCKDILL SLOUGH
A012263	7291	4822	U S FISH & WILDLIFE SERVICE	12/29/03	1,100.00	Modoc	PINE CREEK
			<b>U S FISH &amp; WILDLIFE SERVICE Total</b>		11,100.00		
A012068	7103	3978	U S LASSEN NATL FOREST	09/04/47	1.10	Lassen	BOARD CABIN SPRING
A012069	7104	4001	U S LASSEN NATL FOREST	09/04/47	0.50	Lassen	FIVE TROUGHS SPRING
A014978	9234	4535	U S LASSEN NATL FOREST	08/19/52	0.80	Lassen	PAT MORRIS SPRING
A018840	12883	9191	U S LASSEN NATL FOREST	07/01/59	650.00	Lassen	LITTLE DAVIS CREEK, UNST
A019698	12777	7758	U S LASSEN NATL FOREST	08/22/60	0.40	Shasta	COBBLE SPRING
A019699	12778	7759	U S LASSEN NATL FOREST	08/22/60	0.40	Lassen	CONE CACHE SPRING
A019700	12779	7760	U S LASSEN NATL FOREST	08/22/60	1.10	Shasta	COYOTE SPRING
A021662	14493	8914	U S LASSEN NATL FOREST	03/02/64	1.90	Lassen	WILLOW SPRING
A021663	14494	8915	U S LASSEN NATL FOREST	03/02/64	1.30	Siskiyou	WILEY RANCH SPRINGS
A025248	17964	12076	U S LASSEN NATL FOREST	01/19/77	650.00	Lassen	BIG JACK LAKE
A025660	17965	12077	U S LASSEN NATL FOREST	01/27/78	50.00	Lassen	BIG JACK LAKE
A018105A01	14822	11220	U S LASSEN NATL FOREST	04/30/82	190.00	Shasta	PROCTOR CREEK, UNST
A018105A02	14822	11220	U S LASSEN NATL FOREST	04/30/82	40.00	Shasta	PROCTOR CREEK, UNST
A027411	20039	12932	U S LASSEN NATL FOREST	07/13/82	0.10	Shasta	SOLDIER CREEK
A027412	20040	12933	U S LASSEN NATL FOREST	07/13/82	0.20	Shasta	SOLDIER CREEK
A029987	20731		U S LASSEN NATL FOREST	08/09/91	2.80	Siskiyou	MAYFIELD SPRING
A030254	20752		U S LASSEN NATL FOREST	05/07/93	73.50	Shasta	UNST
			<b>U S LASSEN NATL FOREST Total</b>		1,664.10		
A009132	5320	3945	U S MODOC NATL FOREST	09/29/37	0.70	Siskiyou	HEMLOCK SPRING
A009202	5239	4577	U S MODOC NATL FOREST	12/10/37	0.70	Siskiyou	SCHONCHIN SPRING
A010841	6296	5038	U S MODOC NATL FOREST	07/18/44	0.80	Modoc	HARRIS SPRING
A012708	7536	3580	U S MODOC NATL FOREST	09/23/48	0.30	Modoc	BOTTLE CREEK, BOTTLE SPRING
A013190	7748	3581	U S MODOC NATL FOREST	06/30/49	0.40	Modoc	LAYTON SPRING
A013194	7751	4023	U S MODOC NATL FOREST	06/30/49	0.40	Modoc	COTTONWOOD FLAT SPRING
A013213	7752	4401	U S MODOC NATL FOREST	07/08/49	0.20	Lassen	UNSP
A013214	7753	4402	U S MODOC NATL FOREST	07/08/49	0.20	Modoc	UNSP
A013215	7754	4396	U S MODOC NATL FOREST	07/08/49	0.70	Lassen	UNSP
A013821	8359	3894	U S MODOC NATL FOREST	06/28/50	0.20	Modoc	HOWARDS GULCH CAMPGROUND SPRING
A014088	8664	4277	U S MODOC NATL FOREST	12/04/50	0.10	Modoc	WEST VALLEY SPRING
A014089	8665	4986	U S MODOC NATL FOREST	12/04/50	0.10	Modoc	FITZHUGH SPRING
A014090	8666	4484	U S MODOC NATL FOREST	12/04/50	0.30	Modoc	GROUSE SPRING
A014091	8742	4281	U S MODOC NATL FOREST	12/04/50	0.20	Modoc	COWHEAD SPRING
A018091	11574	6605	U S MODOC NATL FOREST	04/09/58	8.50	Modoc	UNST

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A018203	11655	6376 U S	MODOC NATL FOREST	06/30/58	0.10	Modoc	UNSP
A018204	11656	6377 U S	MODOC NATL FOREST	06/30/58	0.10	Modoc	UNSP
A018636	12026	6619 U S	MODOC NATL FOREST	04/10/59	0.30	Lassen	RICHMAN SPRING
A019163	12503	7311 U S	MODOC NATL FOREST	01/04/60	0.50	Lassen	SUMMIT SPRING
A019164	12504	6712 U S	MODOC NATL FOREST	01/04/60	0.10	Modoc	HUNTER SPRING
A019165	12467	7467 U S	MODOC NATL FOREST	01/04/60	0.10	Modoc	HIDDEN SPRING
A019166	12468	6713 U S	MODOC NATL FOREST	01/04/60	0.20	Modoc	QUAIL SPRING
A019189	12469	7312 U S	MODOC NATL FOREST	01/25/60	0.20	Lassen	CHICKEN SPRING
A019283	12505	7532 U S	MODOC NATL FOREST	03/07/60	0.40	Modoc	RONEY SPRING
A019284	12506	6714 U S	MODOC NATL FOREST	03/07/60	0.40	Modoc	STUDLEY SPRING
A019285	12507	7533 U S	MODOC NATL FOREST	03/07/60	0.20	Modoc	HORSEHEAD SPRING
A019340	12470	6715 U S	MODOC NATL FOREST	04/04/60	0.30	Modoc	HARPER SPRING
A019365	12508	7534 U S	MODOC NATL FOREST	04/20/60	0.20	Modoc	FERN SPRING
A019367	12510	7314 U S	MODOC NATL FOREST	04/20/60	0.20	Lassen	MUD SPRING
A019368	12511	6716 U S	MODOC NATL FOREST	04/20/60	0.20	Lassen	WATER CANYON SPRING
A019369	12512	7535 U S	MODOC NATL FOREST	04/20/60	0.20	Modoc	HOG GULCH SPRING
A019370	12557	6717 U S	MODOC NATL FOREST	04/20/60	0.20	Lassen	DAGO SPRINGS
A019970	13069	8052 U S	MODOC NATL FOREST	02/07/61	0.30	Modoc	FOX MOUNTAIN SPRING
A019971	13070	8053 U S	MODOC NATL FOREST	02/07/61	0.40	Modoc	PLUM SPRING
A019972	13071	8333 U S	MODOC NATL FOREST	02/07/61	7.50	Lassen	UNSP
A019973	13072	8054 U S	MODOC NATL FOREST	02/07/61	0.20	Lassen	SCHOTT SPRING
A020112	13484	8055 U S	MODOC NATL FOREST	05/08/61	0.10	Lassen	DEER SPRING
A020113	13485	8056 U S	MODOC NATL FOREST	05/08/61	0.10	Lassen	STUMP SPRING
A020716	13706	8558 U S	MODOC NATL FOREST	04/10/62	0.20	Lassen	WALKER FLAT DRAW SPRING
A020717	13707	8559 U S	MODOC NATL FOREST	04/10/62	0.30	Lassen	INDIAN SPRING
A021095	14181	8841 U S	MODOC NATL FOREST	01/02/63	0.20	Lassen	UNSP
A021097	14183	8842 U S	MODOC NATL FOREST	01/02/63	0.20	Modoc	UNSP
A021099	14185	8843 U S	MODOC NATL FOREST	01/02/63	0.20	Lassen	UNSP
A021100	14095	8653 U S	MODOC NATL FOREST	01/02/63	0.20	Modoc	UNSP
A021101	14096	8592 U S	MODOC NATL FOREST	01/02/63	0.30	Modoc	MUD SPRING
A021102	14097	8643 U S	MODOC NATL FOREST	01/02/63	0.30	Modoc	PINE SPRING
A021103	14098	8622 U S	MODOC NATL FOREST	01/02/63	0.60	Modoc	HOSKINS SPRING
A021104	14099	8623 U S	MODOC NATL FOREST	01/02/63	0.80	Modoc	HEAD OF RUSH CREEK SPRING
A021105	14100	8654 U S	MODOC NATL FOREST	01/02/63	0.50	Modoc	CHALK SPRING
A021165	14101	8659 U S	MODOC NATL FOREST	02/18/63	0.70	Modoc	RONEY FLAT SPRING
A021491	14341	8773 U S	MODOC NATL FOREST	10/07/63	0.50	Lassen	DEER SPRING
A021492	14342	8838 U S	MODOC NATL FOREST	10/07/63	0.50	Lassen	BUNSELMEIER SPRING
A021501	14422	8840 U S	MODOC NATL FOREST	10/15/63	0.50	Lassen	JIMMY PACKWOOD SPRING
A021502	14489	8906 U S	MODOC NATL FOREST	10/15/63	0.50	Lassen	GERIG SPRING
A021503	14536	8907 U S	MODOC NATL FOREST	10/15/63	0.40	Modoc	DEEP CUT SPRING
A026211	17982	12567 U S	MODOC NATL FOREST	02/20/80	0.20	Lassen	UNST
A026216	17985	12091 U S	MODOC NATL FOREST	02/20/80	0.20	Lassen	UNST
A026217	17986	12092 U S	MODOC NATL FOREST	02/20/80	0.20	Lassen	UNST
A026218	17987	12093 U S	MODOC NATL FOREST	02/20/80	0.20	Lassen	UNST
A026220	17989	12094 U S	MODOC NATL FOREST	02/20/80	0.20	Lassen	UNST

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A026221	17990	12095	U S MODOC NATL FOREST	02/20/80	0.20	Lassen	WINDMILL FLAT
A026222	17991	12096	U S MODOC NATL FOREST	02/20/80	0.10	Lassen	UNSP
A026288	18180	12097	U S MODOC NATL FOREST	04/10/80	0.20	Lassen	UNST
A026290	18182	12098	U S MODOC NATL FOREST	04/10/80	0.20	Lassen	UNST
A026348	18251	12090	U S MODOC NATL FOREST	05/14/80	0.20	Modoc	UNST
A026405	18265	12099	U S MODOC NATL FOREST	06/06/80	0.10	Modoc	SHAKE CANYON
A026477	18381	12100	U S MODOC NATL FOREST	07/29/80	0.20	Lassen	UNST
A026897	19797	13446	U S MODOC NATL FOREST	06/30/81	0.10	Modoc	UNST
A026893	19794		U S MODOC NATL FOREST	06/30/81	0.20	Modoc	UNST
A026894	19795		U S MODOC NATL FOREST	06/30/81	0.20	Modoc	UNST
A026898	19798		U S MODOC NATL FOREST	06/30/81	0.20	Lassen	UNST
A027231	18659	12568	U S MODOC NATL FOREST	03/09/82	0.20	Lassen	UNST
A027233	18661	12568	U S MODOC NATL FOREST	03/09/82	0.20	Lassen	UNST
A027234	18662	12570	U S MODOC NATL FOREST	03/09/82	0.20	Lassen	UNST
A027235	18663	12571	U S MODOC NATL FOREST	03/09/82	0.20	Lassen	COYOTE FLAT DRAW
A027236	18664	12572	U S MODOC NATL FOREST	03/09/82	0.20	Lassen	UNST
A027237	18665	12573	U S MODOC NATL FOREST	03/09/82	0.20	Lassen	UNST
A027238	18666	12574	U S MODOC NATL FOREST	03/09/82	0.20	Lassen	UNST
A027431	18853	13495	U S MODOC NATL FOREST	07/15/82	0.10	Modoc	UNST
A027647	19599		U S MODOC NATL FOREST	02/01/83	102.00	Lassen	UNST
A027648	19600		U S MODOC NATL FOREST	02/01/83	96.50	Lassen	UNST
A027732	19288	12746	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027733	19289	12747	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027734	19290	12748	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027735	19291	12749	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027737	19293	12750	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027738	19294	12738	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027739	19295	12752	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027740	19296	12753	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027741	19297	12754	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027742	19298	12755	U S MODOC NATL FOREST	04/27/83	0.20	Lassen	UNST
A027999	19750	13062	U S MODOC NATL FOREST	03/15/84	0.10	Modoc	UNST
A028001	19752	13359	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028002	19753	13360	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028004	19755	13015	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028006	19757	13016	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028007	19758	13017	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028008	19759	13018	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028009	19760	13019	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028011	19762	13361	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028012	19763	13362	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028014	19765	13020	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028019	19770	13021	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028021	19772	13493	U S MODOC NATL FOREST	03/15/84	0.20	Lassen	UNST
A028022	19773	13022	U S MODOC NATL FOREST	03/15/84	0.20	Lassen	COYOTE FLAT DRAW

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A028024	19775	13023	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	STONE COAL CREEK
A028027	19778	13466	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	STONE COAL CREEK
A028028	19779	13024	U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028030	19781	13025	U S MODOC NATL FOREST	03/15/84	0.20	Lassen	WALKER DRAW
A028031	19782	13397	U S MODOC NATL FOREST	03/15/84	0.20	Lassen	UNST
A028000	19751		U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028005	19756		U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028015	19766		U S MODOC NATL FOREST	03/15/84	0.20	Lassen	UNST
A028016	19767		U S MODOC NATL FOREST	03/15/84	0.20	Lassen	UNST
A028017	19768		U S MODOC NATL FOREST	03/15/84	0.20	Lassen	CARY SPRING
A028018	19769		U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028026	19777		U S MODOC NATL FOREST	03/15/84	0.20	Modoc	MUD SPRING
A028029	19780		U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028032	19783		U S MODOC NATL FOREST	03/15/84	0.20	Modoc	UNST
A028033	19784		U S MODOC NATL FOREST	03/15/84	0.20	Modoc	DEEP CUT SPRINGS
A028398	19671	13366	U S MODOC NATL FOREST	02/26/85	0.10	Lassen	UNST
A028400	19673	13374	U S MODOC NATL FOREST	02/26/85	0.10	Modoc	UNST
A028838	20023	13496	U S MODOC NATL FOREST	05/20/86	0.20	Lassen	UNST
A028841	20026	13453	U S MODOC NATL FOREST	05/20/86	0.20	Lassen	AMBROSE CANYON
A028845	20030	13365	U S MODOC NATL FOREST	05/20/86	0.20	Lassen	UNST
A028846	20031	13392	U S MODOC NATL FOREST	05/20/86	0.20	Lassen	UNST
A028837	20022		U S MODOC NATL FOREST	05/20/86	0.20	Modoc	UNST
A028839	20024		U S MODOC NATL FOREST	05/20/86	0.20	Modoc	UNST
A028840	20025		U S MODOC NATL FOREST	05/20/86	0.20	Modoc	UNST
A028842	20027		U S MODOC NATL FOREST	05/20/86	0.20	Lassen	UNST
A028843	20028		U S MODOC NATL FOREST	05/20/86	0.20	Lassen	SOUTH FORK JUNIPER CREEK
A028844	20029		U S MODOC NATL FOREST	05/20/86	0.20	Lassen	UNST
A028847	20032	13545	U S MODOC NATL FOREST	07/11/03	0.20	Lassen	UNST
A026899	19799	13550	U S MODOC NATL FOREST	07/22/03	0.20	Lassen	UNST
A026895	19796	13556	U S MODOC NATL FOREST	09/10/03	0.20	Modoc	ROCK SPRINGS
A028399	19672	13567	U S MODOC NATL FOREST	09/24/03	0.10	Lassen	UNST
A027432	18854	13574	U S MODOC NATL FOREST	11/24/03	0.10	Modoc	YELLOWJACKET SPRING
A028836	20021	13573	U S MODOC NATL FOREST	11/24/03	0.20	Lassen	UNST
<b>U S MODOC NATL FOREST Total</b>					247.00		
A013019	7741	3782	U S SHASTA-TRINITY NATL FOREST	04/05/49	0.20	Shasta	DEEP CREEK
A013186	8047	3783	U S SHASTA-TRINITY NATL FOREST	06/30/49	1.60	Siskiyou	SLAGGER CAMP SPRING
A013187	8048	3784	U S SHASTA-TRINITY NATL FOREST	06/30/49	1.60	Siskiyou	LOST SPRINGS
A013189	8050	3786	U S SHASTA-TRINITY NATL FOREST	06/30/49	1.40	Siskiyou	BEAR SPRINGS
A020670	13640	8641	U S SHASTA-TRINITY NATL FOREST	03/21/62	1.00	Siskiyou	BELNAP SPRING
A020671	13641	8674	U S SHASTA-TRINITY NATL FOREST	03/21/62	0.90	Siskiyou	HARRIS SPRING
<b>U S SHASTA-TRINITY NATL FOREST Total</b>					6.70		
A016866	10676	6381	US BUREAU OF LAND MANAGEMENT	01/31/56	1.50	Lassen	UNST
A016868	10689	6382	US BUREAU OF LAND MANAGEMENT	01/31/56	10.80	Lassen	UNST
A016869	10639	6078	US BUREAU OF LAND MANAGEMENT	01/31/56	2.90	Lassen	BALD MOUNTAIN LAKE, UNST
A016870	10640	6079	US BUREAU OF LAND MANAGEMENT	01/31/56	0.20	Lassen	UNDR

## Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A016871	10641	6080	US BUREAU OF LAND MANAGEMENT	01/31/56	4.00	Lassen	UNST
A016873	10643	6081	US BUREAU OF LAND MANAGEMENT	01/31/56	4.40	Lassen	NORTH GULCH, SPRING GULCH, UNST
A016899	10719	6540	US BUREAU OF LAND MANAGEMENT	02/20/56	10.00	Shasta	UNST
A018105B	14823	11219	US BUREAU OF LAND MANAGEMENT	04/24/58	180.00	Shasta	PROCTER CREEK, UNST
A020527	13928	8530	US BUREAU OF LAND MANAGEMENT	12/15/61	54.70	Shasta	UNST
A020528	13601	8140	US BUREAU OF LAND MANAGEMENT	12/15/61	6.00	Shasta	UNST
A020933	13992	8568	US BUREAU OF LAND MANAGEMENT	09/06/62	6.70	Shasta	UNST
A020998	14034	8590	US BUREAU OF LAND MANAGEMENT	10/29/62	4.70	Shasta	UNST
A021060	14078	8581	US BUREAU OF LAND MANAGEMENT	12/03/62	0.10	Shasta	UNST
A021774	14725	9233	US BUREAU OF LAND MANAGEMENT	05/18/64	6.40	Shasta	UNST
A027616	19354	12775	US BUREAU OF LAND MANAGEMENT	12/23/82	1,533.00	Lassen	DRY CREEK
A028088	19503	13261	US BUREAU OF LAND MANAGEMENT	03/29/84	0.80	Modoc	UNST
A028091	19506	13085	US BUREAU OF LAND MANAGEMENT	03/29/84	0.60	Modoc	UNST
A028093	19508	13371	US BUREAU OF LAND MANAGEMENT	03/29/84	0.90	Lassen	UNST
A028095	19510	13086	US BUREAU OF LAND MANAGEMENT	03/29/84	1.00	Modoc	UNST
A028096	19511	13087	US BUREAU OF LAND MANAGEMENT	03/29/84	0.40	Modoc	UNST
A028098	19512	13303	US BUREAU OF LAND MANAGEMENT	03/29/84	0.80	Lassen	UNST
A028099	19513	13262	US BUREAU OF LAND MANAGEMENT	03/29/84	1.20	Lassen	UNST
A028089	19504		US BUREAU OF LAND MANAGEMENT	03/29/84	3.00	Modoc	UNST
A028090	19505		US BUREAU OF LAND MANAGEMENT	03/29/84	1.00	Modoc	UNST
A028094	19509		US BUREAU OF LAND MANAGEMENT	03/29/84	1.10	Lassen	UNST
A028261	19536	13349	US BUREAU OF LAND MANAGEMENT	10/01/84	1.20	Modoc	UNST
A028264	19539	13370	US BUREAU OF LAND MANAGEMENT	10/01/84	0.90	Lassen	UNST
A028265	19540	13373	US BUREAU OF LAND MANAGEMENT	10/01/84	0.30	Lassen	UNST
A028270	19545	13364	US BUREAU OF LAND MANAGEMENT	10/01/84	0.50	Modoc	UNST
A028271	19546	13391	US BUREAU OF LAND MANAGEMENT	10/01/84	1.20	Modoc	UNST
A028272	19547	13358	US BUREAU OF LAND MANAGEMENT	10/01/84	0.20	Modoc	UNST
A028273	19548	13338	US BUREAU OF LAND MANAGEMENT	10/01/84	0.50	Lassen	UNST
A028274	19549	13335	US BUREAU OF LAND MANAGEMENT	10/01/84	0.40	Lassen	UNST
A028275	19550	13376	US BUREAU OF LAND MANAGEMENT	10/01/84	0.80	Lassen	UNST
A028276	19551	13334	US BUREAU OF LAND MANAGEMENT	10/01/84	0.40	Lassen	UNST
A028262	19537		US BUREAU OF LAND MANAGEMENT	10/01/84	1.10	Lassen	UNST
A028701	19953	13464	US BUREAU OF LAND MANAGEMENT	01/03/86	1.00	Modoc	UNST
A028702	19954	13327	US BUREAU OF LAND MANAGEMENT	01/03/86	1.20	Lassen	UNST
A028703	19955	13330	US BUREAU OF LAND MANAGEMENT	01/03/86	0.70	Lassen	UNST
A028704	19956	13336	US BUREAU OF LAND MANAGEMENT	01/03/86	0.40	Modoc	UNST
A028709	19961	13319	US BUREAU OF LAND MANAGEMENT	01/03/86	0.60	Lassen	UNST
A028706	19958		US BUREAU OF LAND MANAGEMENT	01/03/86	5.20	Lassen	UNST
A028717	19946	13341	US BUREAU OF LAND MANAGEMENT	01/14/86	0.50	Lassen	UNST
A028718	19947	13084	US BUREAU OF LAND MANAGEMENT	01/14/86	0.80	Lassen	UNST
A028721	19950	13343	US BUREAU OF LAND MANAGEMENT	01/14/86	1.10	Modoc	UNST
A028893	20111	13372	US BUREAU OF LAND MANAGEMENT	09/08/86	0.40	Modoc	UNST
A028894	20112	13297	US BUREAU OF LAND MANAGEMENT	09/08/86	1.10	Modoc	UNST
A029230	20724		US BUREAU OF LAND MANAGEMENT	04/19/88	1.30	Lassen	UNST
A029232	20725		US BUREAU OF LAND MANAGEMENT	04/19/88	1.30	Lassen	UNST



Pit River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A029589	20649	13333	US BUREAU OF LAND MANAGEMENT	10/16/89	0.40	Lassen	UNST
A031051	21129		US BUREAU OF LAND MANAGEMENT	05/12/00	6.00	Modoc	UNST
A031052	21130		US BUREAU OF LAND MANAGEMENT	05/12/00	9.00	Modoc	UNST
A031053	21131		US BUREAU OF LAND MANAGEMENT	05/12/00	15.00	Modoc	UNST
A028258	19533	13555	US BUREAU OF LAND MANAGEMENT	09/10/03	0.40	Lassen	UNST
A028257	19532	13572	US BUREAU OF LAND MANAGEMENT	11/24/03	0.60	Lassen	UNST
A028259	19534	13652	US BUREAU OF LAND MANAGEMENT	06/30/06	0.80	Lassen	UNST
A028256	19531	13673	US BUREAU OF LAND MANAGEMENT	10/23/06	0.60	Lassen	UNST
			<b>US BUREAU OF LAND MANAGEMENT Total</b>		1,892.10		
A005804	3240	1087	WARREN L WEBER	01/13/28	136.20	Modoc	DRY CREEK
			<b>WARREN L WEBER Total</b>		136.20		
A025140	17110	11557	WILLIAM PAPEZ	09/01/76	8.50	Modoc	UNST
A027961	19258	12760	WILLIAM PAPEZ	01/26/84	3.50	Modoc	UNST
			<b>WILLIAM PAPEZ Total</b>		12.00		
A027438	19320		WILLIAM C PROCK	07/16/82	229.00	Modoc	UNST
			<b>WILLIAM C PROCK Total</b>		229.00		
			<b>Grand Total</b>		166,380.90		

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A013398	8208	5317	AMY POWELL-REILLY	10/13/49	0.30	Plumas	UNSP
			<b>AMY POWELL-REILLY Total</b>		0.30		
A028202	19382	12743	APRIL L KEENAN	08/01/84	0.30	Plumas	UNST
			<b>APRIL L KEENAN Total</b>		0.30		
A010025	5864	4105	ASSOCIATION OF THOMPSON LAKE	10/02/40	5.10	Plumas	THOMPSON LAKE
A029432	20487		ASSOCIATION OF THOMPSON LAKE	03/08/89	20.00	Plumas	THOMPSON LAKE
			<b>ASSOCIATION OF THOMPSON LAKE Total</b>		25.10		
A009275	5190	2732	BERNICE C TERRY	04/15/38	4.50	Plumas	CROMBERG SPRING
			<b>BERNICE C TERRY Total</b>		4.50		
A012394	7599	3752	BIG MEADOWS INC	03/09/48	41.30	Plumas	UNSP
			<b>BIG MEADOWS INC Total</b>		41.30		
A015111	9442	6153	BOB CARTER	12/10/52	1.70	Plumas	UNSP
			<b>BOB CARTER Total</b>		1.70		
A010349	5964	2936	BRYAN P PITCAVAGE	12/31/41	21.30	Plumas	CLEAR CREEK
			<b>BRYAN P PITCAVAGE Total</b>		21.30		
A020786	14328	8802	BUCKS LAKE LODGE	05/22/62	0.10	Plumas	UNSP, UNST
			<b>BUCKS LAKE LODGE Total</b>		0.10		
A014583	9845	8347	BUCKS LAKE LODGES INCORPORATED	11/20/51	4.20	Plumas	UNST
			<b>BUCKS LAKE LODGES INCORPORATED Total</b>		4.20		
A011477	6689	3505	BUCKS LAKE SUMMER WATER ASSOCIATION	07/22/46	0.60	Plumas	UNST
A021842	14893	9171	BUCKS LAKE SUMMER WATER ASSOCIATION	07/09/64	0.40	Plumas	UNST
			<b>BUCKS LAKE SUMMER WATER ASSOCIATION Total</b>		1.00		
A007370	4083	2235	CALIF DEPT OF TRANSPORTATION	09/08/32	2.20	Plumas	UNSP
A016380	10367	5872	CALIF DEPT OF TRANSPORTATION	05/17/55	3.40	Sierra	UNSP
			<b>CALIF DEPT OF TRANSPORTATION Total</b>		5.60		
A005630	16478		CALIF DEPT OF WATER RESOURCES	07/30/27	1,393,568.50	Butte, Contra Costa, Sacramento	FEATHER RIVER, ITALIAN SLOUGH, SACRAMENTO RIVER DELTA CHANNELS
A014443	16479		CALIF DEPT OF WATER RESOURCES	08/24/51	9,004,510.20	Butte, Contra Costa	FEATHER RIVER, SACRAMENTO SAN JOAQUIN DELTA CHANNELS

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A016951	14587	9389	CALIF DEPT OF WATER RESOURCES	03/20/56	18,200.00	Plumas	INDIAN CREEK
A016952	12945	9182	CALIF DEPT OF WATER RESOURCES	03/20/56	30,000.00	Plumas	LITTLE LAST CHANCE CREEK
A018844	12946	9928	CALIF DEPT OF WATER RESOURCES	07/06/59	4,962.00	Plumas	LITTLE LAST CHANCE CREEK
A020117	14588	10975	CALIF DEPT OF WATER RESOURCES	05/09/61	3,400.00	Plumas	INDIAN CREEK
A016950	15254		CALIF DEPT OF WATER RESOURCES	01/05/67	49,000.00	Plumas	BIG GRIZZLY CREEK
A021443	15255		CALIF DEPT OF WATER RESOURCES	01/05/67	34,000.00	Plumas	BIG GRIZZLY CREEK
			<b>CALIF DEPT OF WATER RESOURCES Total</b>		10,537,640.70		
A012548	7491	3530	CAMP TIMBERWOLF IMPROVEMENT COMMITTEE	06/16/48	0.40	Plumas	UNSP
			<b>CAMP TIMBERWOLF IMPROVEMENT COMMITTEE Total</b>		0.40		
A007003	3866	1575	CAROL A RHODEHOUSE	07/10/31	3,330.30	Plumas	BLACKHAWK CREEK
			<b>CAROL A RHODEHOUSE Total</b>		3,330.30		
A019730	12871	10458	CASIMIR JATCZAK	09/07/60	0.20	Plumas	UNST
			<b>CASIMIR JATCZAK Total</b>		0.20		
A010011	5685	2581	CITY OF PORTOLA	04/08/43	875.90	Plumas	WILLOW CREEK
A017069	12282	10013	CITY OF PORTOLA	05/03/56	600.00	Plumas	UNSP (5), UNSP (7)
			<b>CITY OF PORTOLA Total</b>		1,475.90		
A012900	7594	4841	Collin Harris	01/17/49	126.00	Sierra	ANTELOPE CREEK
			<b>Collin Harris Total</b>		126.00		
A029127	20591		COZETTE E GRAHAM	10/19/87	18.70	Plumas	TWELVE MILE RAVINE, UNST
			<b>COZETTE E GRAHAM Total</b>		18.70		
A007978	4430	2682	DANIEL WILSON	06/15/34	2.20	Plumas	INDIAN CREEK
			<b>DANIEL WILSON Total</b>		2.20		
A019121	13930	8392	DANIEL H CLIFTON	12/04/59	0.40	Sierra	TREASURE SPRING, TREASURE SPRING CREEK
			<b>DANIEL H CLIFTON Total</b>		0.40		
A015567	10328	7268	DANNY WILSON	10/05/53	0.20	Butte	BALSAM CREEK
			<b>DANNY WILSON Total</b>		0.20		
A017314	11155	8371	DARLA J WOJCIK FAMILY TRUST	10/08/56	1.90	Butte	OREGON GULCH

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>DARLA J WOJCIK FAMILY TRUST Total</b>		1.90		
A009972	5640	3476	DAVID C NORTON	08/09/40	16.20	Plumas	UNSP
A014016	8784	9609	DAVID C NORTON	10/25/50	3.50	Plumas	UNSP
			<b>DAVID C NORTON Total</b>		19.70		
A004122	2107	2023	DAVID K LEE	05/15/40	135.80	Plumas	COLD SPRING, KINGS CREEK
A005171	2866	2024	DAVID K LEE	05/15/40	91.70	Plumas	SUNFLOWER FLAT CREEK
			<b>DAVID K LEE Total</b>		227.50		
A017739	11215	6958	DAVID ROBERT OSTLER	07/24/57	1.10	Sierra	UNSP
			<b>DAVID ROBERT OSTLER Total</b>		1.10		
A006728	3882	2143	DAWN INSTITUTE OF SCIENCE & ART	07/11/30	8.40	Plumas	UNSP
A009968	5684		DAWN INSTITUTE OF SCIENCE & ART	07/22/93	1.30	Plumas	UNSP
			<b>DAWN INSTITUTE OF SCIENCE &amp; ART Total</b>		9.70		
A017195	11014	5884	DAWN M JONES	07/20/56	0.20	Plumas	UNST
			<b>DAWN M JONES Total</b>		0.20		
A016436	10623	6036	DEAN PANFILI	06/23/55	630.80	Plumas	LONG VALLEY CREEK
			<b>DEAN PANFILI Total</b>		630.80		
A001024	497	217	DELBERT H LEHR	07/17/18	108.60	Plumas	UNXX
A011786	6906	3421	DELBERT H LEHR	03/19/47	312.00	Plumas	EAST BRANCH OF NORTH FORK FEATHER RIVER
			<b>DELBERT H LEHR Total</b>		420.60		
A016583	10536	7291	Derek C Anderson	06/07/65	3.50	Plumas	UNST
			<b>Derek C Anderson Total</b>		3.50		
A021361	14791	9026	DEWEY S RAVENSCROFT	06/25/63	5.00	Plumas	FERN CANYON
			<b>DEWEY S RAVENSCROFT Total</b>		5.00		
A029537	20577	13827	DIANE MONTGOMERY	01/10/11	35.00	Sierra	UNST
			<b>DIANE MONTGOMERY Total</b>		35.00		
A026571	18470	13246	Donald A Wallace	10/07/80	89.00	Sierra	SIERRA VALLEY CHANNELS
			<b>Donald A Wallace Total</b>		89.00		
A017963	11625	6601	DUSTIN F DOYLE	01/28/58	0.10	Plumas	UNST
			<b>DUSTIN F DOYLE Total</b>		0.10		
A011271	6536	3737	ELLIOT P SMART	01/31/46	1.60	Plumas	WATERING TROUGH SPRING
			<b>ELLIOT P SMART Total</b>		1.60		
A008964	4958	2564	EST OF WILLIAM JAMES DAWSON JR	05/06/37	5.60	Plumas	UNST
			<b>EST OF WILLIAM JAMES DAWSON JR Total</b>		5.60		
A017132	10832	5918	Est. of Martin A. Poss	06/14/56	0.20	Plumas	UNST
			<b>Est. of Martin A. Poss Total</b>		0.20		
A008460	4682	2223	Feather River Land Trust, a Cal Nonprofit	10/03/35	200.00	Plumas	TAYLOR LAKE
A012844	7617	9165	Feather River Land Trust, a Cal Nonprofit	12/03/48	100.00	Plumas	TAYLOR LAKE
			<b>Feather River Land Trust, a Cal Nonprofit Total</b>		300.00		

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A026942	20121		FIVE BEARS HYDRO, INC	08/06/81	1,448.00	Plumas	SOUTH BRANCH WARD CREEK
A027349	20122		FIVE BEARS HYDRO, INC	06/03/82	5,791.80	Plumas	SOUTH BRANCH WARD CREEK
			<b>FIVE BEARS HYDRO, INC Total</b>		7,239.80		
A009616	5470	2570	FRAZIER CREEK WATER ASSOCIATION	06/14/39	112.20	Butte	EAST BRANCH FRAZIER CREEK, WEST BRANCH FRAZIER CREEK
			<b>FRAZIER CREEK WATER ASSOCIATION Total</b>		112.20		
A008996	5022	4494	FREELANDER TRUST	06/14/37	412.70	Plumas	CLEAR CREEK, OWL CREEK
A017303	12796	7821	FREELANDER TRUST	08/03/66	467.50	Plumas	CLEAR CREEK, OWL CREEK
			<b>FREELANDER TRUST Total</b>		880.20		
A015571	10136	7056	GARY L BROWN	10/07/53	607.00	Plumas	INDIAN CREEK
			<b>GARY L BROWN Total</b>		607.00		
A018968	13221	7798	GENE ALEXANDER	09/04/59	0.10	Plumas	UNST
			<b>GENE ALEXANDER Total</b>		0.10		
A010963	6386	3323	GENE H FISHER	01/26/45	27.40	Butte	ROMA CREEK
			<b>GENE H FISHER Total</b>		27.40		
A008495	4785	2340	GRAEAGLE LAND & WATER COMPANY	11/14/35	11,454.70	Plumas	GRAY EAGLE CREEK, LONG LAKE
A008496	4786	2341	GRAEAGLE LAND & WATER COMPANY	11/14/35	2,895.50	Plumas	GRAY EAGLE CREEK
A025030	17676	12546	GRAEAGLE LAND & WATER COMPANY	03/26/76	196.00	Plumas	FRAZIER CREEK
			<b>GRAEAGLE LAND &amp; WATER COMPANY Total</b>		14,546.20		
A004022	1978	2010	GRAY EAGLE LODGE	06/11/24	5.40	Plumas	UNSP
A004023	1979	1042	GRAY EAGLE LODGE	05/14/31	610.90	Plumas	GRAY EAGLE CREEK
			<b>GRAY EAGLE LODGE Total</b>		616.30		
A021216	14766	9215	GRIZZLY LAKE RESORT IMPROVEMENT DISTRICT	04/01/63	42.00	Plumas	HUMBUG CREEK
			<b>GRIZZLY LAKE RESORT IMPROVEMENT DISTRICT Total</b>		42.00		
A017171	11030	6181	HAROLD D FRANCIS	07/11/56	0.20	Plumas	UNST
			<b>HAROLD D FRANCIS Total</b>		0.20		
A017471	11399	7881	HYDE FAMILY 1990 TRUST	02/20/57	5.40	Plumas	UNST
			<b>HYDE FAMILY 1990 TRUST Total</b>		5.40		
A023364	16585		JAMES D BAKER	10/07/69	0.40	Sierra	TREASURE SPRING, TREASURE SPRING CREEK
			<b>JAMES D BAKER Total</b>		0.40		
A017160	10997	5889	JAMES F RUTHERFORD	12/02/04	0.20	Plumas	UNST
			<b>JAMES F RUTHERFORD Total</b>		0.20		
A027754	19252	12757	JAMES P ROBBINS	05/12/83	3.40	Plumas	UNSP
			<b>JAMES P ROBBINS Total</b>		3.40		

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A012122	7659	3486	JEANNETTE S SASSER	10/08/47	0.50	Plumas	CROMBERG SPRING
			<b>JEANNETTE S SASSER Total</b>		0.50		
A017231	10894	6053	JEFFERY L WILSON	08/10/56	22.40	Plumas	JACKASS CREEK
			<b>JEFFERY L WILSON Total</b>		22.40		
A001712	730	1128	JOAN ESCALANTE	03/06/20	1.10	Butte	UNST
			<b>JOAN ESCALANTE Total</b>		1.10		
A015071	9532	5288	JOHN J GILLAM	11/03/52	144.80	Plumas	HARVEY RAVINE
			<b>JOHN J GILLAM Total</b>		144.80		
A020468	13751	8748	JOHN P SCHMIDT	11/06/61	0.20	Plumas	UNST
			<b>JOHN P SCHMIDT Total</b>		0.20		
A024048	16589	11004	Kathy L. McDonell	05/05/80	0.30	Plumas	CROMBERG SPRING
A025089	17679	11695	Kathy L. McDonell	02/26/85	1.00	Plumas	CROMBERG SPRING
			<b>Kathy L. McDonell Total</b>		1.30		
A006723	3634	2560	Kovach Trust	07/08/30	1,809.00	Butte	EMPIRE CREEK
			<b>Kovach Trust Total</b>		1,809.00		
A011753	7180	5086	LAKE MADRONE WATER DISTRICT	03/04/47	1.70	Butte	FERN DELL CREEK
A030657	21027		LAKE MADRONE WATER DISTRICT	10/07/97	200.00	Butte	BERRY CREEK
			<b>LAKE MADRONE WATER DISTRICT Total</b>		201.70		
A023580	16107	10828	LAKE OROVILLE INVESTMENT GROUP LLC	08/14/70	9.50	Butte	UNST
			<b>LAKE OROVILLE INVESTMENT GROUP LLC Total</b>		9.50		
A018149	11610	7646	LARRY MCMULLAN	05/22/58	0.20	Plumas	UNSP
			<b>LARRY MCMULLAN Total</b>		0.20		
A012117	7658	3484	Laura Rowan Peake	10/02/47	0.30	Plumas	CROMBERG SPRING
			<b>Laura Rowan Peake Total</b>		0.30		
A023924	16402	10760	LDS Recreation Properties LLC	11/18/71	57.70	Sierra	BONTA CREEK, UNST
			<b>LDS Recreation Properties LLC Total</b>		57.70		
A029501	20707		Lewis Van Vleck	06/12/89	44.50	Sierra	SIERRA VALLEY CHANNELS
			<b>Lewis Van Vleck Total</b>		44.50		
A005996	3203	1067	LOREN PERKINS	07/27/28	217.20	Plumas	UNCR
A009886	5589	2625	LOREN PERKINS	04/29/40	202.70	Plumas	UNCR
			<b>LOREN PERKINS Total</b>		419.90		
A016529A	10428	007026A	LOREN V PERKINS LIVING TRUST	08/17/55	5.10	Butte	CARTER RAVINE
A016530	10429	7027	LOREN V PERKINS LIVING TRUST	08/17/55	0.70	Butte	CARTER RAVINE
			<b>LOREN V PERKINS LIVING TRUST Total</b>		5.80		
A005015	2623	2118	LOTTS LAKE ASSOCIATION	05/13/26	0.20	Plumas	UNSP
			<b>LOTTS LAKE ASSOCIATION Total</b>		0.20		
A023564	16180	10365	LOUIS A PAYEN	07/22/70	403.00	Sierra	BIG SPRING, SMALL SPRING

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A011713	6995	3586	<b>LOUIS A PAYEN Total</b> MARGUERITE A MOHIUDDIN <b>MARGUERITE A MOHIUDDIN Total</b>	02/03/47	403.00 7.70 7.70	Plumas	UNSP
A016529B	10428	007026B	MARK PHILLIPS <b>MARK PHILLIPS Total</b>	08/17/55	6.50 6.50	Butte	UNSP
A022485	15693	10425	MARK A GLOISTEIN <b>MARK A GLOISTEIN Total</b>	06/06/66	20.00 20.00	Sierra	UNST
A014807	9846	4942	MARK D EVANS <b>MARK D EVANS Total</b>	05/15/52	0.20 0.20	Plumas	UNST
A023260A	15932	11069	MARK L SCOTT <b>MARK L SCOTT Total</b>	11/26/80	17.00 17.00	Butte	UNST
A008422	4644	2423	Mary Ann Nash <b>Mary Ann Nash Total</b>	08/21/35	9.00 9.00	Butte	OGDEN CREEK
A000685	312	166	MASSACK WATER USERS ASSOCIATION	05/18/17	5.60	Plumas	UNSP
A029544	20513		MASSACK WATER USERS ASSOCIATION <b>MASSACK WATER USERS ASSOCIATION Total</b>	08/18/89	1.70 7.30	Plumas	UNSP
A015570	10135	7055	MC INTYRE RANCHING INC <b>MC INTYRE RANCHING INC Total</b>	10/07/53	758.70 758.70	Plumas	INDIAN CREEK
A019090	13222	7708	MICHAEL MONAHAN <b>MICHAEL MONAHAN Total</b>	11/20/59	0.20 0.20	Plumas	UNST
A011243	6594	4540	MICHAEL NEWSOM <b>MICHAEL NEWSOM Total</b>	12/26/45	0.10 0.10	Plumas	UNSP
A006469	3446	1600	MICHAEL D GRANT	10/28/29	0.70	Plumas	UNSP
A011201	6472	3482	MICHAEL D GRANT <b>MICHAEL D GRANT Total</b>	11/01/45	17.90 18.60	Plumas	UNSP
A024815	18294	12167	MIGUEL AUBAN <b>MIGUEL AUBAN Total</b>	12/01/08	1.40 1.40	Plumas	UNSP
A024421	17166	11470	MIGUEL AUBEN <b>MIGUEL AUBEN Total</b>	07/26/73	2.00 2.00	Plumas	UNST
A031433	21285		MINERAL RESOURCES LLC <b>MINERAL RESOURCES LLC Total</b>	06/06/11	46.00 46.00	Butte	UNST
A004281	2443	1232	MIRIAM C BARKER <b>MIRIAM C BARKER Total</b>	10/28/24	5.10 5.10	Plumas	LITTLE GRAY EAGLE CREEK
A030596	20954	13840	NADINE M BASS <b>NADINE M BASS Total</b>	11/08/11	19.00 19.00	Sierra	UNST
A010917	6403	3113	NORMAN F ROBERTS <b>NORMAN F ROBERTS Total</b>	11/21/44	1.10 1.10	Plumas	UNSP
A020303	13390	8417	NORMAN R COTE <b>NORMAN R COTE Total</b>	07/14/61	0.40 0.40	Plumas	UNST

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A014113	11518		North Yuba Water District	08/18/58	624,084.30	Butte, Plumas	LOST CREEK, SOUTH FORK FEATHER RIVER
			<b>North Yuba Water District Total</b>		624,084.30		
A026904	18878		OKIZU FOUNDATION	07/03/81	49.00	Butte	BERRY CREEK, UNST
A031379			OKIZU FOUNDATION	12/17/02	40.00	Butte	BERRY CREEK, UNST
			<b>OKIZU FOUNDATION Total</b>		89.00		
A019233	13931	8393	PAUL CUETO	02/15/60	0.40	Sierra	TREASURE SPRING, TREASURE SPRING CREEK
			<b>PAUL CUETO Total</b>		0.40		
A011397	6637	3381	PERRY GREENE	05/14/46	2.40	Plumas	UNSP
			<b>PERRY GREENE Total</b>		2.40		
A012279	7286	3603	PETER SENTER	01/30/48	0.10	Plumas	UNSP
			<b>PETER SENTER Total</b>		0.10		
A014653	9216	4183	PG&E	01/22/52	0.60	Plumas	UNST
			<b>PG&amp;E Total</b>		0.60		
A011585	6666	3638	R C K RANCH LLC	10/09/46	464.10	Plumas	MORRIS SLOUGH
			<b>R C K RANCH LLC Total</b>		464.10		
A017776	11243	6014	RALPH F BECKER	08/16/57	2.20	Plumas	UNSP
			<b>RALPH F BECKER Total</b>		2.20		
A019265	13932	8394	RANDY JENSEN	02/28/60	0.40	Sierra	TREASURE SPRING, TREASURE SPRING CREEK
			<b>RANDY JENSEN Total</b>		0.40		
A007526	4213	2065	REGENTS OF THE UNIVERSITY OF CALIFORNIA	03/29/33	1.50	Plumas	SCHNEIDER CREEK
			<b>REGENTS OF THE UNIVERSITY OF CALIFORNIA Total</b>		1.50		
A019750	13241	8020	RICHARD GREIN	09/23/60	0.10	Plumas	UNSP
			<b>RICHARD GREIN Total</b>		0.10		
A004234	2125	631	RICHARD L SCHIWENDINGER	09/24/24	1.70	Plumas	RUSSEL SPRING, UNSP (3)
			<b>RICHARD L SCHIWENDINGER Total</b>		1.70		
A009207	5218	2284	ROBERT RITTER	12/22/37	0.30	Plumas	CROMBERG SPRING
			<b>ROBERT RITTER Total</b>		0.30		
A023260C	15932	11071	ROBERT TEICHMAN	11/26/80	0.20	Butte	UNST
			<b>ROBERT TEICHMAN Total</b>		0.20		
A011976	7075	6880	ROBERT A JONES	06/10/63	18.80	Plumas	UNSP
			<b>ROBERT A JONES Total</b>		18.80		
A004261	2148	732	ROBERT B BECKWITH	10/16/24	0.70	Plumas	UNSP
A020432	13824	9217	ROBERT B BECKWITH	01/18/91	0.50	Plumas	UNSP



## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A027688	19665	13174	<b>ROBERT B BECKWITH Total</b> ROBERT J PALOWODA	03/11/83	1.20 0.10	Plumas	UNST
A025500	17476	11505	<b>ROBERT J PALOWODA Total</b> ROBERT S CONOVER	09/02/77	0.10 0.50	Plumas	UNST
A009274	5189	2193	<b>ROBERT S CONOVER Total</b> ROBERT W ELFEN	04/15/38	0.50 0.60	Plumas	CROMBERG SPRING
A009392	5316	2572	ROBERT W ELFEN	08/18/38	0.60	Plumas	CROMBERG SPRING
A016910	10730	5905	<b>ROBERT W ELFEN Total</b> ROBERT W STEIN	02/28/56	1.20 140.00	Plumas	BIG GRIZZLY CREEK
A019653	12990	9223	<b>ROBERT W STEIN Total</b> RON CARPENTER	08/09/60	140.00 166.50	Plumas	HAUNS CREEK
A020911	14297	8961	<b>RON CARPENTER Total</b> RONALD DREISBACH	08/27/62	166.50 76.00	Butte	GRIZZLY CREEK
A014760	9210	5515	<b>RONALD DREISBACH Total</b> RUSSELL C WESTOVER JR	04/17/52	76.00 0.60	Plumas	UNSP
A022855	15751	10561	<b>RUSSELL C WESTOVER JR Total</b> SEAN CUNNINGHAM	12/31/75	0.60 452.40	Plumas	MILL CREEK
A017870	11564	9566	<b>SEAN CUNNINGHAM Total</b> SHIRLEY ISHAM	11/01/57	452.40 33.00	Plumas	MOSQUITO SPRINGS
A016520	10670	9872	<b>SHIRLEY ISHAM Total</b> SIERRA BIBLE CAMP INC	08/12/55	33.00 19.20	Plumas	UNSP
A009690	5443	3114	<b>SIERRA BIBLE CAMP INC Total</b> SIERRA PACIFIC HOLDING COMPAMY	08/08/39	19.20 150.00	Butte	GRUBBS CREEK, LITTLE FREY CREEK
A006412	3643	1485	<b>SIERRA PACIFIC HOLDING COMPAMY Total</b> SOPER COMPANY	08/17/29	150.00 17.00	Yuba	STICKNER SPRING
A014218	8611	4300	SOPER COMPANY	03/29/51	3.40	Plumas	UNSP
A014219	8612	4301	SOPER COMPANY	03/29/51	48.00	Plumas	MOSES CREEK
A021440	14485	10038	<b>SOPER COMPANY Total</b> SOPER COMPANY, A DELAWARE CORPORATION	08/22/63	68.40 2.20	Plumas	UNSP
A002142	1268		<b>SOPER COMPANY, A DELAWARE CORPORATION Total</b> SOUTH FEATHER WATER & POWER AGENCY	12/17/20	2.20 5,000.00	Butte	LOST CREEK
A002778	2492		SOUTH FEATHER WATER & POWER AGENCY	03/06/22	31,148.90	Butte	LOST CREEK
A002979	1271		SOUTH FEATHER WATER & POWER AGENCY	08/12/22	133,935.80	Butte	LOST CREEK
A001651	1267		SOUTH FEATHER WATER & POWER AGENCY	01/05/23	145,508.40	Plumas	SOUTH FORK FEATHER RIVER
A029060	20656		<b>SOUTH FEATHER WATER &amp; POWER AGENCY Total</b> Squirrel Creek, LLC	07/07/87	315,593.10 9.00	Plumas	BEAR CREEK
			<b>Squirrel Creek, LLC Total</b>		9.00		

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A014864	9192	6512	THE CAMP TIMBERWOLF IMPROVMENT COMM, INC	06/18/52	1.50	Plumas	UNSP
			<b>THE CAMP TIMBERWOLF IMPROVMENT COMM, INC Total</b>		1.50		
A001739	1911	845	THERMALITO WATER AND SEWER DISTRICT	03/25/20	8,200.00	Butte	CONCOW CREEK
A003040	1912	737	THERMALITO WATER AND SEWER DISTRICT	09/16/22	8,200.00	Butte	CONCOW CREEK
			<b>THERMALITO WATER AND SEWER DISTRICT Total</b>		16,400.00		
A011205	6989	3483	THOMAS E NOLTE	11/07/45	1.10	Plumas	CROMBERG SPRING
			<b>THOMAS E NOLTE Total</b>		1.10		
A014810	9849	5616	TIME EADE	05/15/52	0.10	Plumas	UNST
			<b>TIME EADE Total</b>		0.10		
A016582	10535	6631	TOMMIE D MASSSENGILL	09/06/55	2.30	Plumas	UNST
			<b>TOMMIE D MASSSENGILL Total</b>		2.30		
A006171	3243	1089	TRAVIS O MCWILLIAMS	01/28/29	36.70	Butte	BRANCH OF BUSHMAN CREEK
			<b>TRAVIS O MCWILLIAMS Total</b>		36.70		
A009293	5181	2548	U S FOREST SERVICE	05/16/38	17.90	Sierra	UNSP
A014228	8709	3968	U S FOREST SERVICE	04/04/51	0.30	Sierra	UNSP
A014281	8800	4915	U S FOREST SERVICE	05/02/51	0.30	Sierra	UNSP
A014282	8801	4947	U S FOREST SERVICE	05/02/51	1.50	Sierra	LEWIS MILL GUARD STATION SPRING
A014283	8802	5334	U S FOREST SERVICE	05/02/51	0.50	Sierra	SARDINE LOOKOUT SPRING
A014284	8803	4701	U S FOREST SERVICE	05/02/51	0.30	Sierra	UNSP
A014285	8804	4186	U S FOREST SERVICE	05/02/51	0.70	Plumas	UNSP
A014286	8805	5013	U S FOREST SERVICE	05/02/51	1.30	Sierra	UNSP
A014287	8806	4922	U S FOREST SERVICE	05/02/51	0.60	Sierra	UNSP
A023225	16015	10230	U S FOREST SERVICE	01/30/69	0.60	Plumas	HORSETROUGH SPRING
A023226	16014	10274	U S FOREST SERVICE	01/30/69	0.80	Plumas	BECKWOURTH SPRING
A027284	18875		U S FOREST SERVICE	04/07/82	32.00	Sierra	CARMAN CREEK, UNST
			<b>U S FOREST SERVICE Total</b>		56.80		

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A019416	12655	8021	U S LASSEN NATL FOREST	05/05/60	120.00	Plumas	MORRIS LAKE
A019417	12656	8022	U S LASSEN NATL FOREST	05/05/60	27.00	Plumas	GRASSY LAKE
A019418	12657	8023	U S LASSEN NATL FOREST	05/05/60	27.00	Plumas	SADDLE LAKE
A019419	12658	8024	U S LASSEN NATL FOREST	05/05/60	8.00	Plumas	LONG LAKE
A020429	13430	8025	U S LASSEN NATL FOREST	10/06/61	3.40	Butte	UNSP
A021083	14154	8026	U S LASSEN NATL FOREST	12/14/62	34.00	Plumas	SPRING VALLEY LAKE
<b>U S LASSEN NATL FOREST Total</b>					219.40		
A008990	5028	2332	U S PLUMAS NATL FOREST	06/05/37	3.10	Plumas	UNCR
A008991	5029	2930	U S PLUMAS NATL FOREST	06/05/37	0.70	Plumas	UNSP
A009514	5369	3736	U S PLUMAS NATL FOREST	03/01/39	33.60	Butte	FOLEY GULCH, MOUNTAIN HOUSE CREEK
A003918	2625	861	U S PLUMAS NATL FOREST	05/24/39	23.40	Plumas	TOLLGATE CREEK
A009734	5826	3747	U S PLUMAS NATL FOREST	09/22/39	4.50	Plumas	UNST
A009770	5559	4894	U S PLUMAS NATL FOREST	11/21/39	4.70	Plumas	UNSP
A010726	6216	2968	U S PLUMAS NATL FOREST	11/05/43	0.90	Plumas	UNSP
A011146	6509	3339	U S PLUMAS NATL FOREST	09/06/45	3.00	Plumas	UNSP
A011907	7171	6503	U S PLUMAS NATL FOREST	05/27/47	1.70	Plumas	UNST
A012038	7092	5500	U S PLUMAS NATL FOREST	08/13/47	2.80	Plumas	KLING RAVINE
A012535	7401	3605	U S PLUMAS NATL FOREST	06/04/48	6.10	Plumas	UNSP
A013625	8291	5325	U S PLUMAS NATL FOREST	03/10/50	4.70	Plumas	COLD SPRINGS
A014761	9211	5070	U S PLUMAS NATL FOREST	04/17/52	0.30	Plumas	UNST
A014815	10916	6076	U S PLUMAS NATL FOREST	05/20/52	540.00	Plumas	SNAKE LAKE
A015676	9796	5371	U S PLUMAS NATL FOREST	01/08/54	0.30	Plumas	FANT SPRING
A016200	10940	8222	U S PLUMAS NATL FOREST	01/12/55	12.30	Plumas	CUB CREEK

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A017074	10784	6101	U S PLUMAS NATL FOREST	05/04/56	0.70	Plumas	UNSP
A017832	11562	6924	U S PLUMAS NATL FOREST	09/23/57	0.20	Plumas	UNSP
A018185	11617	6281	U S PLUMAS NATL FOREST	07/17/58	0.20	Plumas	UNST
A018413	11822	6885	U S PLUMAS NATL FOREST	11/14/58	0.70	Butte	UNSP
A019239	12414	10956	U S PLUMAS NATL FOREST	02/16/60	0.90	Plumas	WEST BRANCH WHITEHORSE CREEK
A019586	12604	7673	U S PLUMAS NATL FOREST	07/28/60	0.70	Butte	BEAR RANCH L O SPRING
A019587	12605	7674	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	RIDGE SPRING
A019588	12606	7675	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	STONY CREEK SPRING
A019589	12607	7676	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	CHIPMUNK SPRING
A019590	12608	7677	U S PLUMAS NATL FOREST	07/28/60	0.20	Plumas	POISON CREEK SPRING
A019591	12609	8061	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	BEAR SPRING
A019592	12610	7678	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	CROCKER CUT-OFF SPRING
A019593	12611	7679	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	LITTLE DIXIE SPRING
A019594	12612	7680	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	DOYLE SPRING
A019596	12614	7682	U S PLUMAS NATL FOREST	07/28/60	0.20	Plumas	JENKINS #3 SPRING
A019597	12615	7683	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	GRANITE SPRING
A019598	12616	7684	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	PLINCO SPRING
A019599	12617	7685	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	CHASE SPRING
A019600	12618	8062	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	COYOTE SPRING
A019601	12619	7686	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	SQUAW CAMP SPRING
A019602	12620	7687	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	HORSE SHOE SPRING
A019603	12621	7688	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	HORTON CANYON SPRING
A019604	12622	8063	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	JUNIPER SPRING

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A019605	12623	7689	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	FITCH CANYON SPRING
A019606	12624	7690	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	MAHOGANY SPRING
A019607	12625	7691	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	JENKINS #2 SPRING
A019608	12626	8064	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	MIDWAY HOUSE SPRING
A019609	12627	7692	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	DOWNING CABIN SPRING
A019610	12628	7693	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	JUNIPER SPRING
A019611	12629	8065	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	HOG SPRING
A019612	12630	7694	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	JOHNSON MILL SPRING
A019613	12631	7695	U S PLUMAS NATL FOREST	07/28/60	0.70	Butte	SPOON RAVINE SPRING
A019614	12632	7696	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	LONE SPRING
A019615	12633	7697	U S PLUMAS NATL FOREST	07/28/60	0.40	Plumas	SECTION 15 SPRING
A019617	12635	7699	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	SQUAW SUPPRESSION CAMP SPRING
A019619	12637	8066	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	RATTLESNAKE SPRING
A019620	12638	8067	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	CEDAR SPRING
A019621	12639	8068	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	PINE TREE SPRING
A019622	12640	7700	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	GALEPPI SPRING
A019623	12641	7701	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	MURDOCK CROSSING SPRING
A019624	12642	7702	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	SQUAW VALLEY SPRING
A019625	12643	7703	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	BASS #1 SPRING
A019626	12644	7704	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	SOUTH TROUGH SPRING
A019627	12645	7710	U S PLUMAS NATL FOREST	07/28/60	0.70	Plumas	DAVIDSON MINE SPRING
A019628	12646	8305	U S PLUMAS NATL FOREST	07/28/60	0.30	Plumas	SQUAW CANYON SPRING
A020852	13951	8617	U S PLUMAS NATL FOREST	07/12/62	1.60	Plumas	UNSP

## Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A021295	14364	8995	U S PLUMAS NATL FOREST	05/29/63	0.20	Plumas	BLAKELESS SPRING #2
A021296	14365	8982	U S PLUMAS NATL FOREST	05/29/63	0.80	Plumas	CHASE ENCLOSURE SPRING #2
A021297	14366	8996	U S PLUMAS NATL FOREST	05/29/63	0.80	Plumas	CHASE ENCLOSURE SPRING #1
A021304	14367	8968	U S PLUMAS NATL FOREST	05/29/63	0.80	Plumas	BULSON SPRING NO 3
A021305	14368	8969	U S PLUMAS NATL FOREST	05/29/63	0.80	Plumas	BULSON SPRING NO 2
A021306	14369	8970	U S PLUMAS NATL FOREST	05/29/63	0.80	Plumas	BULSON SPRING NO 1
A021307	14370	8971	U S PLUMAS NATL FOREST	05/29/63	0.60	Plumas	BLAKELESS SPRING NO 4
A021308	14371	8972	U S PLUMAS NATL FOREST	05/29/63	0.30	Plumas	BLAKELESS SPRING NO 1
A021312	14372	8984	U S PLUMAS NATL FOREST	05/29/63	0.50	Plumas	BIG BUCK SPRING
A021313	14373	9004	U S PLUMAS NATL FOREST	05/29/63	1.70	Plumas	HEADQUARTERS SPRING #1, HEADQUARTERS SPRINGS #2&3
A021314	14244	8997	U S PLUMAS NATL FOREST	05/29/63	0.80	Plumas	TROSI CANYON SPRING
A021316	14374	8998	U S PLUMAS NATL FOREST	05/29/63	1.50	Plumas	BIG PINE SPRING
A021317	14375	8999	U S PLUMAS NATL FOREST	05/29/63	0.40	Plumas	CEDAR CANYON SPRING
A022187	15225	8986	U S PLUMAS NATL FOREST	06/10/65	0.10	Plumas	UNST
A024263	16728	10955	U S PLUMAS NATL FOREST	12/19/72	9.00	Plumas	UNSP
A026877	18796		U S PLUMAS NATL FOREST	06/17/81	42.00	Plumas	DOTTA CANYON
			<b>U S PLUMAS NATL FOREST Total</b>		720.60		
A019565	12818	9877	USA-USDA FOREST SERVICE	01/02/09	0.80	Plumas	UNNAMED SPRING
			<b>USA-USDA FOREST SERVICE Total</b>		0.80		
A020529	13891	9187	VERDA F LEE FAMILY DATED 4/11/2001	12/18/61	54.00	Plumas	UNSP
			<b>VERDA F LEE FAMILY DATED 4/11/2001 Total</b>		54.00		
A028992	20339		WALLACE FAMILY TRUST	03/20/87	184.00	Sierra	SIERRA VALLEY CHANNELS
			<b>WALLACE FAMILY TRUST Total</b>		184.00		
A011316	7110	3738	WAYNE RANKIN	05/20/53	108.60	Plumas	BERRY CREEK
			<b>WAYNE RANKIN Total</b>		108.60		
A014113	11518		Yuba County Water District	12/28/50	330,861.98	Butte, Sutter, Plumas	SOUTH FORK FEATHER RIVER, LOST CREEK, FEATHER RIVER

Feather River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>Yuba County Water District Total</b>		330,861.98		
			<b>Grand Total</b>		11,862,602.48		

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A003126	1371	1140	Appropriative	Licensed	ALBERT P STIEFEL <b>ALBERT P STIEFEL Total</b>	11/08/22	87.10 87.10	Butte	UNST, WYMAN RAVINE
A016725	10685	6660	Appropriative	Licensed	ALLEGHANY COUNTY WATER DISTRICT <b>ALLEGHANY COUNTY WATER DISTRICT Total</b>	04/18/02	12.00 12.00	Sierra	UNSP
A016724	10441	7079	Appropriative	Licensed	ALLEN C UPTON <b>ALLEN C UPTON Total</b>	11/08/55	1.00 1.00	Butte	WYANDOTTE CREEK
A028395	20887		Appropriative	Permitted	ALLEN F MOORE <b>ALLEN F MOORE Total</b>	02/22/85	3.00 3.00	Yuba	DRY CREEK, UNSP
A025086	17517	11958	Appropriative	Licensed	ANANDA CHURCH OF SELF REALIZATION	06/16/76	43.20	Nevada	UNST
A028680	20373		Appropriative	Permitted	ANANDA CHURCH OF SELF REALIZATION <b>ANANDA CHURCH OF SELF REALIZATION Total</b>	12/24/85	29.30 72.50	Nevada	UNST
A024824	17031	13124	Appropriative	Licensed	ANDERSON AND ANDERSON INC	06/25/75	25.00	Nevada	UNST
A027748	19166	13125	Appropriative	Licensed	ANDERSON AND ANDERSON INC <b>ANDERSON AND ANDERSON INC Total</b>	05/05/83	1.00 26.00	Nevada	UNST
A028403	20927		Appropriative	Permitted	ANNA MAY ROSE <b>ANNA MAY ROSE Total</b>	03/07/85	2.00 2.00	Yuba	DRY CREEK, UNST
A030234	21008		Appropriative	Permitted	AUBURN SKI CLUB INC <b>AUBURN SKI CLUB INC Total</b>	03/15/93	122.00 122.00	Nevada	UPPER CASTLE CREEK
A025584	17400	11440	Appropriative	Licensed	Bank of America <b>Bank of America Total</b>	11/29/77	9.60 9.60	Yuba	UNST
A006099	3220	1080	Appropriative	Licensed	BENJAMIN N BORSOFF <b>BENJAMIN N BORSOFF Total</b>	10/19/28	17.90 17.90	Yuba	EAST BRANCH RICH GULCH
A018175	11802	6611	Appropriative	Licensed	BERNICE ROSENLOF <b>BERNICE ROSENLOF Total</b>	06/10/58	12.50 12.50	Nevada	UNST
A019562	12917	7493	Appropriative	Licensed	BILL AABERG <b>BILL AABERG Total</b>	07/20/60	0.30 0.30	Sierra	UNST
A024530	17274	11238	Appropriative	Licensed	BILLY G CAROTHERS <b>BILLY G CAROTHERS Total</b>	01/21/74	10.00 10.00	Nevada	SWEETLAND CREEK
A020521	13657	8703	Appropriative	Licensed	BITNEY SPRINGS LLC <b>BITNEY SPRINGS LLC Total</b>	12/11/61	14.00 14.00	Nevada	UNST
A026408	18310	12153	Appropriative	Licensed	BOB LATTA <b>BOB LATTA Total</b>	06/06/80	0.80 0.80	Sierra	HOWARD CREEK, NORTH YUBA RIVER



## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A005590	2913	814	Appropriative	Licensed	BRADLEY T SHARPE	07/01/27	2.20	Yuba	WEST BRANCH RICH GULCH
A005677	2914	815	Appropriative	Licensed	BRADLEY T SHARPE	09/07/27	18.10	Yuba	WEST BRANCH RICH GULCH
A006096	3218	1084	Appropriative	Licensed	BRADLEY T SHARPE	10/19/28	1.00	Yuba	WEST BRANCH RICH GULCH
A006097	3219	1085	Appropriative	Licensed	BRADLEY T SHARPE	10/19/28	17.90	Yuba	WEST BRANCH RICH GULCH
					<b>BRADLEY T SHARPE Total</b>		39.20		
A020485	13927	8368	Appropriative	Licensed	Brian Brackbill	11/08/61	0.60	Sierra	Unnamed Stream
					<b>Brian Brackbill Total</b>		0.60		
A019560	12915	7492	Appropriative	Licensed	BRIAN G JACOBS	07/20/60	0.20	Sierra	UNST
					<b>BRIAN G JACOBS Total</b>		0.20		
A008986	5083	2182	Appropriative	Licensed	BROWNS VALLEY IRRIGATION DISTRICT	03/01/41	2,171.90	Yuba	TENNESSEE CREEK
A013130	8649	13608	Appropriative	Licensed	BROWNS VALLEY IRRIGATION DISTRICT	08/31/05	20,000.00	Yuba	DRY CREEK
A013873	9703	13609	Appropriative	Licensed	BROWNS VALLEY IRRIGATION DISTRICT	08/31/05	31,900.00	Yuba	DRY CREEK
A023757	16792	13610	Appropriative	Licensed	BROWNS VALLEY IRRIGATION DISTRICT	08/31/05	11,000.00	Yuba	DRY CREEK
					<b>BROWNS VALLEY IRRIGATION DISTRICT Total</b>		65,071.90		
A023135	15964	10995	Appropriative	Licensed	BRUCE K JORDAN	09/18/68	0.90	Nevada	UNSP
					<b>BRUCE K JORDAN Total</b>		0.90		
A024293	16636	10700	Appropriative	Licensed	BRUCE L RAYNER	01/30/73	1.80	Nevada	MOSQUITO CREEK
					<b>BRUCE L RAYNER Total</b>		1.80		
A029103	20530	13712	Appropriative	Licensed	CAL-WESTERN RECONVEYANCE CORPORATION	05/09/07	6.70	Butte	ROBINSON RAVINE
					<b>CAL-WESTERN RECONVEYANCE CORPORATION Total</b>		6.70		
A013870	8369	4804	Appropriative	Licensed	CALIF DEPT OF FORESTRY AND FIRE PROTECTION	07/27/50	2.40	Nevada	UNSP
					<b>CALIF DEPT OF FORESTRY AND FIRE PROTECTION Total</b>		2.40		
A020427	13564	7019	Appropriative	Licensed	CAROL BROOKS	10/05/61	0.60	Sierra	UNSP
					<b>CAROL BROOKS Total</b>		0.60		
A016874	10804	9323	Appropriative	Licensed	CAROL B DARDICK	01/31/56	21.40	Nevada	UNST
					<b>CAROL B DARDICK Total</b>		21.40		
A019282	12436	7169	Appropriative	Licensed	CATHOLIC YOUTH ORGANIZATION	03/04/60	3.40	Yuba	UNSP
					<b>CATHOLIC YOUTH ORGANIZATION Total</b>		3.40		
A024183	16604	10883	Appropriative	Licensed	CHARLES FOWLER	09/15/72	0.10	Nevada	LEFT OVER SPRING
					<b>CHARLES FOWLER Total</b>		0.10		
A024559	16997	13267	Appropriative	Licensed	CHARLES A JOHNSON	02/21/74	2.20	Nevada	UNSP

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A028191	20013		Appropriative	Permitted	<b>CHARLES A JOHNSON Total</b>		2.20		
					CHEROKEE NEVADA CORPORATION	11/21/94	1,445.00	Sierra	UNST
					<b>CHEROKEE NEVADA CORPORATION Total</b>		1,445.00		
A019561	12916	7540	Appropriative	Licensed	CHRISTIAN HUNTINGTON	07/20/60	0.20	Sierra	UNST
					<b>CHRISTIAN HUNTINGTON Total</b>		0.20		
A014960	9302	7082	Appropriative	Licensed	Christopher W Miller	08/12/52	0.40	Placer	UNSP
					<b>Christopher W Miller Total</b>		0.40		
A026117	18434	12293	Appropriative	Licensed	CITY OF NEVADA CITY	10/17/79	53.70	Nevada	LITTLE DEER CREEK, UNST
					<b>CITY OF NEVADA CITY Total</b>		53.70		
A021158	14239	9010	Appropriative	Licensed	CONSTANCE C CLOVER	02/13/63	1.00	Sierra	UNSP
					<b>CONSTANCE C CLOVER Total</b>		1.00		
A005880	3102	2172	Appropriative	Licensed	COUGHLAN FAMILY RANCH	04/16/28	1,013.60	Nevada	BONNIE RAVINE, GLENNON RAVINE, ROBERTS CREEK
					<b>COUGHLAN FAMILY RANCH Total</b>		1,013.60		
A023111	15803	10206	Appropriative	Licensed	CRAIG LABADIE	08/13/68	0.80	Sierra	UNST
					<b>CRAIG LABADIE Total</b>		0.80		
A004731	2393	735	Appropriative	Licensed	CYRUS M ROLLINS	08/12/25	2.40	Sierra	UNSP
A006120	3232	1309	Appropriative	Licensed	CYRUS M ROLLINS	11/13/28	1.70	Sierra	UNST
					<b>CYRUS M ROLLINS Total</b>		4.10		
A023082	15977	10901	Appropriative	Licensed	DAN T THOMPSON	07/10/68	10.20	Nevada	KENTUCKY RAVINE
					<b>DAN T THOMPSON Total</b>		10.20		
A021554	14793	9832	Appropriative	Licensed	DANIEL MASON	11/27/63	18.00	Nevada	FRENCH CORRAL CREEK
					<b>DANIEL MASON Total</b>		18.00		
A021672	14830	9700	Appropriative	Licensed	DANIEL J GUYER	03/05/64	140.00	Sierra	UNST
					<b>DANIEL J GUYER Total</b>		140.00		
A017285	11045	7214	Appropriative	Licensed	DAVE KING	09/20/56	37.00	Nevada	KENTUCKY RAVINE
					<b>DAVE KING Total</b>		37.00		
A019710	12873	10129	Appropriative	Licensed	David Grenell	08/24/60	1.10	Sierra	THOMAS ELLIS SPRING #3, THOMAS ELLIS SPRING #4
					<b>David Grenell Total</b>		1.10		
A023514	16108	10245	Appropriative	Licensed	DAVID HERSHBERGER	05/20/70	0.30	Nevada	UNSP
A026065	17908	12157	Appropriative	Licensed	DAVID HERSHBERGER	08/14/79	0.60	Nevada	UNSP
					<b>DAVID HERSHBERGER Total</b>		0.90		
A019025	12515	7832	Appropriative	Licensed	DAVID RUMSEY	10/09/59	0.20	Sierra	UNSP
					<b>DAVID RUMSEY Total</b>		0.20		
A020313	13946	8660	Appropriative	Licensed	DAVID WALSH	07/21/61	0.20	Sierra	UNST
					<b>DAVID WALSH Total</b>		0.20		
A022928	15954	10996	Appropriative	Licensed	DAVID B JORDON	10/13/67	0.90	Nevada	UNSP
					<b>DAVID B JORDON Total</b>		0.90		
A027876	19125	12696	Appropriative	Licensed	DAVID B PEDERSON	09/15/83	1.40	Yuba	UNST
					<b>DAVID B PEDERSON Total</b>		1.40		
A016558	11367	8127	Appropriative	Licensed	DAVID C BREWER	08/29/55	4.20	Nevada	LITTLE ROCK CREEK
					<b>DAVID C BREWER Total</b>		4.20		

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A022898	15669	11110	Appropriative	Licensed	DAVID K DAVISON <b>DAVID K DAVISON Total</b>	08/28/67	4.70	Sierra	HUNGRY MOUTH CANYON
A025105	17076	11251	Appropriative	Licensed	DAVID W MARKS <b>DAVID W MARKS Total</b>	07/19/76	11.00	Nevada	KENTUCKY RAVINE
A021598	14416	8825	Appropriative	Licensed	DAWN B VINJE <b>DAWN B VINJE Total</b>	01/15/64	18.00	Yuba	UNST
A019390	12911	8810	Appropriative	Licensed	DENISE STEBLER <b>DENISE STEBLER Total</b>	04/26/60	1.60	Sierra	ROCK CREEK
A022566	15575	9896	Appropriative	Licensed	DIANE W ROLLINS <b>DIANE W ROLLINS Total</b>	04/14/72	20.00	Sierra	DRURY RAVINE
A010009	5687	4866	Appropriative	Licensed	DICKEY EXPLORATION COMPANY <b>DICKEY EXPLORATION COMPANY Total</b>	09/23/40	97.00	Sierra	WET RAVINE
A023535	16409	11027	Appropriative	Licensed	DIRK C REED <b>DIRK C REED Total</b>	06/24/70	15.70	Nevada	UNST, WILLOW VALLEY CREEK
A030332	21118		Appropriative	Permitted	DONNER SUMMIT PUBLIC UTILITY DISTRICT <b>DONNER SUMMIT PUBLIC UTILITY DISTRICT Total</b>	02/08/94	664.00	Nevada	LAKE ANGELA
A025719	17610	12075	Appropriative	Licensed	DOROTHEA SELBY <b>DOROTHEA SELBY Total</b>	04/17/78	13.50	Yuba	UNST
A028988	20947		Appropriative	Permitted	Dorothy Pencik <b>Dorothy Pencik Total</b>	03/16/87	24.00	Sierra	OAK VALLEY CREEK
A020808	13929	8700	Appropriative	Licensed	DOROTHY L VENDLEY <b>DOROTHY L VENDLEY Total</b>	07/19/68	9.20	Nevada	SPRING CREEK
A009827	5663	2650	Appropriative	Licensed	DOWNIEVILLE PUBLIC UTILITY DISTRICT <b>DOWNIEVILLE PUBLIC UTILITY DISTRICT Total</b>	05/15/01	114.00	Sierra	PAULEY CREEK
A026227	17973	11822	Appropriative	Licensed	DUANE FRED LEE <b>DUANE FRED LEE Total</b>	02/21/80	2.60	Nevada	UNST
A022735	15630	10005	Appropriative	Licensed	DUANE T NICHOLSON <b>DUANE T NICHOLSON Total</b>	03/05/73	4.50	Yuba	UNST
A020146	13371	8148	Appropriative	Licensed	DWAYNE M DOBBINS <b>DWAYNE M DOBBINS Total</b>	05/24/61	0.20	Nevada	UNSP
A024876	17136	11423	Appropriative	Licensed	EDWARD CARTER <b>EDWARD CARTER Total</b>	09/10/75	2.20	Yuba	UNST
A020291	13386	9922	Appropriative	Licensed	ELLEN DAVIS <b>ELLEN DAVIS Total</b>	05/12/72	102.00	Yuba	LITTLE DRY CREEK
A015415	9591	5978	Appropriative	Licensed	Eric Christopher Dunisch <b>Eric Christopher Dunisch Total</b>	07/16/53	0.40	Placer	UNSP
A013594	7966	4185	Appropriative	Licensed	ERMA B BELLETT	02/20/50	61.00	Nevada	UNST

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A013772	8313	4184	Appropriative	Licensed	ERMA B BELLETT	06/05/50	19.00	Nevada	UNST
					<b>ERMA B BELLETT Total</b>		80.00		
A019723	13031	9257	Appropriative	Licensed	ERNEST LOCATELLI	08/31/60	6.50	Sierra	MINE TUNNEL
					<b>ERNEST LOCATELLI Total</b>		6.50		
A020340	13854	8677	Appropriative	Licensed	Estate of Luella Debruin	08/02/61	4.90	Nevada	FRENCH CORRAL CREEK, UNST
A022900	15557	10027	Appropriative	Licensed	Estate of Luella Debruin	09/01/67	5.30	Nevada	UNST
					<b>Estate of Luella Debruin Total</b>		10.20		
A003332	1725	3267	Appropriative	Licensed	FAR VIEW ENTERPRISES INC	03/27/23	191.90	Butte	KINGS CREEK, LINCOLN HOUSE RAVINE
A016151	10611	7713	Appropriative	Licensed	FAR VIEW ENTERPRISES INC	11/23/54	50.00	Butte	LINCOLN HOUSE RAVINE
					<b>FAR VIEW ENTERPRISES INC Total</b>		241.90		
A017887	11400	6918	Appropriative	Licensed	FELLOWSHIP OF FRIENDS, INC	11/20/57	2.40	Yuba	UNST
A022518	15590	9584	Appropriative	Licensed	FELLOWSHIP OF FRIENDS, INC	07/06/66	3.20	Yuba	UNST
A025865	17749	13546	Appropriative	Licensed	FELLOWSHIP OF FRIENDS, INC	07/17/03	40.00	Yuba	WOODS CREEK
A027042	19277	13547	Appropriative	Licensed	FELLOWSHIP OF FRIENDS, INC	07/17/03	16.00	Yuba	UNST
A027043	19278	13548	Appropriative	Licensed	FELLOWSHIP OF FRIENDS, INC	07/17/03	42.00	Yuba	WOODS CREEK
					<b>FELLOWSHIP OF FRIENDS, INC Total</b>		103.60		
A007217	4420	2197	Appropriative	Licensed	FLORENCE B VON PLATEN	03/28/32	9.50	Nevada	UNXX
					<b>FLORENCE B VON PLATEN Total</b>		9.50		
A020310	13945	8349	Appropriative	Licensed	FORREST THOMAS	07/19/61	0.60	Sierra	UNSP
					<b>FORREST THOMAS Total</b>		0.60		
A010186	5823	2957	Appropriative	Licensed	FORSYTHE FAMILY TRUST	04/18/41	3.40	Sierra	UNSP
					<b>FORSYTHE FAMILY TRUST Total</b>		3.40		
A019007	12872	10128	Appropriative	Licensed	FRANCIS B PLANT	09/29/59	1.80	Sierra	SPRING #3, THOMAS ELLIS SPRING #1, THOMAS ELLIS SPRING #2, UNSP
					<b>FRANCIS B PLANT Total</b>		1.80		
A028922	20946		Appropriative	Permitted	Frank Pencik	10/20/86	6.00	Sierra	OAK VALLEY CREEK
					<b>Frank Pencik Total</b>		6.00		
A016792B	10815	008072B	Appropriative	Licensed	FRANK A MACHI	12/06/85	4.70	Nevada	UNST
					<b>FRANK A MACHI Total</b>		4.70		
A023956	16404	12058	Appropriative	Licensed	FRANKLIN JONES	12/30/71	0.60	Nevada	UNST

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
					<b>FRANKLIN JONES Total</b>		0.60		
A012154	7067	7040	Appropriative	Licensed	Gary J. Howsley	11/14/47	120.10	Yuba	LITTLE DRY CREEK
					<b>Gary J. Howsley Total</b>		120.10		
A019827	14390	9729	Appropriative	Licensed	GARY POOR	04/08/71	5.30	Sierra	UNST
					<b>GARY POOR Total</b>		5.30		
A009765	5532	4921	Appropriative	Licensed	GARY ZOLLDAN	11/09/39	1.50	Sierra	HARDY SPRING
					<b>GARY ZOLLDAN Total</b>		1.50		
A014371	9978	5645	Appropriative	Licensed	GARY D SMITH	06/27/51	2,903.80	Yuba	FRENCH DRY CREEK
					<b>GARY D SMITH Total</b>		2,903.80		
A017407	11040	6917	Appropriative	Licensed	GARY W DE MAR	12/26/56	72.50	Sierra	ARIZONA TUNNEL SPRING
					<b>GARY W DE MAR Total</b>		72.50		
A022567	15585	9649	Appropriative	Licensed	GEORGE KOOLERY	09/02/66	1.90	Sierra	UNSP
					<b>GEORGE KOOLERY Total</b>		1.90		
A022341	15153	9652	Appropriative	Licensed	GEORGINE TOMASI	11/23/65	0.80	Nevada	UNST
					<b>GEORGINE TOMASI Total</b>		0.80		
A023893	16447	10718	Appropriative	Licensed	GERALD BROOKS	10/07/71	16.00	Nevada	OWL CREEK
					<b>GERALD BROOKS Total</b>		16.00		
A002696	1200	511	Appropriative	Licensed	GOLD LAKE HOLDINGS LLC	12/21/21	3.00	Sierra	UNCR
					<b>GOLD LAKE HOLDINGS LLC Total</b>		3.00		
A028147	19447		Appropriative	Permitted	GREENE ACRES PROPERTY OWNERS ASSOCIATION	06/04/84	14.00	Sierra	UNSP
					<b>GREENE ACRES PROPERTY OWNERS ASSOCIATION Total</b>		14.00		
A026763	18953	12672	Appropriative	Licensed	GREGORY G KSANDER	03/25/81	0.20	Sierra	UNSP
					<b>GREGORY G KSANDER Total</b>		0.20		
A023470	16259	10568	Appropriative	Licensed	GREGORY L COMBS	03/19/70	5.40	Nevada	UNST
					<b>GREGORY L COMBS Total</b>		5.40		
A015100	9828	5683	Appropriative	Licensed	GUS NORTON	12/01/52	0.80	Sierra	UNST
					<b>GUS NORTON Total</b>		0.80		
A026703	18532	12361	Appropriative	Licensed	Heidi Biber	02/03/81	1.20	Nevada	UNST
					<b>Heidi Biber Total</b>		1.20		
A014962	9304	5295	Appropriative	Licensed	HELENE M WULBERN REVOCABLE TRUST 11/21/02	08/12/52	0.20	Placer	UNSP
					<b>HELENE M WULBERN REVOCABLE TRUST 11/21/02 Total</b>		0.20		
A014390A	008798A	007078A	Appropriative	Licensed	HENRY C LITTLE	07/31/92	20.00	Butte	WYANDOTTE CREEK
					<b>HENRY C LITTLE Total</b>		20.00		
A020243	13943	8370	Appropriative	Licensed	Hilary Winslow	06/01/61	0.60	Sierra	UNSP
					<b>Hilary Winslow Total</b>		0.60		
A030265	20863		Appropriative	Permitted	HOLT FAMILY TRUST	07/07/93	7.00	Sierra	UNST
					<b>HOLT FAMILY TRUST Total</b>		7.00		
A026949	18911	12397	Appropriative	Licensed	HUEY JOHNSON	08/10/81	0.20	Nevada	UNST
					<b>HUEY JOHNSON Total</b>		0.20		

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A028682	20102		Appropriative	Permitted	HUTCH H HUTCHISON	12/26/85	0.50	Nevada	UNSP
					<b>HUTCH H HUTCHISON Total</b>		0.50		
A010716	6336	3002	Appropriative	Licensed	IRVING N CHRISTENSEN	10/05/43	7.80	Sierra	UNSP
A019279	12546	7168	Appropriative	Licensed	IRVING N CHRISTENSEN	03/04/60	4.50	Sierra	UNSP
					<b>IRVING N CHRISTENSEN Total</b>		12.30		
A011257	6539	3342	Appropriative	Licensed	JACK E BERNDT	01/10/46	4.30	Sierra	UNSP, UNST
					<b>JACK E BERNDT Total</b>		4.30		
A014991	9201	5305	Appropriative	Licensed	JAMES NEWMAN	08/22/52	2.20	Nevada	UNST
					<b>JAMES NEWMAN Total</b>		2.20		
A012118	7160	3884	Appropriative	Licensed	James & Aileen Stevens Revocable Trust	10/03/47	15.00	Yuba	LITTLE DRY CREEK
A014946	9652	5084	Appropriative	Licensed	James & Aileen Stevens Revocable Trust	07/31/52	11.00	Yuba	LITTLE DRY CREEK
					<b>James &amp; Aileen Stevens Revocable Trust Total</b>		26.00		
A019647	12870	8606	Appropriative	Licensed	JAMES K CHRISTENSEN	08/04/60	27.80	Sierra	EMPIRE SPRING
					<b>JAMES K CHRISTENSEN Total</b>		27.80		
A018804	12160	8625	Appropriative	Licensed	JAMES L MOHAN	06/17/59	1.00	Yuba	MOONSHINE CREEK
					<b>JAMES L MOHAN Total</b>		1.00		
A010181	6026	2944	Appropriative	Licensed	James M & Aileen Stevens Rev Tr	04/09/41	98.70	Yuba	LITTLE DRY CREEK
					<b>James M &amp; Aileen Stevens Rev Tr Total</b>		98.70		
A026522	18513	12362	Appropriative	Licensed	JAMES NELSON DEGLANDON	09/11/80	24.00	Nevada	UNST
					<b>JAMES NELSON DEGLANDON Total</b>		24.00		
A026282	18202	12016	Appropriative	Licensed	JAMES R CUMMINS	04/09/80	6.10	Yuba	UNST
					<b>JAMES R CUMMINS Total</b>		6.10		
A021865	14988	8879	Appropriative	Licensed	JAMES S AVILLA	08/05/64	0.30	Placer	UNSP
					<b>JAMES S AVILLA Total</b>		0.30		
A010839	6383	3431	Appropriative	Licensed	Jana Burgess-Henry	07/15/44	29.00	Yuba	WAGNER CREEK
					<b>Jana Burgess-Henry Total</b>		29.00		
A013342	8218	4055	Appropriative	Licensed	Janie Kouch	09/08/49	1.20	Yuba	SOUTH HONCUT CREEK
					<b>Janie Kouch Total</b>		1.20		
A024799	17750	12294	Appropriative	Licensed	JAY CORY	04/14/75	0.20	Sierra	UNSP
					<b>JAY CORY Total</b>		0.20		
A021644	14628	9333	Appropriative	Licensed	JENISE J WARDEN	02/13/64	0.40	Nevada	UNSP
					<b>JENISE J WARDEN Total</b>		0.40		
A010856	6542	3299	Appropriative	Licensed	JERRY DON ELLSWORTH	03/14/01	57.00	Sierra	FIDDLE CREEK
					<b>JERRY DON ELLSWORTH Total</b>		57.00		
A025403	17354	11466	Appropriative	Licensed	JESSIE C TROST	06/23/77	0.10	Yuba	UNST
					<b>JESSIE C TROST Total</b>		0.10		
A020770	14744	9239	Appropriative	Licensed	JO HAMILTON	05/10/62	2.00	Nevada	UNSP (2)
					<b>JO HAMILTON Total</b>		2.00		
A021970	14989	8881	Appropriative	Licensed	JOAN M HANSON	11/23/64	1.00	Placer	UNSP
					<b>JOAN M HANSON Total</b>		1.00		
A025503	18013	13383	Appropriative	Licensed	JOE W ALEXANDER	09/12/77	49.90	Yuba	UNST
A026515A	018442A	13384	Appropriative	Licensed	JOE W ALEXANDER	02/05/92	5.20	Yuba	UNST

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A026515B	018422B	13385	Appropriative	Licensed	JOE W ALEXANDER	02/05/92	6.00	Yuba	UNST
					<b>JOE W ALEXANDER Total</b>		61.10		
A006057	3283	2041	Appropriative	Licensed	JOHN BARKER	09/17/28	5.10	Sierra	UNSP
					<b>JOHN BARKER Total</b>		5.10		
A025542	17408	11250	Appropriative	Licensed	JOHN FARACE	10/27/77	1.80	Yuba	KEYSTONE CREEK
					<b>JOHN FARACE Total</b>		1.80		
A018696	12090	7389	Appropriative	Licensed	JOHN A PARKER	05/07/59	0.20	Sierra	UNST
					<b>JOHN A PARKER Total</b>		0.20		
A013656	8167	5234	Appropriative	Licensed	JOHN H LUNDIN	03/28/50	1.60	Yuba	UNST
					<b>JOHN H LUNDIN Total</b>		1.60		
A026073	18076	12085	Appropriative	Licensed	JOHN R POWERS III & JANEY H POWERS REVOC TRUST DATED 9/6/00	08/24/79	4.20	Nevada	UNST
					<b>JOHN R POWERS III &amp; JANEY H POWERS REVOC TRUST DATED 9/6/00 Total</b>		4.20		
A017288	10935	6019	Appropriative	Licensed	JOHN T SMEE	09/21/56	0.10	Sierra	UNST
					<b>JOHN T SMEE Total</b>		0.10		
A010173	5777	4026	Appropriative	Licensed	JOSEPH E MARCANTONIO	03/29/41	36.50	Sierra	SLATE CASTLE RAVINE
A018484	11894	6979	Appropriative	Licensed	JOSEPH E MARCANTONIO	01/21/59	0.50	Sierra	SLATE CASTLE CREEK
					<b>JOSEPH E MARCANTONIO Total</b>		37.00		
A012700	7530	3719	Appropriative	Licensed	JULI SHAPIRO-ABDEEN	09/15/48	25.00	Nevada	UNST
					<b>JULI SHAPIRO-ABDEEN Total</b>		25.00		
A016732	11900	6537	Appropriative	Licensed	JUNE BURCHAM WILHELM	11/10/55	0.50	Nevada	UNXX
					<b>JUNE BURCHAM WILHELM Total</b>		0.50		
A019448	13768	8041	Appropriative	Licensed	KATHARINE SPIERS	05/24/60	42.00	Yuba	UNST
					<b>KATHARINE SPIERS Total</b>		42.00		
A018914	12417	7415	Appropriative	Licensed	Katherine Greene	08/14/59	17.00	Yuba	GARDEN RAVINE
					<b>Katherine Greene Total</b>		17.00		
A020792	14164	8897	Appropriative	Licensed	KATHLEEN H GOLDEN	05/25/62	0.20	Sierra	UNSP
					<b>KATHLEEN H GOLDEN Total</b>		0.20		
A014740	9017	5273	Appropriative	Licensed	KEITH L DOLAR	04/04/52	85.30	Butte	UNST
					<b>KEITH L DOLAR Total</b>		85.30		
A026245	18702	12528	Appropriative	Licensed	KEN BURKINDINE	03/04/80	0.40	Sierra	UNST
					<b>KEN BURKINDINE Total</b>		0.40		
A027819	19238	12680	Appropriative	Licensed	KEVIN HOMAN	08/04/83	2.00	Nevada	UNST
					<b>KEVIN HOMAN Total</b>		2.00		
A008330	4661	1928	Appropriative	Licensed	KIM HEMSTALK	05/04/35	5.00	Sierra	COYOTE RAVINE
					<b>KIM HEMSTALK Total</b>		5.00		
A023315	16073		Appropriative	Permitted	KINGVALE PROPERTY OWNERS & WATER USERS INC	07/18/69	20.00	Nevada	FOCHETTI SPRING, LOLA MONTEZ SPRING, S P SPRING
					<b>KINGVALE PROPERTY OWNERS &amp; WATER USERS INC Total</b>		20.00		
A026074	18088		Appropriative	Permitted	LA PORTE PINES COUNTRY CLUB	08/24/79	55.00	Plumas	UNSP, UNSP(2), UNST

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A027273	18597		Appropriative	Permitted	LA PORTE PINES COUNTRY CLUB	09/17/02	54.80	Plumas	UNSP
					<b>LA PORTE PINES COUNTRY CLUB Total</b>		109.80		
A004494	2081	781	Appropriative	Licensed	LAKE VERA MUTUAL WATER COMPANY	03/06/25	70.00	Nevada	ROCK CREEK
A005719	2979	782	Appropriative	Licensed	LAKE VERA MUTUAL WATER COMPANY	10/13/27	729.90	Nevada	ROCK CREEK
					<b>LAKE VERA MUTUAL WATER COMPANY Total</b>		799.90		
A023047	15779	10779	Appropriative	Licensed	LAKE WILDWOOD ASSOCIATION	05/17/68	3,840.00	Nevada	DEER CREEK
					<b>LAKE WILDWOOD ASSOCIATION Total</b>		3,840.00		
A007657	4239	6379	Appropriative	Licensed	LANCE BARLEAN	08/28/33	3.40	Yuba	UNSP
					<b>LANCE BARLEAN Total</b>		3.40		
A028134	20886	13842	Appropriative	Licensed	LEAH M STOCKER	11/08/11	5.00	Yuba	UNST
					<b>LEAH M STOCKER Total</b>		5.00		
A018396	11929	7012	Appropriative	Licensed	LEONARD C FUQUA	11/05/58	0.20	Sierra	COLD SPRING
					<b>LEONARD C FUQUA Total</b>		0.20		
A029180	20522		Appropriative	Permitted	LINDA BATES	03/19/02	5.00	Sierra	GRIZZLY GULCH
					<b>LINDA BATES Total</b>		5.00		
A026605	18765	13817	Appropriative	Licensed	LINDA BIRGE	01/05/11	45.00	Nevada	UNST
					<b>LINDA BIRGE Total</b>		45.00		
A024857	17681	12173	Appropriative	Licensed	LOUIS CLIFFORD LESTER SR	08/14/75	14.50	Nevada	UNST
					<b>LOUIS CLIFFORD LESTER SR Total</b>		14.50		
A012025	7313	6960	Appropriative	Licensed	LOWELL G ROBINSON	08/05/47	0.30	Sierra	UNSP
					<b>LOWELL G ROBINSON Total</b>		0.30		
A022801	15654	10430	Appropriative	Licensed	MAPLE GROVE MUTUAL WATER COMPANY	06/05/67	1.10	Sierra	CEDAR SPRING
A023795	16373		Appropriative	Permitted	MAPLE GROVE MUTUAL WATER COMPANY	06/02/71	10.00	Sierra	UNSP, WIXON SPRING
					<b>MAPLE GROVE MUTUAL WATER COMPANY Total</b>		11.10		
A006834	3665	1878	Appropriative	Licensed	MARIE BERTILLION COLLINS	11/19/30	0.70	Sierra	UNSP
A024808	16940	11499	Appropriative	Licensed	MARIE BERTILLION COLLINS	05/07/75	0.70	Sierra	UNSP
A026189	18266		Appropriative	Permitted	MARIE BERTILLION COLLINS	01/08/99	2.00	Sierra	UNSP
					<b>MARIE BERTILLION COLLINS Total</b>		3.40		
A018779	12139	8117	Appropriative	Licensed	MARIE M LANDERS	06/09/59	0.30	Sierra	UNSP
					<b>MARIE M LANDERS Total</b>		0.30		
A013399	8022	3796	Appropriative	Licensed	MARIN COUNCIL BOY SCOUT TRUST FUND #2	10/13/49	42.50	Nevada	CHUBB LAKE
					<b>MARIN COUNCIL BOY SCOUT TRUST FUND #2 Total</b>		42.50		
A014959	9301	5983	Appropriative	Licensed	MARK MOORE	08/12/52	0.40	Placer	UNSP
					<b>MARK MOORE Total</b>		0.40		
A015345	9575	5185	Appropriative	Licensed	MARK ROTH	06/09/58	0.10	Placer	UNSP



## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A018079	11547	6800	Appropriative	Licensed	<b>MARK ROTH Total</b>		0.10		
					MARTIN FAMILY TRUST	04/02/58	3.70	Nevada	UNST
					<b>MARTIN FAMILY TRUST Total</b>		3.70		
A027000	18773	13792	Appropriative	Licensed	MAURICE ALTSHULER	05/28/09	20.00	Nevada	UNST
A030728	21195	13793	Appropriative	Licensed	MAURICE ALTSHULER	05/28/09	6.00	Nevada	UNST
					<b>MAURICE ALTSHULER Total</b>		26.00		
A021251	14195	9944	Appropriative	Licensed	MICHAEL CIAFARDONI	04/22/63	17.00	Nevada	UNST
					<b>MICHAEL CIAFARDONI Total</b>		17.00		
A025891	17758	11770	Appropriative	Licensed	MICHAEL K SCHARF	12/26/78	1.70	Nevada	UNST
					<b>MICHAEL K SCHARF Total</b>		1.70		
A009750	5462	3069	Appropriative	Licensed	MILTON R HOLSTROM	10/13/39	726.00	Sierra	EMPIRE CREEK, UNSP
					<b>MILTON R HOLSTROM Total</b>		726.00		
A024730	17134	11755	Appropriative	Licensed	Modern Building Inc.	12/20/74	25.00	Butte	UNST
					<b>Modern Building Inc. Total</b>		25.00		
A001270	2082	12795	Appropriative	Licensed	NEVADA IRRIGATION DISTRICT	07/10/91	130,701.50	Nevada	CANYON CREEK, FALL CREEK, JACKSON CREEK, TEXAS CREEK, TRAP CREEK
A001614	1481		Appropriative	Permitted	NEVADA IRRIGATION DISTRICT	01/08/20	60,000.00	Nevada	DEER CREEK
A001615	5801	8808	Appropriative	Licensed	NEVADA IRRIGATION DISTRICT	01/08/20	36,496.40	Nevada	DEER CREEK, SOUTH FORK DEER CREEK
A002276	2085	12797	Appropriative	Licensed	NEVADA IRRIGATION DISTRICT	03/25/21	60,000.00	Nevada, Sierra	MIDDLE YUBA RIVER
A005193	13770		Appropriative	Permitted	NEVADA IRRIGATION DISTRICT	09/08/26	50,000.00	Nevada, Sierra	MIDDLE YUBA RIVER (@ MILTON DAM), MIDDLE YUBA RIVER (@JACKSON MEADOWS DAM)
A006702	5807	12800	Appropriative	Licensed	NEVADA IRRIGATION DISTRICT	06/16/30	4,889.30	Nevada	CLEAR CREEK, FALL CREEK, TRAP CREEK
A008180	5815		Appropriative	Permitted	NEVADA IRRIGATION DISTRICT	11/27/34	207,894.90	Nevada	CLEAR CREEK, FALL CREEK, RUCKER CREEK, TEXAS CREEK, TRAP CREEK
A020017	13772		Appropriative	Permitted	NEVADA IRRIGATION DISTRICT	03/06/61	101,160.00	Nevada	SOUTH YUBA RIVER
					<b>NEVADA IRRIGATION DISTRICT Total</b>		651,142.10		
A014961	9303	6158	Appropriative	Licensed	NORMAN R PICKLES	08/12/52	0.40	Placer	UNSP
					<b>NORMAN R PICKLES Total</b>		0.40		
A013957	11516		Appropriative	Permitted	North Yuba Water District	08/18/58	145,084.30	Plumas, Yuba	SLATE CREEK
					<b>North Yuba Water District Total</b>		145,084.30		

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A013959	8944	4700	Appropriative	Licensed	O'Brien Ranch LLC	09/21/50	983.80	Butte, Yuba	SOUTH HONCUT CREEK
					<b>O'Brien Ranch LLC Total</b>		983.80		
A018565	12005	6754	Appropriative	Licensed	OLIVER G MILHOUS	03/03/59	20.00	Nevada	UNST
					<b>OLIVER G MILHOUS Total</b>		20.00		
A000481	203	368	Appropriative	Licensed	ORIGINAL SIXTEEN TO ONE MINE, INC	07/31/24	724.00	Sierra	BUCKEYE RAVINE
A001193	562	121	Appropriative	Licensed	ORIGINAL SIXTEEN TO ONE MINE, INC	02/25/19	362.00	Sierra	UNSP
					<b>ORIGINAL SIXTEEN TO ONE MINE, INC Total</b>		1,086.00		
A013689	8312	3836	Appropriative	Licensed	OSHA B READER	04/14/50	49.60	Sierra	UNST
A018928	12203	6983	Appropriative	Licensed	OSHA B READER	08/20/59	1.70	Sierra	UNSP
					<b>OSHA B READER Total</b>		51.30		
A011120	6599	3392	Appropriative	Licensed	OSTROM FAMILY TRUST	07/27/45	12.00	Sierra	UNSP
A011501	6713	3393	Appropriative	Licensed	OSTROM FAMILY TRUST	08/07/46	38.20	Sierra	UNSP
A017135	10850	6922	Appropriative	Licensed	OSTROM FAMILY TRUST	06/14/56	0.20	Sierra	UNSP
A017137	10852	5981	Appropriative	Licensed	OSTROM FAMILY TRUST	06/14/56	0.10	Sierra	UNSP
A018782	12221		Appropriative	Permitted	OSTROM FAMILY TRUST	10/02/01	40.10	Sierra	ANDERSON SPRING
A023778	16372		Appropriative	Permitted	OSTROM FAMILY TRUST	05/04/71	24.10	Sierra	UNSP, WIXON SPRING
					<b>OSTROM FAMILY TRUST Total</b>		114.70		
A024165	16758	11081	Appropriative	Licensed	PACIFIC EDGE INC	08/30/72	9.00	Yuba	UNST
					<b>PACIFIC EDGE INC Total</b>		9.00		
A015542	9622	5189	Appropriative	Licensed	PAUL F BUKENHOFER	09/17/53	72.50	Yuba	UNST
					<b>PAUL F BUKENHOFER Total</b>		72.50		
A020823	13820	8729	Appropriative	Licensed	PAULA M SCHROEDER	06/20/62	0.60	Sierra	UNSP
					<b>PAULA M SCHROEDER Total</b>		0.60		
A018176	11803	8201	Appropriative	Licensed	PHILIP PERSONENI	06/10/58	91.70	Nevada	SHADY CREEK
					<b>PHILIP PERSONENI Total</b>		91.70		
A024842	17048	11439	Appropriative	Licensed	PHILIP J SIMMONS	07/22/75	1.00	Sierra	UNST
					<b>PHILIP J SIMMONS Total</b>		1.00		
A009617	5497	2705	Appropriative	Licensed	PONTA, MELVIN J & MARCELLA M 1984 REVOCABLE TRUST	09/26/44	39.80	Sierra	WOODRUFF CREEK
A011994	7054	3526	Appropriative	Licensed	PONTA, MELVIN J & MARCELLA M 1984 REVOCABLE TRUST	07/16/47	1.60	Sierra	UNSP
					<b>PONTA, MELVIN J &amp; MARCELLA M 1984 REVOCABLE TRUST Total</b>		41.40		
A027638	18933	12446	Appropriative	Licensed	R MARILYN WILSON	01/24/83	2.00	Nevada	KENTUCKY RAVINE
					<b>R MARILYN WILSON Total</b>		2.00		
A018368	11988	8848	Appropriative	Licensed	RAENNE A KALFSBEEK	10/10/58	3.70	Yuba	GOLDEN GATE RAVINE
					<b>RAENNE A KALFSBEEK Total</b>		3.70		
A008343	4680	1903	Appropriative	Licensed	RAINBOW HOLDING COMPANY, LTD	05/25/35	112.90	Placer	UNSP
					<b>RAINBOW HOLDING COMPANY, LTD Total</b>		112.90		
A025997	18129	12158	Appropriative	Licensed	RAMON HERNANDEZ	05/16/79	15.00	Yuba	UNST
					<b>RAMON HERNANDEZ Total</b>		15.00		
A017934	11550	6977	Appropriative	Licensed	RAY COLAIZZI	01/06/58	0.80	Sierra	INDEPENDENCE CREEK

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
					<b>RAY COLAIZZI Total</b>		0.80		
A022395	15508	10302	Appropriative	Licensed	REGULAR BAPTIST CAMP INCORPORATED	02/18/66	87.00	Sierra	PILOT LAKE (AKA DELAHUNTY LAKE)
A022396	15220	11011	Appropriative	Licensed	REGULAR BAPTIST CAMP INCORPORATED	09/19/02	3.20	Sierra	UNSP (3)
					<b>REGULAR BAPTIST CAMP INCORPORATED Total</b>		90.20		
A018212	11725	9140	Appropriative	Licensed	RENTIER INCORPORATED	07/09/58	0.70	Sierra	UNST
					<b>RENTIER INCORPORATED Total</b>		0.70		
A018279	11926	7127	Appropriative	Licensed	RICHARD L MILLER	08/21/58	0.20	Sierra	UNSP
					<b>RICHARD L MILLER Total</b>		0.20		
A017797	11267	7196	Appropriative	Licensed	RICHARD W WALKER	08/22/57	1.70	Placer	UNST
					<b>RICHARD W WALKER Total</b>		1.70		
A027542	18885	12513	Appropriative	Licensed	RICHARDS LAND & CATTLE CO	09/30/82	12.00	Yuba	WOODS CREEK
A027603	18884	13380	Appropriative	Licensed	RICHARDS LAND & CATTLE CO	12/03/82	49.00	Yuba	WOODS CREEK
					<b>RICHARDS LAND &amp; CATTLE CO Total</b>		61.00		
A019559	12914	7539	Appropriative	Licensed	ROBERT CARLSTROEM	07/20/60	0.20	Sierra	UNST
					<b>ROBERT CARLSTROEM Total</b>		0.20		
A021496	14525	9634	Appropriative	Licensed	ROBERT A HELLER	10/09/63	1.10	Sierra	UNXX
					<b>ROBERT A HELLER Total</b>		1.10		
A026640	18874		Appropriative	Permitted	ROBERT A ROWE	12/02/80	3.20	Nevada	KENTUCKY RAVINE
					<b>ROBERT A ROWE Total</b>		3.20		
A016792A	10815	008072A	Appropriative	Licensed	ROBERT L RYAN	12/06/85	9.40	Nevada	UNST
					<b>ROBERT L RYAN Total</b>		9.40		
A014951	10084	5848	Appropriative	Licensed	ROBERTA D'ARCY	08/06/52	113.10	Yuba	DRY CREEK
					<b>ROBERTA D'ARCY Total</b>		113.10		
A018674	12824	8179	Appropriative	Licensed	ROCHELLE A FLEMING	04/28/59	0.30	Sierra	UNST
					<b>ROCHELLE A FLEMING Total</b>		0.30		
A021562	14484	8801	Appropriative	Licensed	ROGER P VAN CRAEYNES	12/04/63	2.70	Sierra	UNSP
					<b>ROGER P VAN CRAEYNES Total</b>		2.70		
A026809	18475	12287	Appropriative	Licensed	RONALD GUILD	04/29/81	4.00	Yuba	PRAIRIE CREEK
					<b>RONALD GUILD Total</b>		4.00		
A027976	19244	12656	Appropriative	Licensed	RONALD L GOODSPEED	02/08/84	0.30	Nevada	UNST
					<b>RONALD L GOODSPEED Total</b>		0.30		
A018286	11774	7006	Appropriative	Licensed	ROSS JACOBS	08/26/58	0.20	Sierra	UNST
					<b>ROSS JACOBS Total</b>		0.20		

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A026365	18355	12070	Appropriative	Licensed	ROY BRAATZ <b>ROY BRAATZ Total</b>	05/19/80	3.30 3.30	Nevada	UNST
A020263	13977	10086	Appropriative	Licensed	ROY RAMEY <b>ROY RAMEY Total</b>	06/13/61	24.20 24.20	Nevada	WEST BRANCH GOLD RUN CREEK
A008984	5142	2367	Appropriative	Licensed	RUBY DEVELOPMENT COMPANY <b>RUBY DEVELOPMENT COMPANY Total</b>	06/02/37	241.10 241.10	Sierra	ROCK CREEK
A024904	17224	11479	Appropriative	Licensed	RUBY J RICKARD <b>RUBY J RICKARD Total</b>	10/17/75	2.00 2.00	Nevada	UNSP
A018252	11757	7003	Appropriative	Licensed	SEGHEZZI INC <b>SEGHEZZI INC Total</b>	03/20/64	51.70 51.70	Nevada	UNST
A020309	13944	8350	Appropriative	Licensed	SHAWN BEACHAMP <b>SHAWN BEACHAMP Total</b>	07/19/61	0.60 0.60	Sierra	UNSP
A021727	14700	9328	Appropriative	Licensed	SHERMAN D WINSHIP <b>SHERMAN D WINSHIP Total</b>	04/07/64	15.00 15.00	Nevada	UNST
A021417	14529	9226	Appropriative	Licensed	SIBLEY HANSEN <b>SIBLEY HANSEN Total</b>	08/02/63	0.10 0.10	Sierra	SMALL SPRING
A006286	3316	2427	Appropriative	Licensed	SIERRA CLUB <b>SIERRA CLUB Total</b>	05/13/29	2.80 8.40	Nevada	ZERO SPRING
A008465	4945	2628	Appropriative	Licensed	SIERRA CLUB <b>SIERRA CLUB Total</b>	10/05/35	5.60 8.40	Nevada	UNSP
A020890	14177	9068	Appropriative	Licensed	SIERRA PACIFIC INDUSTRIES <b>SIERRA PACIFIC INDUSTRIES Total</b>	08/06/62	5.60 5.60	Sierra	UNSP, UNST
A026028	18161	12301	Appropriative	Licensed	SOPER COMPANY <b>SOPER COMPANY Total</b>	06/18/79	2.50 2.50	Nevada	UNST
A026067	18454	11796	Appropriative	Licensed	STARDUSTER LAKE ASSOCIATION <b>STARDUSTER LAKE ASSOCIATION Total</b>	08/17/79	27.00 27.00	Nevada	UNST
A023591	16215	10645	Appropriative	Licensed	STEPHEN MAKI <b>STEPHEN MAKI Total</b>	08/24/70	2.30 2.30	Nevada	UNST
A028615	20873		Appropriative	Permitted	STEVE MEHALAKIS	11/08/85	20.00	Yuba	UNST
A028616	20874		Appropriative	Permitted	STEVE MEHALAKIS <b>STEVE MEHALAKIS Total</b>	11/08/85	656.00 676.00	Yuba	UNST
A016659	10458	6570	Appropriative	Licensed	Steven A Beckwitt <b>Steven A Beckwitt Total</b>	10/10/55	7.00 7.00	Nevada	UNCR
A028564	20071	13055	Appropriative	Licensed	STEVEN NIGHTINGALE <b>STEVEN NIGHTINGALE Total</b>	09/26/85	0.40 0.40	Sierra	UNST
A030074	20797		Appropriative	Permitted	SUGAR BOWL CORPORATION	06/15/95	136.00	Placer	LAKE MARY

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A030359	20798		Appropriative	Permitted	SUGAR BOWL CORPORATION	06/15/95	136.00	Placer	LAKE MARY
					<b>SUGAR BOWL CORPORATION Total</b>		272.00		
A017808	11602	6617	Appropriative	Licensed	SUSAN TRIMBLE SILVEY	08/30/57	0.30	Nevada	UNSP, UNST
					<b>SUSAN TRIMBLE SILVEY Total</b>		0.30		
A022135	15294	9724	Appropriative	Licensed	SUSAN M FORD	04/30/65	6.00	Sierra	UNSP
					<b>SUSAN M FORD Total</b>		6.00		
A028187	20186		Appropriative	Permitted	SUSAN T TOWNSEND	07/10/84	35.00	Nevada	OWL CREEK
					<b>SUSAN T TOWNSEND Total</b>		35.00		
A017798	11268	6932	Appropriative	Licensed	SUSANNAH SCHROLL	08/22/57	0.90	Placer	UNST
					<b>SUSANNAH SCHROLL Total</b>		0.90		
A010980	6391	3171	Appropriative	Licensed	Terry Mitchell Riley	02/13/45	17.00	Yuba	MOONSHINE CREEK
					<b>Terry Mitchell Riley Total</b>		17.00		
A021079	14144	9865	Appropriative	Licensed	THE KRUMP LIMITED PARTNERSHIP	12/11/62	29.00	Nevada	NORTH CREEK
					<b>THE KRUMP LIMITED PARTNERSHIP Total</b>		29.00		
A011106	6583	4849	Appropriative	Licensed	THOMAS DE JONGHE	07/13/45	19.70	Sierra	UNSP, VAN JOAN CREEK
A018663	12077	6842	Appropriative	Licensed	THOMAS DE JONGHE	04/24/59	796.40	Sierra	SAN JUAN CANYON
					<b>THOMAS DE JONGHE Total</b>		816.10		
A009651	5425	2777	Appropriative	Licensed	THOMAS A JEKYLL	06/30/39	5.60	Yuba	MOONSHINE CREEK
					<b>THOMAS A JEKYLL Total</b>		5.60		
A028126	20885		Appropriative	Permitted	THOMAS R POPE	04/30/84	7.00	Yuba	UNST
					<b>THOMAS R POPE Total</b>		7.00		
A018395	11928	7011	Appropriative	Licensed	TIMOTHY WALKER	11/05/58	0.20	Sierra	COLD SPRING
					<b>TIMOTHY WALKER Total</b>		0.20		
A017142	10833	6907	Appropriative	Licensed	TREVOR D ROBBINS	06/20/56	2.60	Nevada	UNST
					<b>TREVOR D ROBBINS Total</b>		2.60		
A014930	9266	5083	Appropriative	Licensed	TRI-LODGE ASSOCIATION	07/28/52	16.80	Nevada	LYTTON CREEK
					<b>TRI-LODGE ASSOCIATION Total</b>		16.80		
A015246	9585	4864	Appropriative	Licensed	TROY L JONES	03/19/53	2.30	Nevada	UNSP
					<b>TROY L JONES Total</b>		2.30		
A022265	15651	13721	Appropriative	Licensed	TSCHOPP MUTUAL WATER COMPANY	05/30/07	8.40	Sierra	UNSP, WIXON SPRING
					<b>TSCHOPP MUTUAL WATER COMPANY Total</b>		8.40		
A018581	11987	7507	Appropriative	Licensed	TYE ROMMEL	03/10/59	0.10	Sierra	UNST
					<b>TYE ROMMEL Total</b>		0.10		
A006563	3462	4000	Appropriative	Licensed	U S FOREST SERVICE	02/13/30	0.40	Sierra	UNSP
A007608	4266	1863	Appropriative	Licensed	U S FOREST SERVICE	07/05/33	1.80	Sierra	UNSP

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A007691	4232	1864	Appropriative	Licensed	U S FOREST SERVICE	09/28/33	0.40	Sierra	GENTLE ANNIE SPRING
A007767	4269	1865	Appropriative	Licensed	U S FOREST SERVICE	11/27/33	0.30	Sierra	UNSP
A008493	4684	2139	Appropriative	Licensed	U S FOREST SERVICE	11/13/35	6.20	Sierra	JERRETT SPRING
A009561	5364	2480	Appropriative	Licensed	U S FOREST SERVICE	04/19/39	8.40	Sierra	BAKER SPRING
A010038	5700	4893	Appropriative	Licensed	U S FOREST SERVICE	10/17/40	5.60	Placer	SUMMIT SPRING NO 1
A010153	5788	2659	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	1.10	Nevada	LOGAN SPRING
A010154	5789	2660	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	1.40	Nevada	BIG LICK SPRINGS
A010155	5790	2661	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	1.00	Nevada	DEMPSEY SPRINGS
A010156	5791	4888	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	9.20	Nevada	WHITE CLOUD SPRINGS
A010158	5793	2662	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	1.40	Nevada	COLEMAN SPRINGS
A010159	5794	4175	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	0.60	Nevada	SKILLMAN FLAT SPRING
A010160	5795	2663	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	0.60	Nevada	DEMORY SPRING
A010161	5796	2664	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	1.40	Nevada	UPPER DERBEC SPRING
A010162	5797	2665	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	9.80	Nevada	SNOWTENT SPRING
A010163	5798	2666	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	2.90	Nevada	DERBEC SPRINGS
A010164	5799	2667	Appropriative	Licensed	U S FOREST SERVICE	03/22/41	4.40	Nevada	WILLOW SPRINGS
A010446	6018	2891	Appropriative	Licensed	U S FOREST SERVICE	05/06/42	3.10	Nevada	THIMBLEBERRY CREEK
A010447	6019	2892	Appropriative	Licensed	U S FOREST SERVICE	05/06/42	3.70	Nevada	JUNCTION HOUSE SPRING
A010448	6020	4895	Appropriative	Licensed	U S FOREST SERVICE	05/06/42	1.10	Nevada	GROUSE RIDGE SPRING NO 3
A010449	6021	3057	Appropriative	Licensed	U S FOREST SERVICE	05/06/42	0.20	Nevada	MOGONIGAL SPRING
A010451	6023	2894	Appropriative	Licensed	U S FOREST SERVICE	05/06/42	3.40	Nevada	BEAR TRAP CREEK
A010452	6024	3058	Appropriative	Licensed	U S FOREST SERVICE	05/06/42	0.20	Nevada	GROUSE RIDGE SPRING NO 1
A010453	6025	3921	Appropriative	Licensed	U S FOREST SERVICE	05/06/42	0.60	Nevada	GROUSE RIDGE SPRING NO 2

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A010496	6091	2895	Appropriative	Licensed	U S FOREST SERVICE	07/15/42	0.90	Nevada	MOBLEY HOMESTEAD SPRING NO 1
A010497	6092	2896	Appropriative	Licensed	U S FOREST SERVICE	07/15/42	4.70	Nevada	HOLDEN SPRING
A010500	6095	2898	Appropriative	Licensed	U S FOREST SERVICE	07/15/42	1.80	Nevada	UNSP
A010502	6099	2899	Appropriative	Licensed	U S FOREST SERVICE	07/15/42	3.20	Nevada	MOBLEY HOMESTEAD SPRING NO 2
A010503	6100	2900	Appropriative	Licensed	U S FOREST SERVICE	07/15/42	4.10	Nevada	INDIAN SPRING
A010506	6103	2902	Appropriative	Licensed	U S FOREST SERVICE	07/15/42	0.90	Nevada	UPPER WOOLSEY SPRING
A010634	6150	2903	Appropriative	Licensed	U S FOREST SERVICE	05/01/43	2.20	Sierra	HALLS RANCH SPRING
A010637	6153	2905	Appropriative	Licensed	U S FOREST SERVICE	05/01/43	2.20	Sierra	WILD PLUM SPRING
A010639	6155	2907	Appropriative	Licensed	U S FOREST SERVICE	05/01/43	1.60	Sierra	DEADWOOD SPRING
A010640	6156	2908	Appropriative	Licensed	U S FOREST SERVICE	05/01/43	2.20	Sierra	GOLD LAKE SPRING
A010642	6158	2910	Appropriative	Licensed	U S FOREST SERVICE	05/01/43	1.50	Sierra	SADDLEBACK SPRING
A011382	6627	7752	Appropriative	Licensed	U S FOREST SERVICE	04/23/46	0.60	Nevada	RED MOUNTAIN SPRING NO 1
A012054	7080	3979	Appropriative	Licensed	U S FOREST SERVICE	08/21/47	210.30	Sierra	BEAR CREEK
A012104	7107	5532	Appropriative	Licensed	U S FOREST SERVICE	09/24/47	5.00	Sierra	HASKELL CREEK
A012105	7197	4210	Appropriative	Licensed	U S FOREST SERVICE	09/24/47	0.10	Sierra	GLEASON SPRING
A012108	7198	8987	Appropriative	Licensed	U S FOREST SERVICE	09/24/47	6.10	Sierra	CARVIN CREEK, UNSP
A012734	7577	4944	Appropriative	Licensed	U S FOREST SERVICE	10/07/48	17.90	Placer	UNSP
A013626	8115	5514	Appropriative	Licensed	U S FOREST SERVICE	03/10/50	8.20	Sierra	GRASSY LAKE CREEK
A013627	8116	4873	Appropriative	Licensed	U S FOREST SERVICE	03/10/50	12.20	Sierra	ORGAN CREEK
A014368	9086	4981	Appropriative	Licensed	U S FOREST SERVICE	06/27/51	0.10	Sierra	INDEPENDENCE RAVINE
A014369	8833	5423	Appropriative	Licensed	U S FOREST SERVICE	06/27/51	1.60	Sierra	FIDDLE CREEK
A014399	8880	5114	Appropriative	Licensed	U S FOREST SERVICE	07/19/51	2.00	Nevada	RATTLESNAKE CREEK
A014400	8830	6972	Appropriative	Licensed	U S FOREST SERVICE	07/19/51	0.60	Nevada	JACKSON CREEK

## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A016642	10775	6162	Appropriative	Licensed	U S FOREST SERVICE	09/30/55	0.90	Sierra	CARVIN CREEK
A017236	14333	9873	Appropriative	Licensed	U S FOREST SERVICE	08/13/56	4,320.00	Nevada	WEAVER LAKE
A017827	11555	6959	Appropriative	Licensed	U S FOREST SERVICE	09/19/57	0.90	Sierra	UNSP (2)
A017867	11386	8642	Appropriative	Licensed	U S FOREST SERVICE	10/31/57	4.00	Nevada	UNSP
A018294	11777	7651	Appropriative	Licensed	U S FOREST SERVICE	08/28/58	0.20	Nevada	MARSH TRACT SPRING
A018744	13212	8632	Appropriative	Licensed	U S FOREST SERVICE	05/28/59	130.00	Sierra	UNST
A018745	13213	8633	Appropriative	Licensed	U S FOREST SERVICE	05/28/59	90.00	Sierra	PACKER CREEK
A018746	13214	8634	Appropriative	Licensed	U S FOREST SERVICE	05/28/59	380.00	Sierra	SALMON CREEK
A018747	13215	8635	Appropriative	Licensed	U S FOREST SERVICE	05/28/59	282.20	Sierra	SARDINE CREEK
A018748	13216	8983	Appropriative	Licensed	U S FOREST SERVICE	05/28/59	350.00	Sierra	SAWMILL CREEK
A018749	13217	8636	Appropriative	Licensed	U S FOREST SERVICE	05/28/59	250.00	Sierra	SALMON CREEK
A021130	14147	8582	Appropriative	Licensed	U S FOREST SERVICE	01/22/63	2.20	Sierra	UNSP
A021420	14530	8940	Appropriative	Licensed	U S FOREST SERVICE	08/06/63	0.20	Sierra	UNSP
A023124	15805	9651	Appropriative	Licensed	U S FOREST SERVICE	09/05/68	0.30	Sierra	UNSP
A028413	19713	13031	Appropriative	Licensed	U S FOREST SERVICE	03/29/85	0.80	Sierra	UNSP
					<b>U S FOREST SERVICE Total</b>		6,170.90		
A024067	16490	11008	Appropriative	Licensed	WALTER BALDAIN	05/12/72	8.00	Yuba	UNST
					<b>WALTER BALDAIN Total</b>		8.00		
A022419	15278	9703	Appropriative	Licensed	WASHINGTON COUNTY WATER DISTRICT	03/11/66	48.00	Nevada	HENDERSON RAVINE
					<b>WASHINGTON COUNTY WATER DISTRICT Total</b>		48.00		
A016823	10823	7089	Appropriative	Licensed	WAYNE L HARSHBARGER	01/09/56	35.00	Nevada	UNST
					<b>WAYNE L HARSHBARGER Total</b>		35.00		
A018170	11648	7666	Appropriative	Licensed	WILLIAM C DOUB II	06/05/58	1.10	Yuba	LITTLE WILLOW CREEK
					<b>WILLIAM C DOUB II Total</b>		1.10		
A026642	18723		Appropriative	Permitted	WILLIAM H CLEMENS	12/03/80	3.00	Nevada	RAPP RAVINE
					<b>WILLIAM H CLEMENS Total</b>		3.00		
A011355	6661	3358	Appropriative	Licensed	WILLIAM R SMITH	03/28/46	0.60	Sierra	JIM CROW CANYON



## Yuba River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
<b>WILLIAM R SMITH Total</b>							0.60		
A002197	1154	435	Appropriative	Licensed	YUBA COUNTY WATER AGENCY	02/11/21	511,784.30	Yuba	NORTH YUBA RIVER
A003026	1354	436	Appropriative	Licensed	YUBA COUNTY WATER AGENCY	09/07/22	10,000.00	Yuba	NORTH YUBA RIVER
A005004	2604	777	Appropriative	Licensed	YUBA COUNTY WATER AGENCY	04/30/26	15,000.00	Yuba	NORTH YUBA RIVER
A005632	15026		Appropriative	Permitted	YUBA COUNTY WATER AGENCY	07/30/27	1,159,000.00	Yuba	NORTH YUBA RIVER, YUBA RIVER
A009516	6106	3050	Appropriative	Licensed	YUBA COUNTY WATER AGENCY	03/01/39	72,397.80	Yuba	NORTH YUBA RIVER
A010282	8330	5544	Appropriative	Licensed	YUBA COUNTY WATER AGENCY	09/12/41	5,335.00	Yuba	NORTH YUBA RIVER
A015204	15027		Appropriative	Permitted	YUBA COUNTY WATER AGENCY	03/28/66	246,000.00	Yuba	NORTH YUBA RIVER, YUBA RIVER
A015574	15030		Appropriative	Permitted	YUBA COUNTY WATER AGENCY	03/28/66	514,000.00	Nevada, Yuba	MIDDLE YUBA RIVER, NORTH YUBA RIVER, OREGON CREEK, YUBA RIVER
A029837	20595		Appropriative	Permitted	YUBA COUNTY WATER AGENCY	10/11/90	21,719.30	Yuba	DEADWOOD CREEK, OWL GULCH
<b>YUBA COUNTY WATER AGENCY Total</b>							2,555,236.40		
A002978	1270	12984	Appropriative	Licensed	YUBA COUNTY WATER DISTRICT	08/12/22	6,060.00	Yuba	DRY CREEK
A013957	11516		Appropriative	Licensed	YUBA COUNTY WATER DISTRICT	09/20/50	145,082.64	Plumas, Yuba	NORTH YUBA RIVER, YUBA RIVER
A011596	7086	4699	Appropriative	Licensed	YUBA INVESTMENT COMPANY	10/28/46	2,558.70	Yuba	DRY CREEK
<b>YUBA INVESTMENT COMPANY Total</b>							2,558.70		
A026914	18489	12619	Appropriative	Licensed	YUBA RIVER RECREATION GROUP INC	07/13/81	2.60	Nevada	HUMBUG CREEK
<b>YUBA RIVER RECREATION GROUP INC Total</b>							2.60		
<b>Grand Total</b>							3,595,920.74		

## Bear River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A029052	20786	13687	ANNE K SOUSA	12/13/06	5.80	Nevada	UNST
			<b>ANNE K SOUSA Total</b>		5.80		
A029455	20562		ARTHUR W ARMSTRONG	3/28/89	7.00	Nevada	IRON CROSS CREEK, ROCK CREEK
			<b>ARTHUR W ARMSTRONG Total</b>		7.00		
A025897	18040	11864	BEN R RAWE	1/5/79	0.30	Nevada	WOLF CREEK
			<b>BEN R RAWE Total</b>		0.30		
A026042	17969	11895	Bethel Church Nevada County	7/5/79	1.50	Nevada	UNST
			<b>Bethel Church Nevada County Total</b>		1.50		
A019535	12763	7754	BETTY THOMAS	7/11/60	20.00	Nevada	UNST
			<b>BETTY THOMAS Total</b>		20.00		
A015964	10090	7264	BLEAU 1989 REVOCABLE TRUST DATED 12/22/89	5/5/65	14.80	Nevada	UNST
			<b>BLEAU 1989 REVOCABLE TRUST DATED 12/22/89 Total</b>		14.80		
A027768	19029	12402	BOB J BALDWIN	6/7/83	2.40	Nevada	UNST
			<b>BOB J BALDWIN Total</b>		2.40		
A000959	743	385	CAMP FAR WEST IRRIGATION DISTRICT	4/1/18	4,832.10	Yuba	BEAR RIVER
A002881	2089	2266	CAMP FAR WEST IRRIGATION DISTRICT	6/13/22	5,000.00	Yuba	BEAR RIVER
A003843	2090	2267	CAMP FAR WEST IRRIGATION DISTRICT	2/11/24	3,592.20	Yuba	BEAR RIVER
A010190	5852	2740	CAMP FAR WEST IRRIGATION DISTRICT	4/28/41	5,000.00	Yuba	BEAR RIVER
			<b>CAMP FAR WEST IRRIGATION DISTRICT Total</b>		18,424.30		
A021821	14841	9992	CITY OF GRASS VALLEY	6/18/64	4.00	Nevada	RHODE ISLAND RAVINE
A025601	17893		CITY OF GRASS VALLEY	12/16/77	2,200.00	Nevada	UNXX
			<b>CITY OF GRASS VALLEY Total</b>		2,204.00		
A029097	20492	13344	COX-HARTLEY FAMILY 1993 TRUST	8/17/87	17.00	Nevada	LONG RAVINE
			<b>COX-HARTLEY FAMILY 1993 TRUST Total</b>		17.00		
A026932	18555	12337	CRAIG FERRARI	7/27/81	1.30	Nevada	LONG RAVINE
A029177	20384	13514	CRAIG FERRARI	1/26/88	3.30	Nevada	LONG RAVINE
			<b>CRAIG FERRARI Total</b>		4.60		
A020794	14711	10153	DANIEL HALE	5/28/62	8.30	Nevada	UNSP, UNST
			<b>DANIEL HALE Total</b>		8.30		
A017495	11042	5812	DARKHORSE GOLF CLUB LLC	3/5/57	9.00	Nevada	UNST
A027767	19028	12401	DARKHORSE GOLF CLUB LLC	6/7/83	1.90	Nevada	UNST
			<b>DARKHORSE GOLF CLUB LLC Total</b>		10.90		
A026161	18143	12136	DAVID MCFARLANE	1/3/80	0.10	Nevada	UNSP
			<b>DAVID MCFARLANE Total</b>		0.10		
A015282	9761	4714	DAVID L FERGUSON	4/7/53	15.00	Nevada	INDIAN RAVINE
			<b>DAVID L FERGUSON Total</b>		15.00		
A025099	16957	11240	DENNIS ACMOODY	7/14/76	0.70	Placer	CAMPBELL CREEK
			<b>DENNIS ACMOODY Total</b>		0.70		
A023012	15728	10361	Dept of Fish and Game	3/27/68	44.00	Yuba	UNST
A023013	15729	10387	Dept of Fish and Game	3/27/68	9.60	Nevada	UNST
A023014	15730	10388	Dept of Fish and Game	3/27/68	21.00	Yuba	UNST

## Bear River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A024601	16798	11216	Dept of Fish and Game	5/2/74	3.00	Yuba	UNST
A024641	16797	11212	Dept of Fish and Game	4/22/82	5.10	Yuba	UNST
			<b>Dept of Fish and Game Total</b>		82.70		
A021495	14411	9027	DONALD L DAY	10/9/63	9.20	Nevada	UNST
			<b>DONALD L DAY Total</b>		9.20		
A027513	18935	12432	DORIS L MINARD	9/13/82	3.10	Nevada	UNST
			<b>DORIS L MINARD Total</b>		3.10		
A021843	14973	9263	ELIZABETH STREATER	7/10/64	0.10	Nevada	UNSP
			<b>ELIZABETH STREATER Total</b>		0.10		
A017858	11509	6590	GARY M LAUGHLIN	10/23/57	0.80	Nevada	UNSP (2)
			<b>GARY M LAUGHLIN Total</b>		0.80		
A027958	19299	12783	GLADYS MARTINES	1/25/84	3.00	Nevada	UNST
A029895	20705		GLADYS MARTINES	1/25/91	27.00	Nevada	UNST
			<b>GLADYS MARTINES Total</b>		30.00		
A023070	16276	11076	GREGORY W BOCK	6/18/68	52.30	Nevada	UNST
			<b>GREGORY W BOCK Total</b>		52.30		
A014179	8713	4076	HERRMANN GOTTFIELD	3/7/51	21.30	Nevada	UNST
			<b>HERRMANN GOTTFIELD Total</b>		21.30		
A017539	11052	6926	HIDDEN MEADOW RANCH	4/3/57	91.80	Nevada	UNCR
			<b>HIDDEN MEADOW RANCH Total</b>		91.80		
A015879	10532	5520	IKE GOMEZ	5/19/54	18.30	Nevada	LONG HOLLOW
			<b>IKE GOMEZ Total</b>		18.30		
A028605	20716		JACK F ANDERSEN	10/28/85	6.50	Nevada	SOUTH WOLF CREEK, UNST
			<b>JACK F ANDERSEN Total</b>		6.50		
A018371	11846	8036	JAMES C PAGE	10/14/58	90.80	Placer	UNST
A025408	18090	11807	JAMES C PAGE	6/28/77	29.00	Placer	UNST
			<b>JAMES C PAGE Total</b>		119.80		
A030915	21141		JAMES M SILLER	1/2/03	89.00	Yuba	VINEYARD CREEK
			<b>JAMES M SILLER Total</b>		89.00		
A025582	17443	11469	Jape Holley Taylor	11/29/77	15.00	Nevada	UNST
			<b>Jape Holley Taylor Total</b>		15.00		
A030508	20929		JAY BETZ	11/21/95	56.00	Nevada	ROCK CREEK, UNST
			<b>JAY BETZ Total</b>		56.00		
A025502	17606	12279	JAY VICE	9/7/77	9.40	Nevada	MEYER RAVINE
			<b>JAY VICE Total</b>		9.40		
A017437	11015	7742	JEFFREY L FINK	1/28/57	3.50	Nevada	UNST
			<b>JEFFREY L FINK Total</b>		3.50		
A029100	20553	13829	Jim A Nevins	1/11/11	8.40	Placer	UNST
			<b>Jim A Nevins Total</b>		8.40		
A024814	17265	11749	JOHN C HUSMANN	5/23/75	0.50	Nevada	UNST
			<b>JOHN C HUSMANN Total</b>		0.50		
A014896	9165	4969	JOSEPH D LITCHFIELD	7/8/52	10.00	Nevada	UNST
			<b>JOSEPH D LITCHFIELD Total</b>		10.00		
A025493	17730	12042	JOSHUA L WITTLER	8/29/77	21.00	Nevada	INDIAN SPRINGS CREEK, UNST

## Bear River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>JOSHUA L WITTLER Total</b>		21.00		
A028102	19386	12709	Judy Bauer	4/4/84	4.00	Nevada	UNST
			<b>Judy Bauer Total</b>		4.00		
A017942B	11413	008536B	LADSON I GEDDINGS	10/14/81	9.80	Nevada	LONG HOLLOW RAVINE
			<b>LADSON I GEDDINGS Total</b>		9.80		
A019830	13852	8657	LAKE MANAGEMENT COMMITTEE	10/27/60	35.00	Nevada	BUTLER CREEK
			<b>LAKE MANAGEMENT COMMITTEE Total</b>		35.00		
A017258	11462	6296	LAKE OF THE PINES ASSN INC	8/27/56	17.00	Nevada	RAGSDALE CREEK
A022535	15355	9675	LAKE OF THE PINES ASSN INC	7/27/66	4,150.00	Nevada	MAGNOLIA CREEK
			<b>LAKE OF THE PINES ASSN INC Total</b>		4,167.00		
A018214	11635	6752	LCB PROPERTIES LLC	7/11/58	55.80	Nevada	LONG HOLLOW RAVINE
			<b>LCB PROPERTIES LLC Total</b>		55.80		
A022821A		009610A	Louis BARTOLUCCI	5/6/02	21.00	Nevada	UNST
A023549A		010658A	Louis BARTOLUCCI	12/14/98	14.00	Nevada	UNST
			<b>Louis BARTOLUCCI Total</b>		35.00		
A025375	17757	11924	LUELLA BURTON	6/1/77	23.00	Placer	UNST
A028660	19898	13032	LUELLA BURTON	12/13/85	10.00	Placer	UNST
			<b>LUELLA BURTON Total</b>		33.00		
A017863	11331	9020	MARTIN P & BARBARA C BRUMM JOINT LIVING TRUST	10/25/57	26.80	Nevada	UNST
			<b>MARTIN P &amp; BARBARA C BRUMM JOINT LIVING TRUST Total</b>		26.80		
A017918	11685	10988	MELBA C SMITH	12/17/57	53.00	Nevada	WOLF CREEK
			<b>MELBA C SMITH Total</b>		53.00		
A027040	18782	12458	MICHAEL J BONELLI	10/13/81	14.50	Nevada	UNST
			<b>MICHAEL J BONELLI Total</b>		14.50		
A028348	19601	12817	MICHAEL K SCHARF	12/4/84	3.90	Placer	UNST
			<b>MICHAEL K SCHARF Total</b>		3.90		
A031298	21148		MICHAEL S DICKEY	5/15/03	49.00	Nevada	UNST
			<b>MICHAEL S DICKEY Total</b>		49.00		
A028630	20005	13060	MIKE BASICH	12/2/85	0.10	Placer	CAMPBELL CREEK
			<b>MIKE BASICH Total</b>		0.10		
A019749C		008012C	MOREHEAD LAND LLC	10/13/00	402.40	Nevada, Sutter	EAST BORROW PIT OF SUTTER BYPASS, POODLE CREEK, UNST
			<b>MOREHEAD LAND LLC Total</b>		402.40		
A002652A	5803	10350	NEVADA IRRIGATION DISTRICT	11/22/21	12,500.00	Nevada, Placer	BEAR RIVER
A006229	5804	8809	NEVADA IRRIGATION DISTRICT	3/26/29	50,936.30	Placer	BEAR RIVER
A002652B	11626		NEVADA IRRIGATION DISTRICT	11/22/21	65,000.00	Placer	BEAR RIVER
			<b>NEVADA IRRIGATION DISTRICT Total</b>		128,436.30		
A023107	16058	10594	PATRICK D BRYAN	8/7/68	9.20	Nevada	UNST
			<b>PATRICK D BRYAN Total</b>		9.20		
A028561	19808	12977	PAUL R SEIDER	9/20/85	1.50	Nevada	SOUTH WOLF CREEK
			<b>PAUL R SEIDER Total</b>		1.50		

## Bear River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A026684	18972	12398	PINE LAKE ASSOCIATION	1/13/81	45.00	Nevada	UNST
			<b>PINE LAKE ASSOCIATION Total</b>		45.00		
A025922A	17889	11925	PITTS FAMILY TRUST	3/11/86	18.00	Nevada	UNST
			<b>PITTS FAMILY TRUST Total</b>		18.00		
A017912	11641	7101	RICHARD L BARBER	12/11/57	5.60	Placer	UNSP (2)
A021867	15251	9546	RICHARD L BARBER	8/10/64	358.30	Placer	LITTLE BEAR CREEK, UNST
			<b>RICHARD L BARBER Total</b>		363.90		
A020105	13690	7762	RICHARD P O'NEIL	5/1/61	2.50	Nevada	WOLF CREEK
			<b>RICHARD P O'NEIL Total</b>		2.50		
A021473	14619	8876	ROBERT FORD	9/23/63	0.90	Nevada	UNST
			<b>ROBERT FORD Total</b>		0.90		
A025962	17954	12055	ROBERT C ERDMANN	4/3/79	5.00	Nevada	UNST
			<b>ROBERT C ERDMANN Total</b>		5.00		
A025922B	17889	11926	Robert M Rourke	3/11/86	5.30	Nevada	UNST
			<b>Robert M Rourke Total</b>		5.30		
A003995	1847	1612	ROBERT N CAIN	5/20/24	40.00	Nevada	MAGNOLIA CREEK
A015607	9697	5685	ROBERT N CAIN	11/10/53	91.10	Nevada	MAGNOLIA CREEK
			<b>ROBERT N CAIN Total</b>		131.10		
A017942A	11413	008536A	ROBERT P WADMAN	10/14/81	48.30	Nevada	LONG HOLLOW RAVINE
			<b>ROBERT P WADMAN Total</b>		48.30		
A024624	18166	12199	ROBIN BURKE	4/27/87	8.80	Placer	UNST
			<b>ROBIN BURKE Total</b>		8.80		
A023550	16229	12355	RODRIC ANDERSON	7/10/70	8.00	Nevada	UNST
			<b>RODRIC ANDERSON Total</b>		8.00		
A025226	17450	12339	ROGER C PATTERSON	1/3/77	92.00	Placer	UNST
			<b>ROGER C PATTERSON Total</b>		92.00		
A031859			RON BINGAMAN	10/20/10	2,172.00	Nevada	
A030973	21073		RON BINGAMAN	10/14/99	2,172.00	Nevada	UNST (AKA WOLF HANNAMAN RANDOM DITCH)
			<b>RON BINGAMAN Total</b>		4,344.00		
A026072	18034	11907	RONALD F BURKHARDT	8/24/79	18.00	Nevada	UNST
			<b>RONALD F BURKHARDT Total</b>		18.00		
A017767	11458	8624	Ryan R Say	8/12/57	4.80	Nevada	UNST
			<b>Ryan R Say Total</b>		4.80		
A025492	17729	11941	SARAH JOELSON	8/29/77	15.00	Nevada	INDIAN SPRINGS CREEK
			<b>SARAH JOELSON Total</b>		15.00		
A026100	18035	11880	SCOTT C JASPAR	9/28/79	2.40	Nevada	UNST
			<b>SCOTT C JASPAR Total</b>		2.40		
A019003	12858	7437	SETH NOTO	9/25/59	1.10	Nevada	UNST
			<b>SETH NOTO Total</b>		1.10		
A023549B		010658B	SHARON EARHART	12/14/98	8.00	Nevada	UNST
			<b>SHARON EARHART Total</b>		8.00		
A026876	19442	12618	SHEILA ST GERMAIN	6/17/81	5,166.00	Nevada	UNST
			<b>SHEILA ST GERMAIN Total</b>		5,166.00		

## Bear River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A024984	16847	11190	SMITH & SMITH RANCH, A PARTNERSHIP	1/29/76	3.00	Nevada	UNST
A027152	18851	12679	SMITH & SMITH RANCH, A PARTNERSHIP	12/17/81	2.40	Nevada	UNST
			<b>SMITH &amp; SMITH RANCH, A PARTNERSHIP Total</b>		5.40		
A010221	14871	11120	SOUTH SUTTER WATER DISTRICT	5/15/81	130,745.10	Yuba	BEAR RIVER
A014804	11297	11118	SOUTH SUTTER WATER DISTRICT	5/12/52	139,534.80	Yuba	BEAR RIVER
			<b>SOUTH SUTTER WATER DISTRICT Total</b>		270,279.90		
A014773B	9106	006560B	SPRING VALLEY HOMEOWNERS ASSOCIATION	12/10/82	24.00	Placer	UNST
A020632	13760	8381	SPRING VALLEY HOMEOWNERS ASSOCIATION	3/1/62	52.00	Placer	UNST
A025139	17584	13120	SPRING VALLEY HOMEOWNERS ASSOCIATION	8/31/76	4.70	Placer	UNST
			<b>SPRING VALLEY HOMEOWNERS ASSOCIATION Total</b>		80.70		
A017430	11047	6954	STEVE KOTHE	1/23/57	84.90	Nevada	RAGSDALE CREEK
			<b>STEVE KOTHE Total</b>		84.90		
A022382	15366	10099	THE LAKEWOOD ASSOCIATION INC	2/4/66	486.00	Nevada	DRY CREEK
			<b>THE LAKEWOOD ASSOCIATION INC Total</b>		486.00		
A026160	18323	12118	THOMAS S VAN HORNE	12/31/79	3.10	Nevada	UNSP
A027695	19793	12934	THOMAS S VAN HORNE	3/23/83	11.90	Nevada	UNST
			<b>THOMAS S VAN HORNE Total</b>		15.00		
A010150	5785	2656	U S FOREST SERVICE	3/22/41	0.50	Nevada	KING WOOLFORD SPRING
A010439	6011	2888	U S FOREST SERVICE	5/6/42	0.70	Nevada	FOWLER SPRING
A010504	6101	4977	U S FOREST SERVICE	7/15/42	10.50	Nevada	MULE SPRING
			<b>U S FOREST SERVICE Total</b>		11.70		
A025211	17449	12756	UNITED AUBURN INDIAN DEVELOPMENT CORP	12/13/76	49.90	Placer	UNST
			<b>UNITED AUBURN INDIAN DEVELOPMENT CORP Total</b>		49.90		
A028170	19598	13007	William Scott	6/25/84	0.10	Nevada	UNST
			<b>William Scott Total</b>		0.10		
A028138	19417		WILLIAM M DONNELLY JR	5/23/84	2.00	Nevada	UNST
			<b>WILLIAM M DONNELLY JR Total</b>		2.00		
			<b>Grand Total</b>		436,025.40		

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A010397	5958	3042	AL RENKER	3/11/1942	0.10	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>AL RENKER Total</b>		0.10		
A007905	4344	1801	ALBERT E CASH	4/12/1934	0.20	El Dorado	BULL CREEK
			<b>ALBERT E CASH Total</b>		0.20		
A027366	19846		ALBERT R DAVIDSON	6/21/1982	30.00	El Dorado	UNST
			<b>ALBERT R DAVIDSON Total</b>		30.00		
A016894	11321	7150	ALLEN E NEWTON	2/14/1956	18.20	Placer	UNST
			<b>ALLEN E NEWTON Total</b>		18.20		
A013849	8397	5518	ALLEN FAMILY TRUST	7/17/1950	53.30	Placer	UNST
			<b>ALLEN FAMILY TRUST Total</b>		53.30		
A026457	18473	12786	American River Conservancy	7/15/1980	49.00	El Dorado	GRANITE CREEK
			<b>American River Conservancy Total</b>		49.00		
A013296	8191	6304	ANN BATEY	8/15/1949	137.00	El Dorado	INDIAN CREEK
			<b>ANN BATEY Total</b>		137.00		
A029219	20482		ANTHONY J FREITAS	4/7/1988	21.20	El Dorado	JOHNTOWN CREEK
			<b>ANTHONY J FREITAS Total</b>		21.20		
A027928	19263	12703	APPLE MOUNTAIN LP	12/7/1983	11.80	El Dorado	SOUTH CANYON, UNST
			<b>APPLE MOUNTAIN LP Total</b>		11.80		
A011184	6479	3390	ARDEN HALL	10/16/1945	0.10	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>ARDEN HALL Total</b>		0.10		
A011516	6699	3383	ARTHUR S DEAN	8/15/1946	36.20	El Dorado	UNSP
			<b>ARTHUR S DEAN Total</b>		36.20		
A021648	14938	11111	AUBURN LAKE TRAILS PROPERTY OWNERS ASSOC	2/21/1964	34.00	El Dorado	MAINE BAR CANYON
A023556	16296	11112	AUBURN LAKE TRAILS PROPERTY OWNERS ASSOC	7/14/1970	20.00	El Dorado	MAINE BAR CANYON
A026410	18279	12013	AUBURN LAKE TRAILS PROPERTY OWNERS ASSOC	6/10/1980	14.00	El Dorado	MAINE BAR CANYON
			<b>AUBURN LAKE TRAILS PROPERTY OWNERS ASSOC Total</b>		68.00		
A011817	6920	6045	BAKER FAMILY TRUST 1999	4/8/1947	13.70	El Dorado	HANGTOWN CREEK
A011850	6959	3357	BAKER FAMILY TRUST 1999	5/1/1947	3.40	El Dorado	HANGTOWN CREEK
			<b>BAKER FAMILY TRUST 1999 Total</b>		17.10		
A019125	12391	7458	BARBARA ELLEN HOLLAND	12/8/1959	5.30	El Dorado	UNSP, UNST
			<b>BARBARA ELLEN HOLLAND Total</b>		5.30		
A020256B	13189	9778	BARBAREE JERNIGAN	5/5/1971	2.20	El Dorado	WHITE ROCK CREEK
			<b>BARBAREE JERNIGAN Total</b>		2.20		
A017420	11173	6289	BEADLE LIVING TRUST DATED SEPTEMBER 12,1995	1/11/1957	5.90	Placer	UNST
			<b>BEADLE LIVING TRUST DATED SEPTEMBER 12,1995 Total</b>		5.90		
A027752	19827		BEAR STATE WATER WORKS	5/10/1983	37.00	El Dorado	UNSP
			<b>BEAR STATE WATER WORKS Total</b>		37.00		
A021855	14852	9503	BENJAMIN KEH	7/20/1964	4.00	Placer	MINERS RAVINE
			<b>BENJAMIN KEH Total</b>		4.00		
A022037	15105	9621	Berry Patty LLC	2/4/1965	2.20	El Dorado	UNSP (2)
			<b>Berry Patty LLC Total</b>		2.20		
A018182	11853	6484	BERTABELLE STEAD	6/13/1958	0.50	El Dorado	NEW WORLD TUNNEL
			<b>BERTABELLE STEAD Total</b>		0.50		
A014263	8672	4696	BISHOP FAMILY TRUST	4/20/1951	0.30	El Dorado	UNSP

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A015346	9640	7253	BISHOP FAMILY TRUST	5/18/1953	0.40	El Dorado	UNSP
A016123	10244	10898	BISHOP FAMILY TRUST	11/4/1954	2.20	El Dorado	UNSP
A018515	13834	10899	BISHOP FAMILY TRUST	2/3/1959	1.20	El Dorado	UNSP
			<b>BISHOP FAMILY TRUST Total</b>		4.10		
A010731	6307	5449	BLACK ROCK RANCH	11/17/1943	715.10	El Dorado	HASTINGS CREEK (AKA BLACK ROCK CREEK)
A013123	7488	5450	BLACK ROCK RANCH	5/31/1949	52.00	El Dorado	HASTING CREEK (AKA BLACK ROCK CREEK)
A019943	13983	9915	BLACK ROCK RANCH	1/31/1961	104.60	El Dorado	BLACK ROCK CREEK
			<b>BLACK ROCK RANCH Total</b>		871.70		
A023438	16059	10241	BLUE CANYON PROPERTIES INC	1/16/1970	15.00	Placer	UNST
			<b>BLUE CANYON PROPERTIES INC Total</b>		15.00		
A004365	2048	1112	BORIS T YEN	12/15/1924	2.80	El Dorado	EVANS CREEK
			<b>BORIS T YEN Total</b>		2.80		
A025841	17711	12427	BRETTE MARK GREEN	10/3/1978	1.30	El Dorado	UNST
			<b>BRETTE MARK GREEN Total</b>		1.30		
A016974	10644	5862	Brian P Tucker	3/28/1956	9.60	Placer	UNDR
			<b>Brian P Tucker Total</b>		9.60		
A006999	2797	1419	BRIAN K BRAY	7/7/1931	0.30	El Dorado	UNST
			<b>BRIAN K BRAY Total</b>		0.30		
A014138	8583	4878	BURNS LIVING TRUST	1/22/1951	0.20	El Dorado	BULL CREEK
A020543	13567	9133	BURNS LIVING TRUST	12/29/1961	0.40	El Dorado	UNSP (3)
			<b>BURNS LIVING TRUST Total</b>		0.60		
A013971	8391	6961	BYRON D SHER	9/29/1950	76.00	El Dorado	UNXX
			<b>BYRON D SHER Total</b>		76.00		
A004868	2458	945	BYRON W BACCHI IRREVOCABLE TRUST, THE	12/19/1925	36.20	El Dorado	NORTH INDIAN CREEK
			<b>BYRON W BACCHI IRREVOCABLE TRUST, THE Total</b>		36.20		
A013766	8755	5825	C A JONES	5/31/1950	12.00	El Dorado	NORTON RAVINE
			<b>C A JONES Total</b>		12.00		
A021806	15127	9611	CARDWELL R CURREN	6/8/1964	4.70	El Dorado	WEST FORK SAWMILL CREEK
			<b>CARDWELL R CURREN Total</b>		4.70		
A022052	15107	9622	CAROL BERCIER	2/24/1965	1.00	El Dorado	UNSP (2)
			<b>CAROL BERCIER Total</b>		1.00		
A005806	3036	1071	CAROL WARD	1/16/1928	79.60	Placer	ANTELOPE CREEK
A009500	5335	3137	CAROL WARD	1/31/1939	90.30	Placer	ANTELOPE CREEK
			<b>CAROL WARD Total</b>		169.90		
A007586	4189	3154	CECIL L WESTEL JR	6/14/1933	5.00	El Dorado	LONG CANYON
			<b>CECIL L WESTEL JR Total</b>		5.00		
A026475	18404	12899	CHARLES DAVIS	7/28/1980	0.30	Placer	UNST
			<b>CHARLES DAVIS Total</b>		0.30		
A023990	16722	10947	CHARLES D BRADARIC	3/7/1972	4.50	Placer	UNST
			<b>CHARLES D BRADARIC Total</b>		4.50		
A018053	11628	10069	CHARLES K MCCLATCHY	3/17/1958	6.00	El Dorado	UNST
			<b>CHARLES K MCCLATCHY Total</b>		6.00		
A026380	19259		CHI WEST INC	5/22/1980	72,397.80	El Dorado	ROCK CREEK
A027353	19260		CHI WEST INC	6/4/1982	67,478.70	El Dorado	ROCK CREEK
			<b>CHI WEST INC Total</b>		139,876.50		
A023939	16492	11032	CHRIS BEAUCHAMP	12/6/1971	3.90	El Dorado	UNST
			<b>CHRIS BEAUCHAMP Total</b>		3.90		



## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A018929	12275	10064	CHRISTIAN CHURCHES OF N CALIF-W NEVADA	8/20/1959	12.30	Placer	UNSP
			<b>CHRISTIAN CHURCHES OF N CALIF-W NEVADA Total</b>		12.30		
A025097	17594	11694	CINDY WHITE	7/9/1976	0.60	El Dorado	UNST
			<b>CINDY WHITE Total</b>		0.60		
A012149	7201	4847	CITY OF PLACERVILLE	11/4/1947	10.00	El Dorado	UNST
A014708	9209	6282	CITY OF PLACERVILLE	3/11/1952	6.60	El Dorado	BIG CANYON CREEK
			<b>CITY OF PLACERVILLE Total</b>		16.60		
A001853	859	1070	CITY OF SACRAMENTO	5/29/1920	2.10	El Dorado	SAYLES CANYON
A012140	11358		CITY OF SACRAMENTO	10/29/1947	271,739.50	Sacramento	AMERICAN RIVER
A012321	11359		CITY OF SACRAMENTO	2/13/1948	443,478.50	El Dorado	BRUSH CREEK, SILVER CREEK, SOUTH FORK SILVER CREEK
A016060	11361		CITY OF SACRAMENTO	5/7/1958	95,108.80	Sacramento	AMERICAN RIVER
							BRUSH CREEK, GERLE CREEK, LOON LAKE, ROCKBOUND LAKE, RUBICON RIVER, SILVER CREEK, SOUTH FORK RUBICON RIVER
A012622	11360		CITY OF SACRAMENTO	10/30/2000	966,174.80	El Dorado	
			<b>CITY OF SACRAMENTO Total</b>		1,776,503.70		
A004062	1853	1434	CITY OF STOCKTON	9/21/1939	12.20	Amador	UNCR
A007952	4514	2248	CITY OF STOCKTON	5/25/1934	0.40	Amador	UNCR
			<b>CITY OF STOCKTON Total</b>		12.60		
A025809	17623	12579	CLARENCE DILTS	8/21/1978	2.40	El Dorado	UNSP
			<b>CLARENCE DILTS Total</b>		2.40		
A019791	12964	8081	CLARIS GOULART	10/4/1960	62.40	Placer	UNST
			<b>CLARIS GOULART Total</b>		62.40		
A029657			COUNTY OF SAN JOAQUIN	2/9/1990	147,000.00		
			<b>COUNTY OF SAN JOAQUIN Total</b>		147,000.00		
A017398	10943	6893	Dale Capper	12/17/1956	31.00	El Dorado	UNST
			<b>Dale Capper Total</b>		31.00		
A019975	13230	10022	DALE B COOK	3/16/1973	14.70	El Dorado	UNST
			<b>DALE B COOK Total</b>		14.70		
A024427	16890	11259	DANIEL E LITTLE	8/3/1973	2.80	El Dorado	UNST
			<b>DANIEL E LITTLE Total</b>		2.80		
A013521	8424	4467	Daniel J Peterson	12/27/1949	145.00	El Dorado	UNST
			<b>Daniel J Peterson Total</b>		145.00		
A024575	16850	11161	DARREL PEARSON	3/21/1974	2.90	El Dorado	KELLEY CREEK
			<b>DARREL PEARSON Total</b>		2.90		
A017571B	11120	9732	DAVE TOGNETTI	4/25/1957	4.10	Placer	ANTELOPE CREEK
			<b>DAVE TOGNETTI Total</b>		4.10		
A005704	3038	1884	DAVID B BARTHOLOMEW	9/30/1927	0.30	El Dorado	UNSP (2)
			<b>DAVID B BARTHOLOMEW Total</b>		0.30		
A017571A	11120	9731	DAVID C MOORE	4/25/1957	3.90	Placer	ANTELOPE CREEK
			<b>DAVID C MOORE Total</b>		3.90		
A005024	2663	857	DAVID HAYNES MERING	5/18/1926	0.30	El Dorado	UNSP
			<b>DAVID HAYNES MERING Total</b>		0.30		
A012462	7434	3529	DAVID W GIRARD	4/6/1948	4.00	El Dorado	CHUNK RAVINE
			<b>DAVID W GIRARD Total</b>		4.00		
A016289	10247	5507	David William Barton	3/18/1955	14.60	Placer	UNSP
			<b>David William Barton Total</b>		14.60		
A026778	19076	12620	DE ANZA PLACER GOLD MINING COMPANY	4/6/1981	9.80	Placer	PAGGE CREEK

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A027566	19829	13841	DE ANZA PLACER GOLD MINING COMPANY	11/8/2011	215.20	Placer	NORTH FORK FORBES CREEK
A029364	20777	13844	DE ANZA PLACER GOLD MINING COMPANY	12/9/2011	11.20	Placer	PAGGE CREEK
			<b>DE ANZA PLACER GOLD MINING COMPANY Total</b>		236.20		
A021763	15075	8882	DEAN P A ELBERT	5/6/1964	9.00	El Dorado	THIRD OTTER CREEK
			<b>DEAN P A ELBERT Total</b>		9.00		
A011689	6706	5205	DEER HILLS PROPERTY OWNERS ASSN	1/9/1947	45.00	El Dorado	UNST
			<b>DEER HILLS PROPERTY OWNERS ASSN Total</b>		45.00		
A016995	11491	7992	DENNIS R DALTON	4/9/1956	3.00	Placer	UNST
			<b>DENNIS R DALTON Total</b>		3.00		
A018211B	11657	9367	DIAMANTE DEVELOPMENT LLC	7/9/1958	0.50	El Dorado	UNSP
A022791	15500	10062	DIAMANTE DEVELOPMENT LLC	5/18/1967	0.30	El Dorado	UNST
			<b>DIAMANTE DEVELOPMENT LLC Total</b>		0.80		
A009134	5059	3790	DIANE COSGROVE	10/2/1937	0.10	El Dorado	COLD STREAM
			<b>DIANE COSGROVE Total</b>		0.10		
A021857	15201	10018	DIANE W BUCHHOLZ	7/20/1964	16.00	El Dorado	BEAR CREEK
			<b>DIANE W BUCHHOLZ Total</b>		16.00		
A028208A	019433A	13035	DIANNA NEWBORN	3/8/1991	5.50	El Dorado	UNST
A029958	20856	13724	DIANNA NEWBORN	6/6/2007	14.50	El Dorado	UNST
			<b>DIANNA NEWBORN Total</b>		20.00		
A004357	2047	1348	DINO E ANDREOTTI	12/9/1924	1.80	El Dorado	UNCR
A022596	15410	9637	DINO E ANDREOTTI	9/30/1966	0.20	El Dorado	UNST
			<b>DINO E ANDREOTTI Total</b>		2.00		
A026436	18729	12676	DOBBAS RANCH	6/30/1980	0.50	El Dorado	UNSP
A026438	18731	12677	DOBBAS RANCH	6/30/1980	0.40	El Dorado	UNSP
			<b>DOBBAS RANCH Total</b>		0.90		
A005413	2955	3008	DON K AND J A TAYLOR, TRUSTEES	4/11/1927	137.60	Placer	RED RAVINE (AKA BUCKEYE RAVINE)
			<b>DON K AND J A TAYLOR, TRUSTEES Total</b>		137.60		
A023032	15758	10314	Donald Ray Neal	4/19/1968	12.60	Placer	UNST
			<b>Donald Ray Neal Total</b>		12.60		
A014328	9289	5017	DONALD DEAN HUTCHISON	5/29/1951	43.90	Placer	ANTELOPE CREEK
			<b>DONALD DEAN HUTCHISON Total</b>		43.90		
A012598	7431	4049	DONALD G RHODES	7/19/1948	2.50	El Dorado	UNSP
A018559	12063	8421	DONALD G RHODES	2/26/1959	2.50	El Dorado	UNST
			<b>DONALD G RHODES Total</b>		5.00		
A013752	8200	4756	DONALD W FIELDS	5/23/1950	4.10	El Dorado	WEBER CREEK
			<b>DONALD W FIELDS Total</b>		4.10		
A009952	5622	2563	DONNA MCTAGGART	7/12/1940	0.20	El Dorado	PYRAMID CREEK
			<b>DONNA MCTAGGART Total</b>		0.20		
A024705	17798	12232	DOROTHY A MARTIN	11/6/1974	1.80	El Dorado	WHITE ROCK CREEK
			<b>DOROTHY A MARTIN Total</b>		1.80		
A028159	20087	13231	DOUGLAS A NICKELL	6/12/1984	0.10	Placer	UNSP
			<b>DOUGLAS A NICKELL Total</b>		0.10		
A030352	20882		DOUGLAS B VEERKAMP	4/14/1994	88.00	El Dorado	UNST
			<b>DOUGLAS B VEERKAMP Total</b>		88.00		
A021696	14623	9202	Douglas R. Gingerich	3/17/1964	20.00	Placer	UNST
			<b>Douglas R. Gingerich Total</b>		20.00		
A018590	13585	8107	DRONE GRANT INVESTMENT GROUP	3/12/1959	61.30	El Dorado, Placer	DEVILS CANYON CREEK
			<b>DRONE GRANT INVESTMENT GROUP Total</b>		61.30		

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A024514C	16976	11411	DWIGHT R DENTON	1/25/1984	6.00	El Dorado	SWEETWATER CREEK
A024514D	16976	11412	DWIGHT R DENTON	1/25/1984	20.00	El Dorado	SWEETWATER CREEK
A027630	18901	12613	DWIGHT R DENTON	1/13/1983	9.00	El Dorado	SWEETWATER CREEK
A027703	19034	12615	DWIGHT R DENTON	4/4/1983	5.00	El Dorado	SWEETWATER CREEK
			<b>DWIGHT R DENTON Total</b>		40.00		
A025711	17843	12515	ECHO LANE INVESTORS	4/6/1978	110.00	El Dorado	INDIAN CREEK
			<b>ECHO LANE INVESTORS Total</b>		110.00		
A013369	8403	5210	EDWARD MACKAY	9/28/1949	9.50	El Dorado	UNCR
			<b>EDWARD MACKAY Total</b>		9.50		
A026573	19066	12660	EDWARD L PURKEY	10/8/1980	1.40	El Dorado	UNST
			<b>EDWARD L PURKEY Total</b>		1.40		
A012475	7386	3889	EDWARD P AKIN	4/14/1948	40.00	El Dorado	UNST
			<b>EDWARD P AKIN Total</b>		40.00		
A001692	1053	2184	EL DORADO IRRIGATION DISTRICT	3/25/2008	1,125.00	El Dorado	NORTH FORK WEBER CREEK
			<b>EL DORADO IRRIGATION DISTRICT Total</b>		1,125.00		
A019532	13536	8231	ELAINE BARKER	7/8/1960	1.20	Placer	UNST
			<b>ELAINE BARKER Total</b>		1.20		
A012875	7654	4021	ELISABETH MILLER	12/23/1948	25.00	El Dorado	COLD SPRINGS CREEK
A014603	8953	5587	ELISABETH MILLER	12/14/1951	15.00	El Dorado	UNST
			<b>ELISABETH MILLER Total</b>		40.00		
A022364	15320	9022	ELIZABETH CRONIN	1/13/1966	0.10	El Dorado	UNST
			<b>ELIZABETH CRONIN Total</b>		0.10		
A011628	6789	3206	ELIZABETH A NILES	11/18/1946	0.80	El Dorado	UNSP
			<b>ELIZABETH A NILES Total</b>		0.80		
A018541	12027	9676	EMIGRANT GAP MUTUAL WATER CO	2/19/1959	73.00	Placer	BLUE CANYON CREEK, UNST
			<b>EMIGRANT GAP MUTUAL WATER CO Total</b>		73.00		
A024535	17217	11424	ERLINE M MELLO	1/25/1974	16.00	El Dorado	COLOMA CANYON CREEK
			<b>ERLINE M MELLO Total</b>		16.00		
A011523B	6700	005447B	Estate of Rudolf K. Sachau	8/21/1946	36.40	Placer	UNSP
A025016	17647	11750	Estate of Rudolf K. Sachau	3/5/1976	1.00	Placer	UNSP
			<b>Estate of Rudolf K. Sachau Total</b>		37.40		
A026825	18611	12395	ESTHER E TOWNZEN	5/11/1981	2.10	El Dorado	UNST
			<b>ESTHER E TOWNZEN Total</b>		2.10		
A019826	12972	9337	EUGENE FILEV	10/24/1960	2.00	El Dorado	UNSP (3)
			<b>EUGENE FILEV Total</b>		2.00		
A006431	3395	1287	EUGENE LANGENBACH	9/10/1929	0.10	El Dorado	UNST
			<b>EUGENE LANGENBACH Total</b>		0.10		
A016037	10068	5822	EUGENE A WILSON	9/8/1954	1.40	El Dorado	UNST
			<b>EUGENE A WILSON Total</b>		1.40		
A025631	17347	11246	EUGENE H MEYER	1/3/1978	0.20	El Dorado	BURNT SHANTY CREEK
			<b>EUGENE H MEYER Total</b>		0.20		
A000548	258	176	EVELYN T WICKS	12/28/1916	53.70	Placer	SECRET RAVINE
			<b>EVELYN T WICKS Total</b>		53.70		
A012318	7162	4341	EVERETT B DYER III	2/11/1948	2.00	El Dorado	SOUTH FORK TENNESSEE CREEK
			<b>EVERETT B DYER III Total</b>		2.00		
A019553	12930	7751	FARHAD MORTAZAVI	7/18/1960	1.70	Placer	UNST
			<b>FARHAD MORTAZAVI Total</b>		1.70		
A016544	10554	6167	FAY F CARVER	8/23/1955	1.60	Placer	UNST
			<b>FAY F CARVER Total</b>		1.60		
A018211A	11657	9366	FAY LOUIE LIVING REVOCABLE TRUST OF 5/11/01	7/9/1958	10.00	El Dorado	GREEN SPRING CREEK

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A022226	15448	9324	FAY LOUIE LIVING REVOCABLE TRUST OF 5/11/01	7/16/1965	17.00	El Dorado	GREEN SPRINGS CREEK
			<b>FAY LOUIE LIVING REVOCABLE TRUST OF 5/11/01 Total</b>		27.00		
A031074	21172		FLA Roseville LP	8/5/2005	49.00	Placer	UNST
			<b>FLA Roseville LP Total</b>		49.00		
A018551	13584	9959	FORESTHILL PUBLIC UTILITY DISTRICT	2/24/1959	81.00	Placer	MILL CREEK
A021945	15375		FORESTHILL PUBLIC UTILITY DISTRICT	10/22/1964	24,075.80	Placer	NORTH SHIRTTAIL CANYON
A024596	16644	13038	FORESTHILL PUBLIC UTILITY DISTRICT	4/22/1974	166.80	Placer	MILL CREEK
			<b>FORESTHILL PUBLIC UTILITY DISTRICT Total</b>		24,323.60		
A012131	7200	5976	FOUR CORNERS LANDOWNERS ASSOC	10/16/1947	587.00	El Dorado	JACOBS CREEK
			<b>FOUR CORNERS LANDOWNERS ASSOC Total</b>		587.00		
A007776	4364	2233	FRANCINE MARQUIS	12/5/1933	0.40	El Dorado	UNST
			<b>FRANCINE MARQUIS Total</b>		0.40		
A029955	20661		FRANCIS P ALLEN TRUST	5/15/1991	2.50	El Dorado	PEACOCK RAVINE
			<b>FRANCIS P ALLEN TRUST Total</b>		2.50		
A006540	3509	1119	FRANK D MORILLAS	1/20/1930	61.10	Placer	SECRET RAVINE
			<b>FRANK D MORILLAS Total</b>		61.10		
A020339	13427	8239	FRANK P ROMANO	8/2/1961	3.40	El Dorado	UNSP
			<b>FRANK P ROMANO Total</b>		3.40		
A024683	17146	11477	FRED H RUSSELL III	8/30/1974	6.00	El Dorado	UNST
			<b>FRED H RUSSELL III Total</b>		6.00		
A011588A	6729	003374A	FREDERICK R MCLAREN	9/20/1982	8.80	El Dorado	INDIAN CREEK
A011588B	6729	003374B	FREDERICK R MCLAREN	9/20/1982	8.80	El Dorado	INDIAN CREEK
A011588C02	6729	003374C02	FREDERICK R MCLAREN	12/13/1985	75.70	El Dorado	INDIAN CREEK
A016368A	10290	008701A	FREDERICK R MCLAREN	9/20/1982	3.80	El Dorado	INDIAN CREEK
A016368B	10290	008701B	FREDERICK R MCLAREN	9/20/1982	3.80	El Dorado	INDIAN CREEK
A016368C02	10290	008701C02	FREDERICK R MCLAREN	12/13/1985	43.60	El Dorado	INDIAN CREEK
			<b>FREDERICK R MCLAREN Total</b>		144.50		
A003405	2329	2053	GAEL M BARSOTTI	5/18/1923	188.40	El Dorado	BRUSH CANYON
A020305	14796	9696	GAEL M BARSOTTI	7/18/1961	70.20	El Dorado	BRUSH CANYON
A020306	14797	9679	GAEL M BARSOTTI	7/18/1961	70.20	El Dorado	BRUSH CANYON
A020307	14798	9680	GAEL M BARSOTTI	7/18/1961	70.20	El Dorado	BRUSH CANYON
			<b>GAEL M BARSOTTI Total</b>		399.00		
A026060	18050	11935	GAIL IRENE WHITE	8/8/1979	0.40	Placer	UNST
			<b>GAIL IRENE WHITE Total</b>		0.40		
A007013	3806	1699	GALE A MCGUIRE	7/20/1931	0.30	El Dorado	BULL CREEK
			<b>GALE A MCGUIRE Total</b>		0.30		
A018657	12072	6495	GARY T MATSON	4/21/1959	9.00	El Dorado	UNST
			<b>GARY T MATSON Total</b>		9.00		
A018158	11644	8402	GEOFF H JOHNSON	5/26/1958	72.20	El Dorado	UNSP, UNST
			<b>GEOFF H JOHNSON Total</b>		72.20		
A015252	9538	7761	George Popescu	3/24/1953	15.00	El Dorado	KELLEY CREEK
			<b>George Popescu Total</b>		15.00		
A015522	10016	7542	George & Geri Grant LP	9/2/1953	36.20	Placer	OWL CREEK, UNST
			<b>George &amp; Geri Grant LP Total</b>		36.20		
A002458	1632	486	GEORGE A FARIS	7/27/1921	0.40	El Dorado	UNSP (2)
			<b>GEORGE A FARIS Total</b>		0.40		
A016763	10509	5508	GEORGE A LAY	12/5/1955	11.00	Placer	UNDR
			<b>GEORGE A LAY Total</b>		11.00		

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A022996	15659	10207	GEORGE ANGELO TSAKOPOULOS	2/28/1968	15.00	Sacramento	ALDER CREEK
			<b>GEORGE ANGELO TSAKOPOULOS Total</b>		15.00		
A018004	11546	8163	GEORGE L COX	2/18/1958	36.70	Placer	UNST
A021211	14210	8855	GEORGE L COX	3/29/1963	8.60	Placer	UNST
			<b>GEORGE L COX Total</b>		45.30		
A013131	7830	3813	GEORGE W SHRIVER	6/2/1949	0.20	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>GEORGE W SHRIVER Total</b>		0.20		
A005644A	12827		GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	3/24/2000	74,347.90	El Dorado	PILOT CREEK
							BACON CANYON, BRANCH OF FIRST CANYON OTTER CREEK, BRANCH OF SECOND CANYON OTTER CREEK, BRANCH OF THIRD CANYON OTTER CREEK, DEEP CANYON, PILOT CREEK, UNXX, UNXX (2)
A016212	11304		GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	3/24/2000	20,000.00	El Dorado	
A016688	11306		GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT	10/24/1955	20,363.90	El Dorado	ONION CREEK
			<b>GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT Total</b>		114,711.80		
A018487	11895	7157	GERALD E HAWKINS	1/23/1959	8.10	El Dorado	UNSP
			<b>GERALD E HAWKINS Total</b>		8.10		
A002944	1193	296	Gerald R Decamp	7/26/1922	0.30	El Dorado	COLD STREAM
			<b>Gerald R Decamp Total</b>		0.30		
A007305	3982	1701	GILBERT A ALBIANI	6/27/1932	0.20	El Dorado	UNSP
			<b>GILBERT A ALBIANI Total</b>		0.20		
A018566	11912	6634	GLEN EASTMAN	3/4/1959	0.90	El Dorado	UNSP, UNST
			<b>GLEN EASTMAN Total</b>		0.90		
A015804	9984	8171	GORDON J VICINI	3/30/1954	98.80	El Dorado	BURNT SHANTY CREEK, UNST
			<b>GORDON J VICINI Total</b>		98.80		
A011588C01	6729	003374C01	GREENSTONE COUNTRY OWNER'S ASSOC	12/13/1985	101.80	El Dorado	INDIAN CREEK
A016368C01	10290	008701C01	GREENSTONE COUNTRY OWNER'S ASSOC	12/13/1985	210.90	El Dorado	INDIAN CREEK
A026722	18583	12463	GREENSTONE COUNTRY OWNER'S ASSOC	2/20/1981	30.00	El Dorado	UNST
A026815	18584	12461	GREENSTONE COUNTRY OWNER'S ASSOC	5/1/1981	1.70	El Dorado	UNST
A026816	18585	12599	GREENSTONE COUNTRY OWNER'S ASSOC	5/1/1981	3.80	El Dorado	UNST
A026817	18586	12600	GREENSTONE COUNTRY OWNER'S ASSOC	5/1/1981	39.00	El Dorado	UNST
A026818	18587	12462	GREENSTONE COUNTRY OWNER'S ASSOC	5/1/1981	4.10	El Dorado	UNST
			<b>GREENSTONE COUNTRY OWNER'S ASSOC Total</b>		391.30		
A003793	1743	590	GREGORY D HAWES	1/10/1924	0.60	El Dorado	COLD STREAM
			<b>GREGORY D HAWES Total</b>		0.60		
A015043	9282	6572	GREGORY M WATSON	10/7/1952	5.00	Placer	UNST
			<b>GREGORY M WATSON Total</b>		5.00		
A016508	10555	5837	GREGORY W PAINTER	10/22/1959	0.10	El Dorado	UNSP (2)
			<b>GREGORY W PAINTER Total</b>		0.10		
A027615	18865	12406	HARLEY DELANO	12/20/1982	0.90	El Dorado	UNST
			<b>HARLEY DELANO Total</b>		0.90		
A026099	18080	11266	HENRIETTA DENNIS	9/27/1979	1.30	El Dorado	UNSP
			<b>HENRIETTA DENNIS Total</b>		1.30		
A006797	3653	1400	HENRIK KAM	9/17/1930	0.20	El Dorado	FORNI CREEK
			<b>HENRIK KAM Total</b>		0.20		
A014439	8850	4857	HENRY TEICHERT	8/23/1951	3.00	Placer	UNXX

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A015338	9553	5071	HENRY TEICHERT	5/12/1953	20.00	Placer	GRAPEVINE RAVINE
			<b>HENRY TEICHERT Total</b>		23.00		
A013839	8361	5452	HENRY WALTHER	7/6/1950	38.00	Placer	UNST
A015077	9273	5687	HENRY WALTHER	11/5/1952	16.00	Placer	UNST
			<b>HENRY WALTHER Total</b>		54.00		
A013419	7692	5430	HIDDEN VALLEY COMMUNITY ASSOC	10/26/1949	165.50	Placer	MINERS RAVINE
A014525	8892	5431	HIDDEN VALLEY COMMUNITY ASSOC	10/16/1951	57.30	Placer	MINERS RAVINE, UNST
			<b>HIDDEN VALLEY COMMUNITY ASSOC Total</b>		222.80		
A012364	8127	4118	JACALYN GAY WINJE	2/27/1948	12.30	El Dorado	UNST
			<b>JACALYN GAY WINJE Total</b>		12.30		
A024351A	017135A	12736	JACK E DEL CONTE	4/27/1990	1.40	Sacramento	LINDA CREEK
			<b>JACK E DEL CONTE Total</b>		1.40		
A008756	4822	2431	JACK R WEAVER	8/8/1936	0.20	El Dorado	UNSP
			<b>JACK R WEAVER Total</b>		0.20		
A025930	17740	11751	JAMES HART	2/28/1979	15.00	El Dorado	UNST
			<b>JAMES HART Total</b>		15.00		
A014370	8994	5229	JAMES PETRIKIN	6/27/1951	50.70	Placer	DIRTY FACE RAVINE
			<b>JAMES PETRIKIN Total</b>		50.70		
A025854	17735	12594	JAMES A CROFF	10/13/1978	6.80	El Dorado	UNST
			<b>JAMES A CROFF Total</b>		6.80		
A007294	3973	1684	JAMES A WATT	6/16/1932	0.20	Alpine	UNSP
			<b>JAMES A WATT Total</b>		0.20		
A009643	5394	2489	JAMES D & JANIS L ALDEA REVOKABLE TRUST	6/26/1939	0.10	El Dorado	UNST
A010477	6004	2967	JAMES D & JANIS L ALDEA REVOKABLE TRUST	6/12/1942	0.30	El Dorado	UNST
			<b>JAMES D &amp; JANIS L ALDEA REVOKABLE TRUST Total</b>		0.40		
A028184	19584	12693	JAMES D MCLAIN	7/6/1984	0.30	El Dorado	UNST
			<b>JAMES D MCLAIN Total</b>		0.30		
A028474	19727	13389	JAMES G CLARK	6/12/1985	0.50	El Dorado	UNST
			<b>JAMES G CLARK Total</b>		0.50		
A012124	7129	6648	JAMES W ARNOLD	10/8/1947	14.00	El Dorado	NORTON RAVINE
			<b>JAMES W ARNOLD Total</b>		14.00		
A019052A	12310	10056	JAMI MANDEL	10/29/1959	7.10	Placer	UNST
			<b>JAMI MANDEL Total</b>		7.10		
A023041	15939	11075	JANICE M SUTHERLAND	5/10/1968	45.00	El Dorado, Placer	CLIPPER CREEK, UNST
			<b>JANICE M SUTHERLAND Total</b>		45.00		
A004597B		000948B	JASON CARDINET	8/20/2004	16.30	Placer	AUBURN RAVINE
			<b>JASON CARDINET Total</b>		16.30		
A004781	2403	943	JEFF LITTLE	9/24/1925	0.40	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>JEFF LITTLE Total</b>		0.40		
A020490	13614	8160	JEFF WEAVER	11/10/1961	1.40	El Dorado	MOSQUITO CREEK
			<b>JEFF WEAVER Total</b>		1.40		
A010751	6237	3966	JEFFREY TILFORD	1/18/1944	149.30	Placer	UNST
A014545	9004	5160	JEFFREY TILFORD	11/1/1951	21.20	Placer	UNXX
			<b>JEFFREY TILFORD Total</b>		170.50		
A022817	15561	11707	JEFFREY C OLSON	6/14/1967	23.00	El Dorado	MARTEL CREEK, UNST
			<b>JEFFREY C OLSON Total</b>		23.00		
A013542	8041	4134	JEFFREY R LEONG	1/18/1950	85.30	Placer	UNCR
			<b>JEFFREY R LEONG Total</b>		85.30		
A014884	9127	8123	JEFFREY S HUBER	7/1/1952	12.00	Placer	CAPS RAVINE

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>JEFFREY S HUBER Total</b>		12.00		
A005601	2905	1003	JEREMIAH FLYNN	7/11/1927	0.30	El Dorado	UNSP
			<b>JEREMIAH FLYNN Total</b>		0.30		
A013502	8031	4853	Jerome Vickrey	12/7/1949	0.80	El Dorado	UNST
			<b>Jerome Vickrey Total</b>		0.80		
A024109	16523	10713	JERRY DUNCAN	7/6/1972	9.00	Placer	UNST
			<b>JERRY DUNCAN Total</b>		9.00		
A019185	12425	7817	JERRY JOHNSON	1/18/1960	35.00	Placer	UNST
			<b>JERRY JOHNSON Total</b>		35.00		
A019392	13781	8664	JERRY W BALLEW	4/26/1960	2.80	El Dorado	UNSP
			<b>JERRY W BALLEW Total</b>		2.80		
A025855	17736	11800	JOANNE K BATEMAN	10/13/1978	15.00	El Dorado	UNST
			<b>JOANNE K BATEMAN Total</b>		15.00		
A012156	7142	3777	JOHN BRIGGS	11/17/1947	10.00	El Dorado	UNST
			<b>JOHN BRIGGS Total</b>		10.00		
A015662	9733	6523	JOHN METROPULOS III	12/28/1953	5.30	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>JOHN METROPULOS III Total</b>		5.30		
A009199	5174	2571	John A. Cunningham	12/3/1937	0.10	El Dorado	COLD STREAM
			<b>John A. Cunningham Total</b>		0.10		
A011813	6852	4317	JOHN C SUNDIN	4/4/1947	1.10	El Dorado	CHUNK CREEK
			<b>JOHN C SUNDIN Total</b>		1.10		
A020259	13374	8114	JOHN E MARLOW	6/12/1961	16.20	El Dorado	UNST
A020514	13836	10791	JOHN E MARLOW	12/5/1961	15.60	El Dorado	UNST
			<b>JOHN E MARLOW Total</b>		31.80		
A007662	4251	1980	JOHN H PETERSON	9/6/1933	0.20	El Dorado	UNSP
			<b>JOHN H PETERSON Total</b>		0.20		
A021802	14569	9251	JOHN P HENDERSON	5/29/1964	28.00	El Dorado	IRISH CREEK
			<b>JOHN P HENDERSON Total</b>		28.00		
A018157	11643	8687	John Ryan Neil	5/26/1958	185.30	El Dorado	UNST
			<b>John Ryan Neil Total</b>		185.30		
A017223	11314	6248	JOHN T LUKKONEN	8/9/1956	266.50	Placer	SAILORS RAVINE
			<b>JOHN T LUKKONEN Total</b>		266.50		
A002190	1003	510	JON KNUDSEN	11/16/1948	87.00	Placer	CAPS RAVINE
			<b>JON KNUDSEN Total</b>		87.00		
A023302	15955	11159	JOSEPH MALONEY	7/2/1969	14.70	El Dorado	UNST
			<b>JOSEPH MALONEY Total</b>		14.70		
A030402	20968	13804	JOSEPH M KEATING	4/6/2010	14.00	El Dorado	UNST
			<b>JOSEPH M KEATING Total</b>		14.00		
A012999	7757	4363	JOSEPH S LANZA	3/24/1949	173.80	El Dorado	FISH CREEK
			<b>JOSEPH S LANZA Total</b>		173.80		
A018684	12034	7387	JOSH L WILSON JR	4/30/1959	3.40	Placer	UNSP
			<b>JOSH L WILSON JR Total</b>		3.40		
A025560	17345	12476	KARL HEMPFLING	11/10/1977	4.00	El Dorado	UNST
A025567	17346	11420	KARL HEMPFLING	11/15/1977	2.40	El Dorado	UNST
			<b>KARL HEMPFLING Total</b>		6.40		
A012240	7239	6374	KATHERINE A TUTTLE	1/13/1948	70.00	El Dorado	WHITE ROCK CANYON
			<b>KATHERINE A TUTTLE Total</b>		70.00		
A025728	17560	12394	KEN JOSEPH	3/17/1989	1.10	El Dorado	UNST
			<b>KEN JOSEPH Total</b>		1.10		
A024875	16908	13688	KENNETH PIMENTEL	12/13/2006	2.50	El Dorado	BRUSHY CANYON

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>KENNETH PIMENTEL Total</b>		2.50		
A013616	8147	3839	KENNETH SAYLOR	3/6/1950	0.20	El Dorado	UNST
			<b>KENNETH SAYLOR Total</b>		0.20		
A027651	19312		KENNETH WILSON	2/10/1983	8,398.10	El Dorado	CANYON CREEK
			<b>KENNETH WILSON Total</b>		8,398.10		
A006685	3565	1290	KENNETH J MAGRI	5/21/1930	0.30	El Dorado	UNCR
			<b>KENNETH J MAGRI Total</b>		0.30		
A018579	11931	7229	KENNETH J TURTON	3/30/1965	15.00	Placer	MORMON RAVINE
			<b>KENNETH J TURTON Total</b>		15.00		
A012885	7656	4479	KENNETH S HILL	12/29/1948	36.00	El Dorado	UNST
			<b>KENNETH S HILL Total</b>		36.00		
A013146	7822	3824	KEVIN CAIRNS	6/9/1949	0.20	El Dorado	EVANS CREEK
			<b>KEVIN CAIRNS Total</b>		0.20		
A010212	5851	3524	KIRKWOOD MOUNTAIN RESORT LLC	5/28/1941	0.20	Alpine	UNSP
A030062	20851		KIRKWOOD MOUNTAIN RESORT LLC	2/7/1992	250.00	Alpine	CAPLES LAKE
A030453	20852		KIRKWOOD MOUNTAIN RESORT LLC	6/8/1995	250.00	Alpine	CAPLES LAKE
			<b>KIRKWOOD MOUNTAIN RESORT LLC Total</b>		500.20		
A010484	6044	3289	KRISTAN OTTO	6/26/1942	0.10	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>KRISTAN OTTO Total</b>		0.10		
A008623	4765	3541	KYBURZ MUTUAL WATER COMPANY	3/30/1936	1.10	El Dorado	SOUTH FORK AMERICAN RIVER
A026486	18511		KYBURZ MUTUAL WATER COMPANY	8/7/1980	146.00	El Dorado	UNST, UNST (2)
			<b>KYBURZ MUTUAL WATER COMPANY Total</b>		147.10		
A013718	8159	4471	LAGUNA HOMEOWNERS ASSOCIATION	5/3/1950	10.00	Placer	UNST
			<b>LAGUNA HOMEOWNERS ASSOCIATION Total</b>		10.00		
A016650	10445	7204	LAKEVIEW HILLS COMMUNITY ASSOCIATION	3/10/1965	113.60	Placer	CARROLL CREEK, MINERS RAVINE
			<b>LAKEVIEW HILLS COMMUNITY ASSOCIATION Total</b>		113.60		
A012040	7093	4445	LARANE INVESTMENTS	8/13/1947	18.00	Placer	GRAPEVINE RAVINE
			<b>LARANE INVESTMENTS Total</b>		18.00		
A025667	17805	11717	LARISA LYSAK	2/2/1978	0.90	Placer	UNST
			<b>LARISA LYSAK Total</b>		0.90		
A021888	15625	10773	Larry Bowser	8/31/1964	2.10	Placer	UNST
			<b>Larry Bowser Total</b>		2.10		
A018617	12314	7997	LARRY JONES	3/31/1959	7.80	Placer	UNST
			<b>LARRY JONES Total</b>		7.80		
A024514A	16976	11409	LARRY R GOULDEN	1/25/1984	12.00	El Dorado	UNST
			<b>LARRY R GOULDEN Total</b>		12.00		
A007316	4014	1942	LAWRENCE E SWENSON	7/8/1932	0.10	El Dorado	UNST
			<b>LAWRENCE E SWENSON Total</b>		0.10		
A021225	14566	10002	LAWRENCE L CABODI	4/8/1963	2.20	El Dorado	UNSP
			<b>LAWRENCE L CABODI Total</b>		2.20		
A008356	4626	1933	LAWRENCE T WELDEN	6/11/1935	0.10	El Dorado	UNSP
			<b>LAWRENCE T WELDEN Total</b>		0.10		
A028467	19739		LEE A CHIUSANO	6/4/1985	2.80	El Dorado	UNST
			<b>LEE A CHIUSANO Total</b>		2.80		
A025315	17212	11457	LEE F SMITH	3/31/1977	7.00	El Dorado	TENNESSEE CREEK
			<b>LEE F SMITH Total</b>		7.00		
A020840	13791	8411	LEO E FINNERAN	7/3/1962	4.00	El Dorado	UNCR
			<b>LEO E FINNERAN Total</b>		4.00		
A013519	8104	5414	LEON M GASTALDI	12/27/1949	83.00	El Dorado	UNST



## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A013292	7867	3787	<b>LEON M GASTALDI Total</b>		83.00		
			LEV V RIKOFF	8/11/1949	0.30	El Dorado	UNSP
A002011	937	152	<b>LEV V RIKOFF Total</b>		0.30		
			LEZLIE ELAINE DORSETT	9/18/1920	0.20	El Dorado	UNSP
A026523	18777	12447	<b>LEZLIE ELAINE DORSETT Total</b>		0.20		
			LINDA D WALDECK	9/11/1980	0.30	Placer	UNST
A019325	12555	8113	<b>LINDA D WALDECK Total</b>		0.30		
			LINDA R MURRAY	3/24/1960	9.00	Placer	UNST
A021407	14357	8866	<b>LINDA R MURRAY Total</b>		9.00		
			LINZY L COTHAM JR	7/24/1963	26.60	El Dorado	UNST
A019825	12971	8225	<b>LINZY L COTHAM JR Total</b>		26.60		
			Lionell Williams Trust	10/24/1960	4.50	El Dorado	UNSP
A013318	7868	3788	<b>Lionell Williams Trust Total</b>		4.50		
			LOIS PENMAN	8/29/1949	0.30	El Dorado	UNSP
A018512	12002	7506	<b>LOIS PENMAN Total</b>		0.30		
A030239	20915		LORI JANOWSKI	1/29/1959	25.00	El Dorado	UNCR
			LORI JANOWSKI	3/23/1993	6.00	El Dorado	UNST
A029223	20717	13677	<b>LORI JANOWSKI Total</b>		31.00		
			LOUIS W HEBERT	11/27/2006	1.20	Placer	UNST
A013612	8402	3842	<b>LOUIS W HEBERT Total</b>		1.20		
			LUCILLE HONIG	3/1/1950	10.00	El Dorado	DUTCH MARY RAVINE
A003910	1970	586	<b>LUCILLE HONIG Total</b>		10.00		
			LYDIA BACA	3/18/1924	0.10	El Dorado	UNSP
A026406	18219	12068	<b>LYDIA BACA Total</b>		0.10		
			MARC ALLISON	6/6/1980	0.20	Placer	UNST
A019764	12790	7667	<b>MARC ALLISON Total</b>		0.20		
			MARCIA C TAFFY WARNER	9/30/1960	19.00	El Dorado	MOSQUITO CREEK
A014410	9394	5598	<b>MARCIA C TAFFY WARNER Total</b>		19.00		
			MARK FOSTER	7/30/1951	29.20	Placer	SECRET RAVINE
A011258B	6528	9363	<b>MARK FOSTER Total</b>		29.20		
			MARK HANNUM	1/10/1946	11.80	Placer	UNST
A026934	18880	12449	<b>MARK HANNUM Total</b>		11.80		
			MARTHA J CROWL	7/30/1981	0.60	Placer	UNST
A010344	5940	3071	<b>MARTHA J CROWL Total</b>		0.60		
			Mary Hillabrand	12/12/1941	0.10	El Dorado	UNSP
A008163	4500	3553	<b>Mary Hillabrand Total</b>		0.10		
			MARY WOOD	11/20/1934	3.40	El Dorado	UNSP
A007070	3919	1555	<b>MARY WOOD Total</b>		3.40		
			Mary Leslie Rev. Trust	9/1/1931	0.10	El Dorado	UNST
A020796	13838	8489	<b>Mary Leslie Rev. Trust Total</b>		0.10		
			MELINDA S LAU	5/29/1962	149.50	El Dorado	SHENOGLA CREEK
A019880	13228	10465	<b>MELINDA S LAU Total</b>		149.50		
A021480	14567	10466	MHC TT, INC.	12/16/1960	152.00	Placer	KELLY CREEK
			MHC TT, INC.	10/1/1963	44.00	Placer	KELLY CREEK
A009026	5162	2557	<b>MHC TT, INC. Total</b>		196.00		
			MICHAEL HICKOX	6/28/1937	0.20	El Dorado	UNST
A027979	19335	12741	<b>MICHAEL HICKOX Total</b>		0.20		
			Michael K Baughman	2/17/1984	6.00	Placer	UNST
A014244	9003	4648	<b>Michael K Baughman Total</b>		6.00		
			Michael K Baughman	4/10/1951	161.30	Placer	UNXX

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>Michael K Baughman Total</b>		161.30		
A026057	17953	12833	MICHAEL KIM	7/30/1979	30.00	El Dorado	UNST
			<b>MICHAEL KIM Total</b>		30.00		
A018653	12245	7914	MICHAEL MCCARTY	4/20/1959	3.80	Placer	UNST
			<b>MICHAEL MCCARTY Total</b>		3.80		
A009463	5323	2485	MICHAEL CARL VISMAN	8/4/1942	543.00	El Dorado	COON GULCH
			<b>MICHAEL CARL VISMAN Total</b>		543.00		
A014620	9007	5860	MICHAEL R POSEHN	1/15/1952	1.00	Placer	UNST
			<b>MICHAEL R POSEHN Total</b>		1.00		
A030430	20999		Michael W Dennis	11/22/1994	10.00	Placer	UNST
			<b>Michael W Dennis Total</b>		10.00		
A017382	10898	7668	Michelle D. Menard	12/7/1956	19.00	El Dorado	UNST
			<b>Michelle D. Menard Total</b>		19.00		
A020086	13353	9954	MICHIGAN BLUFF MUTUAL WATER COMPANY	4/13/1961	2.50	Placer	UNXX
A020653	13784	9955	MICHIGAN BLUFF MUTUAL WATER COMPANY	3/14/1962	8.10	Placer	UNSP
A024997	17213	11598	MICHIGAN BLUFF MUTUAL WATER COMPANY	2/18/1976	8.10	Placer	UNSP
A027642	19719	13254	MICHIGAN BLUFF MUTUAL WATER COMPANY	1/31/1983	3.40	Placer	UNSP (AKA BOHEA MINE TUNNEL)
			<b>MICHIGAN BLUFF MUTUAL WATER COMPANY Total</b>		22.10		
A024514B	16976	11410	MIKE LEMIRE	1/25/1984	10.00	El Dorado	SWEETWATER CREEK
A027602	18877	12443	MIKE LEMIRE	4/25/1989	7.00	El Dorado	SWEETWATER CREEK
			<b>MIKE LEMIRE Total</b>		17.00		
A026427	18499	13619	MINERS COVE HOMEOWNERS ASSOCIATION	11/21/2005	15.00	Placer	MINERS RAVINE
			<b>MINERS COVE HOMEOWNERS ASSOCIATION Total</b>		15.00		
A021616	14965	9252	MINERS RAVINE ESTATES HOMEOWNERS ASSOCIATION	1/24/1964	21.00	Placer	MINERS RAVINE
			<b>MINERS RAVINE ESTATES HOMEOWNERS ASSOCIATION Total</b>		21.00		
A017414	12359	7015	MITCHELL D HOPE	3/20/1964	25.50	Placer	MINERS RAVINE
			<b>MITCHELL D HOPE Total</b>		25.50		
A011264	6934	10829	MT RALSTON PROPERTIES ASSN INC	8/2/2005	13.20	El Dorado	TAMARACK CREEK
A015623	10214	10830	MT RALSTON PROPERTIES ASSN INC	8/2/2005	6.00	El Dorado	TAMARACK CREEK
A026577	18519	12457	MT RALSTON PROPERTIES ASSN INC	8/2/2005	23.60	El Dorado	UNSP
			<b>MT RALSTON PROPERTIES ASSN INC Total</b>		42.80		
A018485	12089	9025	N JON NELSON	1/21/1959	3.10	El Dorado	CHINA CREEK
			<b>N JON NELSON Total</b>		3.10		
A009358	5288	2246	NANCY BAUER	7/29/1938	0.10	El Dorado	UNST
			<b>NANCY BAUER Total</b>		0.10		
A011097	6445	3024	NANCY BALCH-PRICE FISCHER	7/5/1945	0.10	Alpine	UNSP
			<b>NANCY BALCH-PRICE FISCHER Total</b>		0.10		
A004027	1878	893	NANCY E DOLCINI	6/14/1924	0.70	El Dorado	UNSP
			<b>NANCY E DOLCINI Total</b>		0.70		
A006529	5805	4403	NEVADA IRRIGATION DISTRICT	1/9/1930	3,411.60	Placer	AUBURN RAVINE
A008177	5812	12801	NEVADA IRRIGATION DISTRICT	11/27/1934	1,580.00	Placer	UNST (AKA WILSON CRK)
			<b>NEVADA IRRIGATION DISTRICT Total</b>		4,991.60		
A019872	13025	8108	New Forestry, LLC	12/9/1960	3.70	Placer	UNSP
			<b>New Forestry, LLC Total</b>		3.70		
A017207	10885	8289	NIKOLAI BARADIN	8/3/1956	35.00	El Dorado	UNST
			<b>NIKOLAI BARADIN Total</b>		35.00		

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A025424	17385	12027	NORMA JEAN SCHNEIDER	7/11/1977	2.10	El Dorado	UNST
A025425	17386	11497	NORMA JEAN SCHNEIDER	7/11/1977	2.00	El Dorado	UNST
			<b>NORMA JEAN SCHNEIDER Total</b>		4.10		
A025144	19837	13175	NORTH CANYON LAKE ASSOCIATION	9/10/1976	35.00	El Dorado	NORTH CANYON CREEK
			<b>NORTH CANYON LAKE ASSOCIATION Total</b>		35.00		
A014794	9291	9738	NORTH FORK ASSOCIATION	5/5/1952	22.00	Placer	FREEMAN CREEK
			<b>NORTH FORK ASSOCIATION Total</b>		22.00		
A011836	6927	4243	NORTHERN CALIFORNIA CONFERENCE ASSOC OF 7TH DAY ADVENTISTS	4/22/1947	13.00	El Dorado	MOUND SPRINGS CREEK
A013592	8214	4244	NORTHERN CALIFORNIA CONFERENCE ASSOC OF 7TH DAY ADVENTISTS	2/20/1950	20.00	El Dorado	MOUND SPRINGS CREEK
			<b>NORTHERN CALIFORNIA CONFERENCE ASSOC OF 7TH DAY ADVENTISTS Total</b>		33.00		
A004219	2598	941	ORENO J TONARELLI	9/17/1924	0.20	El Dorado	COLD STREAM
			<b>ORENO J TONARELLI Total</b>		0.20		
A026078	17930	11863	ORVILLE F SLINGSBY	8/28/1979	0.30	Placer	UNST
			<b>ORVILLE F SLINGSBY Total</b>		0.30		
A026633	18492	12411	OSCAR R CAMPBELL JR	11/25/1980	0.20	El Dorado	UNST
			<b>OSCAR R CAMPBELL JR Total</b>		0.20		
A014229	8620	6653	OUR LADY OF THE OAKS, A CALIF CORP	4/5/1951	63.00	Placer	UNST
			<b>OUR LADY OF THE OAKS, A CALIF CORP Total</b>		63.00		
A004597A	000948A		PATRIC JAMES HILLENBRAND LIVING TRUST	8/20/2004	21.00	Placer	AUBURN RAVINE
			<b>PATRIC JAMES HILLENBRAND LIVING TRUST Total</b>		21.00		
A021423	14598	8781	PATRICIA MCCORMICK	8/8/1963	0.20	El Dorado	STATION CREEK
			<b>PATRICIA MCCORMICK Total</b>		0.20		
A016326	11492	7303	Patty A Hooper	6/9/1965	318.60	Placer	UNST (2)
			<b>Patty A Hooper Total</b>		318.60		
A013994	8520	5323	PATTY BERRY	10/13/1950	2.50	El Dorado	UNSP
A022051	15106	9620	PATTY BERRY	2/24/1965	0.60	El Dorado	UNSP (2)
A022053	15108	9625	PATTY BERRY	2/24/1965	0.10	El Dorado	UNSP (2)
			<b>PATTY BERRY Total</b>		3.20		
A020326	13199	9365	Paul Perron	7/26/1961	23.00	Placer	UNST
			<b>Paul Perron Total</b>		23.00		
A006842	3735	1467	PAUL HEWES	12/6/1930	0.90	El Dorado	FORNI CREEK
			<b>PAUL HEWES Total</b>		0.90		
A017571C	11120	9733	PAUL NIPPERT	4/25/1957	4.10	Placer	ANTELOPE CREEK
			<b>PAUL NIPPERT Total</b>		4.10		
A024146	16670	10954	PAUL THOMASSON	8/17/1972	2.00	El Dorado	OTTER CREEK
			<b>PAUL THOMASSON Total</b>		2.00		
A004344	2305	1423	Paul A Zanetta	4/10/1934	18.10	El Dorado	MILL CREEK
			<b>Paul A Zanetta Total</b>		18.10		
A025973	17940	11867	PAUL S BURNS	4/16/1979	0.10	Placer	UNST
			<b>PAUL S BURNS Total</b>		0.10		
A013160	8316	4332	PAULA S DWELLY	6/17/1949	11.60	Placer	LIVE OAK RAVINE (AKA LIVE OAK CREEK)
			<b>PAULA S DWELLY Total</b>		11.60		
A007018	3808	1837	PAULINE RODGERS	7/25/1931	0.30	El Dorado	UNSP
			<b>PAULINE RODGERS Total</b>		0.30		
A016327	11493	7912	PETE JENSON	4/7/1967	32.00	Placer	UNST

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A018858	12718	7828	<b>PETE JENSON Total</b>		32.00		
			PETER M LA TONA	7/15/1959	2.30	Placer	MINERS RAVINE
			<b>PETER M LA TONA Total</b>		2.30		
A001923	843	352	PETER N BERBOHM	5/12/1924	30.30	Placer	SAILORS RAVINE
			<b>PETER N BERBOHM Total</b>		30.30		
A003982	1791	1111	PETER R BOHLEY	5/8/1924	2.70	El Dorado	EVANS CREEK
A022299	15076	10250	PETER R BOHLEY	10/1/1965	0.20	El Dorado	EVANS CREEK
			<b>PETER R BOHLEY Total</b>		2.90		
A013576	8457	4797	PILOT HILL ESTATES HOMEOWNERS ASSOC	2/9/1950	57.00	El Dorado	UNST
			<b>PILOT HILL ESTATES HOMEOWNERS ASSOC Total</b>		57.00		
A018085	13856		PLACER COUNTY WATER AGENCY	4/7/1958	839,438.40	Placer, Sacramento	DUNCAN CANYON, MIDDLE FORK AMERICAN RIVER, NORTH FORK AMERICAN RIVER, RUBICON RIVER, MIDDLE FORK AMERICAN RIVER, NORTH FORK AMERICAN RIVER, NORTH FORK LONG CANYON, RUBICON RIVER, SOUTH FORK LONG CANYON
A018087	13858		PLACER COUNTY WATER AGENCY	4/8/1958	451,592.40	Placer, Sacramento	
			<b>PLACER COUNTY WATER AGENCY Total</b>		1,291,030.80		
A003887A		001093A	PLASSE HOMESTEAD WATER ASSOCIATION	1/29/2003	1.10	Amador	UNSP, UNST
			<b>PLASSE HOMESTEAD WATER ASSOCIATION Total</b>		1.10		
A003887B		001093B	PLASSE'S MEADOW GROUP LLC	1/29/2003	1.90	Amador	UNSP, UNST
			<b>PLASSE'S MEADOW GROUP LLC Total</b>		1.90		
A018095	11572	10371	QUINTETTE SERVICE	4/17/1958	9.30	El Dorado	CRYSTAL SPRING
			<b>QUINTETTE SERVICE Total</b>		9.30		
A019052B	12310	10057	R W VELON	7/20/2004	7.10		
			<b>R W VELON Total</b>		7.10		
A013520	8423	3833	RALPH MILLER	12/27/1949	40.00	El Dorado	UNST
			<b>RALPH MILLER Total</b>		40.00		
A026940	18496	12409	Randolph G Wilson	8/4/1981	1.00	El Dorado	UNST
			<b>Randolph G Wilson Total</b>		1.00		
A006801	3746	1802	RAYMOND BENDER	9/20/1930	0.30	El Dorado	UNSP
			<b>RAYMOND BENDER Total</b>		0.30		
A018189	11652	6789	RAYMOND KRINGEL	6/10/1963	1.70	El Dorado	UNST
			<b>RAYMOND KRINGEL Total</b>		1.70		
A006414	3366	1803	RAYMOND A YOUNG	8/19/1929	0.10	El Dorado	UNSP
			<b>RAYMOND A YOUNG Total</b>		0.10		
A013644	8219	5979	RAYMOND BEST PATCHEN	3/22/1950	110.00	El Dorado	MANHATTAN CREEK
			<b>RAYMOND BEST PATCHEN Total</b>		110.00		
A006410	3669	1904	RAYMOND W LARSEN	8/16/1929	362.00	El Dorado	SOUTH FORK BRUSH CANYON
			<b>RAYMOND W LARSEN Total</b>		362.00		
A019633	12835	7725	RICHARD E. FREY	8/1/1960	42.50	Placer	UNST
			<b>RICHARD E. FREY Total</b>		42.50		
A007647	4207	1652	RICHARD FIELLEN	8/14/1933	1.10	El Dorado	ROCKY CANYON
			<b>RICHARD FIELLEN Total</b>		1.10		
A013829	8347	4092	RICHARD C PAYNE & RUTH L PAYNE FAMILY TRUST	7/5/1950	0.10	El Dorado	UNSP

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>RICHARD C PAYNE &amp; RUTH L PAYNE FAMILY TRUST Total</b>		0.10		
A012184	7096	3602	RICHARD E AKIN	12/3/1947	29.20	El Dorado	UNST
			<b>RICHARD E AKIN Total</b>		29.20		
A008698	4803	2471	RICHARD K JONES	6/8/1936	0.10	El Dorado	UNST
			<b>RICHARD K JONES Total</b>		0.10		
A002262	938	491	RICHARD L GALLAGHER	3/15/1921	1.20	El Dorado	COLD STREAM
			<b>RICHARD L GALLAGHER Total</b>		1.20		
A028122	19361	12714	RICHARD SCOTT HEER	4/26/1984	3.00	El Dorado	UNST
			<b>RICHARD SCOTT HEER Total</b>		3.00		
A019328	12673	7810	RICK MANICA	3/28/1960	21.00	El Dorado	OTTER CREEK
			<b>RICK MANICA Total</b>		21.00		
A001778	819	789	RICK MASSIE	4/17/1975	27.00	Placer	CLOVER VALLEY CREEK
			<b>RICK MASSIE Total</b>		27.00		
A014377	8812	4865	Robert Aichele	6/28/1951	0.10	El Dorado	ROCKY CANYON
			<b>Robert Aichele Total</b>		0.10		
A009728	5617	2573	ROBERT BRUCIA	9/18/1939	0.10	El Dorado	STATION CREEK
			<b>ROBERT BRUCIA Total</b>		0.10		
A020627A	13629	008487A	ROBERT DEITZ II	8/13/1992	4.50	El Dorado	UNST
			<b>ROBERT DEITZ II Total</b>		4.50		
A024672	16897	11435	ROBERT B JORDAN	8/16/1974	14.90	El Dorado	JOHNTOWN CREEK
			<b>ROBERT B JORDAN Total</b>		14.90		
A024888	17819	12469	ROBERT D BERGTHOLD	9/29/1975	1.00	Placer	MINERS RAVINE
			<b>ROBERT D BERGTHOLD Total</b>		1.00		
A011142	6453	3354	ROBERT E JONES	5/24/1963	0.10	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>ROBERT E JONES Total</b>		0.10		
A013740	8740	5312	Robert E Woodward, Jr	5/15/1950	33.00	Placer	UNST
			<b>Robert E Woodward, Jr Total</b>		33.00		
A024948	16889	11244	ROBERT H AND ERIKA L ANDERSON REVOCABLE TRUST	12/3/1975	4.30	El Dorado	UNST
			<b>ROBERT H AND ERIKA L ANDERSON REVOCABLE TRUST Total</b>		4.30		
A012181	7152	4478	ROBERT H POWELL	12/1/1947	7.00	El Dorado	UNST
			<b>ROBERT H POWELL Total</b>		7.00		
A025495	17339	13232	ROBERT I RIDGWAY	9/2/1977	1.40	El Dorado	UNST
			<b>ROBERT I RIDGWAY Total</b>		1.40		
A025453	17375	12048	ROBERT N DUPRIEST	8/10/1977	0.40	Placer	UNST
			<b>ROBERT N DUPRIEST Total</b>		0.40		
A006263	3318	1122	ROBERT P STANLEY	4/20/1929	0.10	El Dorado	UNSP
			<b>ROBERT P STANLEY Total</b>		0.10		
A020018	13096	7970	Roberta Kanter	3/6/1961	1.00	Placer	UNST
			<b>Roberta Kanter Total</b>		1.00		
A020827	13966	9648	RODNEY PIMENTAL	6/22/1962	5.00	El Dorado	UNST
			<b>RODNEY PIMENTAL Total</b>		5.00		
A028821	19942	13743	ROGER E TURNER	10/31/2007	1.30	Placer	DRY CREEK
			<b>ROGER E TURNER Total</b>		1.30		
A008951	4960	2152	ROLF W MORROW	4/22/1937	0.10	El Dorado	UNSP
			<b>ROLF W MORROW Total</b>		0.10		
A003934	1848	2369	RONALD JAVOR	3/31/1924	0.40	El Dorado	UNSP
			<b>RONALD JAVOR Total</b>		0.40		

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A007387	4140	1820	RONALD E MINER	9/23/1932	0.20	El Dorado	UNSP
			<b>RONALD E MINER Total</b>		0.20		
A003496	1509	488	RONALD J BELL	7/2/1923	0.30	El Dorado	UNSP
			<b>RONALD J BELL Total</b>		0.30		
A017173	11536	6987	RONALD J COLEMAN	7/12/1956	25.50	Placer	UNST
			<b>RONALD J COLEMAN Total</b>		25.50		
A012463	7383	3771	RONALD N HUSTON	4/7/1948	24.00	El Dorado	INDIAN CREEK, UNST
			<b>RONALD N HUSTON Total</b>		24.00		
A021171	14326	9258	RONALD ROSS CLOVER	2/27/1963	1.70	Placer	SECRET RAVINE
			<b>RONALD ROSS CLOVER Total</b>		1.70		
A013233	7831	10052	ROSE ANN GUTIERREZ	7/13/1949	121.00	El Dorado	PILOT CREEK
A023937	16494	11030	ROSE ANN GUTIERREZ	12/6/1971	19.00	El Dorado	PILOT CREEK
A023938	16493	11031	ROSE ANN GUTIERREZ	12/6/1971	16.00	El Dorado	UNST
			<b>ROSE ANN GUTIERREZ Total</b>		156.00		
A021876	14859	9227	RSC DEVELOPMENT CORPORATION	8/24/1964	57.10	Placer	DUTCH RAVINE
			<b>RSC DEVELOPMENT CORPORATION Total</b>		57.10		
A023903	16642	10803	RYAN ENNIS	10/22/1971	0.90	El Dorado	UNSP
			<b>RYAN ENNIS Total</b>		0.90		
A025122	16986	11267	S360 Granite Lakes LLC	8/2/1976	10.00	Placer	UNST
			<b>S360 Granite Lakes LLC Total</b>		10.00		
A008011	4474	2509	SACRAMENTO MOUNTAINEERS	7/5/1934	1.00	El Dorado	UNSP
			<b>SACRAMENTO MOUNTAINEERS Total</b>		1.00		
A025316	17145	11453	SACRAMENTO VALLEY TEEN CHALLENGE INC	3/31/1976	6.00	Placer	UNST
			<b>SACRAMENTO VALLEY TEEN CHALLENGE INC Total</b>		6.00		
A026969	18764	13757	Saeed Zarakani	3/20/2008	3.00	Placer	UNST
			<b>Saeed Zarakani Total</b>		3.00		
A026137	18210	12245	SALLY MARKSTEIN	11/19/1979	1.40	Placer	UNST
			<b>SALLY MARKSTEIN Total</b>		1.40		
A005830	4009	6324	San Juan Water District	2/11/1928	4,581.90	Placer	NORTH FORK AMERICAN RIVER
			<b>San Juan Water District Total</b>		4,581.90		
A022515	15318	9950	SCHOENNAUER FAMILY PARTNERSHIP	6/30/1966	12.00	El Dorado	RINGOLD CREEK
			<b>SCHOENNAUER FAMILY PARTNERSHIP Total</b>		12.00		
A011917	7176	10135	SCHUBIN RANCH LP	6/5/1947	83.00	El Dorado	UNST
A013663	8222	10134	SCHUBIN RANCH LP	3/30/1950	150.00	El Dorado	UNST
A014778	9141	10136	SCHUBIN RANCH LP	4/25/1952	90.00	El Dorado	UNST
			<b>SCHUBIN RANCH LP Total</b>		323.00		
A003321	1554	5488	SCIOTS TRACT CABIN OWNERS ASSN	3/23/1923	15.60	El Dorado	CODY CREEK
			<b>SCIOTS TRACT CABIN OWNERS ASSN Total</b>		15.60		
A005683	3035	1201	SCOTT E ADAMS	9/7/1927	0.10	El Dorado	UNSP
			<b>SCOTT E ADAMS Total</b>		0.10		
A018320	11778	6978	SCOTT KRIGER	9/16/1958	1.30	El Dorado	CHINA CREEK
			<b>SCOTT KRIGER Total</b>		1.30		
A007340	4026	2295	Sharon Warden	8/6/1932	0.10	El Dorado	UNSP
A007341	4027	1584	Sharon Warden	8/6/1932	0.10	El Dorado	UNSP
			<b>Sharon Warden Total</b>		0.20		
A010325	5939	3291	SHARON L CAMERON	11/21/1941	0.10	El Dorado	UNSP
A020256A	13189	9779	SHARON L CAMERON	5/5/1971	2.60	El Dorado	WHITE ROCK CREEK
			<b>SHARON L CAMERON Total</b>		2.70		

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A028993	20394	13325	SHIRLAND LAKEVIEW ESTATES HOMEOWNERS ASSOC	3/24/1987	6.60	Placer	UNST
			<b>SHIRLAND LAKEVIEW ESTATES HOMEOWNERS ASSOC Total</b>		6.60		
A018955	12217	8621	SHIRLIE ROBERTS	9/1/1959	9.70	El Dorado	JOHNTOWN CREEK
			<b>SHIRLIE ROBERTS Total</b>		9.70		
A020601	14248		SIERRA LAKES COUNTY WATER DISTRICT	1/3/1964	1,177.00	Placer	ICE LAKES
			<b>SIERRA LAKES COUNTY WATER DISTRICT Total</b>		1,177.00		
A019114	12541	9031	SIERRA PACIFIC INDUSTRIES	12/2/1959	1.10	El Dorado	ONION CREEK
			<b>SIERRA PACIFIC INDUSTRIES Total</b>		1.10		
A028208B	019433B	13036	SILVER SPRINGS LLC	3/8/1991	0.50	El Dorado	UNST
			<b>SILVER SPRINGS LLC Total</b>		0.50		
A019119	12388	9032	SLEEPY HOLLOW OWNERS ASSOCIATION	12/3/1959	47.50	El Dorado	UNST
			<b>SLEEPY HOLLOW OWNERS ASSOCIATION Total</b>		47.50		
A010012	5671	7195	SOUTHFORK PARTNERSHIP	9/24/1940	23.00	Placer	BADGER RAVINE, UNST
			<b>SOUTHFORK PARTNERSHIP Total</b>		23.00		
A012180	7151	4477	STAR-CREST LUMBER, INC	12/1/1947	49.00	El Dorado	UNST
A013257	8373	4480	STAR-CREST LUMBER, INC	7/25/1949	7.70	El Dorado	UNST
			<b>STAR-CREST LUMBER, INC Total</b>		56.70		
A025310	17844	11713	STEPHEN HOFFMAN	3/29/1977	4.50	El Dorado	UNST
			<b>STEPHEN HOFFMAN Total</b>		4.50		
A006080	3181	2038	STEPHEN RULAND	10/3/1928	0.10	El Dorado	UNSP
			<b>STEPHEN RULAND Total</b>		0.10		
A021185	14483	10075	STEPHEN C MARIANOS	3/8/1963	6.00	El Dorado	WEBER CREEK
			<b>STEPHEN C MARIANOS Total</b>		6.00		
A025380	17876	12386	STEPHEN W BEAM	6/2/1977	0.60	El Dorado	UNST
			<b>STEPHEN W BEAM Total</b>		0.60		
A006549	3477	1888	STEVEN BENNETTS	2/4/1930	20.40	El Dorado	EMIGRANT RAVINE CREEK
			<b>STEVEN BENNETTS Total</b>		20.40		
A019922	13052	9923	STEVEN FORD	1/17/1961	3.20	El Dorado	UNST
			<b>STEVEN FORD Total</b>		3.20		
A015298	9533	5660	STONEWORTH INC	4/17/1953	73.30	Placer	SOUTH FORK DRY CREEK
A018752	12366	7519	STONEWORTH INC	5/29/1959	152.00	Placer	SOUTH FORK DRY CREEK
			<b>STONEWORTH INC Total</b>		225.30		
A020144	13369	8089	Susan McElhone	5/23/1961	0.10	Placer	UNST
			<b>Susan McElhone Total</b>		0.10		
A016885	10910	7612	SUSAN A FREDERICKS	2/8/1956	15.00	El Dorado	UNST
A021232	14404	10098	SUSAN A FREDERICKS	4/10/1963	7.20	El Dorado	UNST
			<b>SUSAN A FREDERICKS Total</b>		22.20		
A025340	17257	11601	Susan D Hobbs	4/22/1977	8.00	El Dorado	UNST
			<b>Susan D Hobbs Total</b>		8.00		
A026023	18081	11847	SWANSBORO COUNTRY PROPERTY OWNERS ASSOCIATION INC	6/13/1979	23.00	El Dorado	UNST
A026024	18082	11928	SWANSBORO COUNTRY PROPERTY OWNERS ASSOCIATION INC	6/13/1979	40.50	El Dorado	UNST
A026025	18083	11848	SWANSBORO COUNTRY PROPERTY OWNERS ASSOCIATION INC	6/13/1979	17.00	El Dorado	REDBIRD CREEK

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A026026	18084	11984	SWANSBORO COUNTRY PROPERTY OWNERS ASSOCIATION INC	6/13/1979	7.10	El Dorado	UNST
A026027	18085	11849	SWANSBORO COUNTRY PROPERTY OWNERS ASSOCIATION INC	6/13/1979	40.00	El Dorado	UNST
A028792	20056	13240	SWANSBORO COUNTRY PROPERTY OWNERS ASSOCIATION INC	2/3/1986	9.00	El Dorado	UNST
			<b>SWANSBORO COUNTRY PROPERTY OWNERS ASSOCIATION INC Total</b>		136.60		
A009269	5187	2694	SWORD & SANDALS INC	4/13/1938	0.60	El Dorado	UNCR
			<b>SWORD &amp; SANDALS INC Total</b>		0.60		
A024351B	017135B	13157	TANYA M BOYD	4/27/1990	0.80	Sacramento	LINDA CREEK
			<b>TANYA M BOYD Total</b>		0.80		
A008791	4877	3191	TAYLOR T WHEELER	9/14/1936	0.10	El Dorado	UNSP
			<b>TAYLOR T WHEELER Total</b>		0.10		
A022478	15551	10769	TERENCE A HALL	5/27/1966	15.00	El Dorado	EMPIRE CREEK
			<b>TERENCE A HALL Total</b>		15.00		
A029233	20340		TERRIL R LUKENS EXEMPTION TRUST & LUKEN SURVIVOR'S TRUST UDT	4/19/1988	181.00	Placer	UNSP
			<b>TERRIL R LUKENS EXEMPTION TRUST &amp; LUKEN SURVIVOR'S TRUST UDT Total</b>		181.00		
A007036	3799	1416	Terry D. Herringshaw	8/10/1931	0.20	El Dorado	UNSP
			<b>Terry D. Herringshaw Total</b>		0.20		
A011055	6442	3324	THE BRUCE & PAT BLAIKIE FAMILY TRUST DATED 5/20/1993	5/22/1945	0.20	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>THE BRUCE &amp; PAT BLAIKIE FAMILY TRUST DATED 5/20/1993 Total</b>		0.20		
A022465	15447	9913	The Pepper Family Trust	5/13/1966	1.50	El Dorado	BURNT SHANTY CREEK
			<b>The Pepper Family Trust Total</b>		1.50		
A006440	3396	1549	THE RITO S CASTANON FAMILY TRUST	9/18/1929	0.10	El Dorado	UNST
			<b>THE RITO S CASTANON FAMILY TRUST Total</b>		0.10		
A020627D	13629	008487D	THOMAS WALTERS	8/13/1992	25.20	El Dorado	UNST
			<b>THOMAS WALTERS Total</b>		25.20		
A020627B	13629	008487B	THOMAS E WALTERS	8/13/1992	1.30	El Dorado	UNST
			<b>THOMAS E WALTERS Total</b>		1.30		
A026981	19271	12888	THOMAS L PIATANESI	9/2/1981	7.00	El Dorado	UNST
			<b>THOMAS L PIATANESI Total</b>		7.00		
A017411	11024	6810	THOMAS S VAN HORNE	12/27/1956	17.00	Placer	UNST
			<b>THOMAS S VAN HORNE Total</b>		17.00		
A004510	2315	776	TIFFANY HOLBROOK	3/19/1925	6.50	El Dorado	UNSP
			<b>TIFFANY HOLBROOK Total</b>		6.50		
A017108	11013	7716	TIMBERLAKE ESTATES HOMEOWNERS ASSOC	5/29/1956	12.00	Placer	UNST
			<b>TIMBERLAKE ESTATES HOMEOWNERS ASSOC Total</b>		12.00		
A007788	4294	1674	TIMOTHY B COLLINS	12/26/1933	0.20	El Dorado	UNSP
			<b>TIMOTHY B COLLINS Total</b>		0.20		
A022062	15099	9129	TIMOTHY J MANDELLA	3/1/1965	0.40	El Dorado	UNSP (2)
			<b>TIMOTHY J MANDELLA Total</b>		0.40		
A006817	3718	1906	TONY PLANCHON	10/8/1930	0.20	El Dorado	UNST
			<b>TONY PLANCHON Total</b>		0.20		
A006988	3836	1343	TRACY ANN BRENNAN-MULLIGAN	6/29/1931	0.10	El Dorado	ROCK CREEK



## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A018807	12161	6790	TRACY ANN BRENNAN-MULLIGAN	6/17/1959	0.10	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>TRACY ANN BRENNAN-MULLIGAN Total</b>		0.20		
A016402	10552	6008	TROOP #1 B S A	6/2/1955	0.50	El Dorado	CODY LAKE, UNSP
			<b>TROOP #1 B S A Total</b>		0.50		
A004597C	000948C		Trudy Reed, et al	8/20/2004	8.20	Placer	AUBURN RAVINE
			<b>Trudy Reed, et al Total</b>		8.20		
A022914	15682	13080	TRUST OF WILLIAM & MARY ROTH AUS	9/29/1967	3.00	El Dorado	JOHNTOWN CREEK
A025406	17863	13081	TRUST OF WILLIAM & MARY ROTH AUS	6/24/1977	15.00	El Dorado	JOHNTOWN CREEK
			<b>TRUST OF WILLIAM &amp; MARY ROTH AUS Total</b>		18.00		
A018106	11630	6767	TRUSTEN B WADSWORTH	4/28/1958	2.00	El Dorado	UNST
			<b>TRUSTEN B WADSWORTH Total</b>		2.00		
A021880	14767	9277	TWILIGHT RIDE LLC	8/26/1964	0.80	Placer	UNST
			<b>TWILIGHT RIDE LLC Total</b>		0.80		
A012046	7203	6975	Tyson Muncher	1/28/1964	31.10	El Dorado	EAST FORK SAWMILL CREEK, SAWMILL CREEK
			<b>Tyson Muncher Total</b>		31.10		
A002141	936	245	U S ELDORADO NATL FOREST	12/17/1920	1.20	El Dorado	COLD STREAM
A003879	1719	534	U S ELDORADO NATL FOREST	2/28/1924	0.10	El Dorado	ATWOOD SPRING
A004722	2382	1420	U S ELDORADO NATL FOREST	8/6/1925	0.30	El Dorado	UNSP
A004740	2383	2102	U S ELDORADO NATL FOREST	8/19/1925	2.30	El Dorado	UNST
A005142	2644	1001	U S ELDORADO NATL FOREST	8/4/1926	0.50	El Dorado	UNST
A006730	3585	2405	U S ELDORADO NATL FOREST	4/14/1930	0.50	El Dorado	UNSP
A007196	3959	1679	U S ELDORADO NATL FOREST	2/27/1932	3.00	Amador	UNST
A007304	4010	2441	U S ELDORADO NATL FOREST	6/27/1932	0.10	El Dorado	UNSP
A007498	4170	4543	U S ELDORADO NATL FOREST	2/7/1933	0.80	El Dorado	UNST
A007522	4163	4099	U S ELDORADO NATL FOREST	3/24/1933	0.60	Alpine	UNST
A008271	4576	1856	U S ELDORADO NATL FOREST	3/4/1935	0.40	El Dorado	UNSP
A008582	4761	3767	U S ELDORADO NATL FOREST	3/11/1936	0.50	El Dorado	ASPEN CREEK
A008929	4944	2159	U S ELDORADO NATL FOREST	3/30/1937	3.30	El Dorado	COX CREEK
A008936	4984	3972	U S ELDORADO NATL FOREST	4/3/1937	3.40	Amador	UNSP
A009058	5052	2161	U S ELDORADO NATL FOREST	7/29/1937	0.40	El Dorado	UNSP
A009086	5020	2164	U S ELDORADO NATL FOREST	8/21/1937	2.60	El Dorado	FRY CREEK
A009087	5021	2165	U S ELDORADO NATL FOREST	8/21/1937	1.30	El Dorado	UNST
A009120	5050	3254	U S ELDORADO NATL FOREST	9/18/1937	1.00	El Dorado	ROCKY CANYON
A009122	5051	2336	U S ELDORADO NATL FOREST	9/21/1937	0.60	El Dorado	ROCKY CANYON
A009128	5100	2166	U S ELDORADO NATL FOREST	9/27/1937	0.20	El Dorado	PYRAMID CREEK
A009129	5101	2167	U S ELDORADO NATL FOREST	9/27/1937	0.20	El Dorado	PYRAMID CREEK
A009189	5104	2168	U S ELDORADO NATL FOREST	11/27/1937	0.70	El Dorado	UNSP
A009251	5195	3922	U S ELDORADO NATL FOREST	3/4/1938	5.20	Amador	BLACK ROCK SPRING
A009289	5177	4059	U S ELDORADO NATL FOREST	5/6/1938	1.10	El Dorado	OATES SPRING
A009298	5178	3129	U S ELDORADO NATL FOREST	5/19/1938	0.70	El Dorado	OLANIE SPRING
A009310	5191	3256	U S ELDORADO NATL FOREST	6/6/1938	0.50	El Dorado	SNOW SLIDE CREEK
A009399	5261	3388	U S ELDORADO NATL FOREST	8/26/1938	0.90	El Dorado	UNSP
A009408	5251	4016	U S ELDORADO NATL FOREST	9/10/1938	0.30	El Dorado	UNST
A009425	5273	2337	U S ELDORADO NATL FOREST	9/24/1938	0.30	El Dorado	UNSP
A009655	5407	2864	U S ELDORADO NATL FOREST	7/5/1939	1.80	Placer	BUCKEYE SPRING
A009843	5566	3273	U S ELDORADO NATL FOREST	2/28/1940	1.00	El Dorado	UNSP
A009869	5580	2865	U S ELDORADO NATL FOREST	4/9/1940	0.50	El Dorado	UNST
A009884	5581	2866	U S ELDORADO NATL FOREST	4/26/1940	1.30	El Dorado	UNCR
A009890	5588	2867	U S ELDORADO NATL FOREST	5/8/1940	1.10	El Dorado	ASPEN CREEK

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A009955	5646	3502 U S	ELDORADO NATL FOREST	7/20/1940	1.90	El Dorado	BRYANT FORK CREEK
A010110	5844	5870 U S	ELDORADO NATL FOREST	2/5/1941	5.30	Amador	SHEEP CORRAL CREEK
A010192	5858	3161 U S	ELDORADO NATL FOREST	4/29/1941	0.20	Alpine	ROSS SPRING
A010289	5907	2921 U S	ELDORADO NATL FOREST	9/24/1941	0.20	El Dorado	UNST
A010360	5977	4095 U S	ELDORADO NATL FOREST	1/13/1942	0.20	El Dorado	UNST
A010385	5979	2948 U S	ELDORADO NATL FOREST	2/6/1942	0.30	El Dorado	STATION CREEK
A010405	5980	3288 U S	ELDORADO NATL FOREST	3/16/1942	2.00	El Dorado	UNSP
A010463	5975	2933 U S	ELDORADO NATL FOREST	5/16/1942	2.00	El Dorado	UNST
A010593	6143	4548 U S	ELDORADO NATL FOREST	1/25/1943	1.80	El Dorado	CHAMPAGNE CANYON, UNST
A010604	6178	3643 U S	ELDORADO NATL FOREST	2/24/1943	0.20	El Dorado	ASPEN CREEK
A010608	6179	4044 U S	ELDORADO NATL FOREST	3/4/1943	0.70	El Dorado	UNSP
A010614	6144	3297 U S	ELDORADO NATL FOREST	3/16/1943	6.90	El Dorado	ALDER CREEK
A010773	6281	2940 U S	ELDORADO NATL FOREST	2/23/1944	0.10	El Dorado	UNST
A010821	6282	4870 U S	ELDORADO NATL FOREST	5/19/1944	12.70	El Dorado	CODY CREEK
A010823	6283	3084 U S	ELDORADO NATL FOREST	5/26/1944	1.00	El Dorado	UNSP, UNST
A010827	6284	5654 U S	ELDORADO NATL FOREST	6/5/1944	5.20	El Dorado	UNSP
A011256	6733	7767 U S	ELDORADO NATL FOREST	1/10/1946	44.90	El Dorado	TAMARACK FLAT CREEK
A011370	6734	3497 U S	ELDORADO NATL FOREST	4/12/1946	0.20	El Dorado	UNST
A011464	6682	3573 U S	ELDORADO NATL FOREST	7/10/1946	0.10	El Dorado	FORN CREEK
A011608	6759	3330 U S	ELDORADO NATL FOREST	11/6/1946	0.20	El Dorado	FRY CREEK
A011742	6881	3419 U S	ELDORADO NATL FOREST	2/25/1947	0.20	El Dorado	ROCKY CANYON
A011867	7003	3395 U S	ELDORADO NATL FOREST	5/9/1947	0.10	El Dorado	UNSP
A011893	6976	4861 U S	ELDORADO NATL FOREST	5/26/1947	0.70	El Dorado	ASPEN CREEK
A011971	7009	4744 U S	ELDORADO NATL FOREST	7/3/1947	0.50	El Dorado	SAYLES CANYON
A012000	7051	3346 U S	ELDORADO NATL FOREST	7/21/1947	0.70	El Dorado	UNST
A012057	7081	3399 U S	ELDORADO NATL FOREST	8/26/1947	0.20	El Dorado	UNSP
A012397	7324	3721 U S	ELDORADO NATL FOREST	3/12/1948	0.20	El Dorado	PYRAMID CREEK
A012552	7449	5535 U S	ELDORADO NATL FOREST	6/22/1948	1.20	El Dorado	BULL CREEK
A013383	7911	3834 U S	ELDORADO NATL FOREST	10/5/1949	0.50	El Dorado	UNSP
A013410	8004	3797 U S	ELDORADO NATL FOREST	10/24/1949	0.10	Alpine	JONES SPRING
A013653	8136	6630 U S	ELDORADO NATL FOREST	3/27/1950	1.70	El Dorado	BRYAN CREEK
A014409	9031	4382 U S	ELDORADO NATL FOREST	7/27/1951	0.10	El Dorado	UNSP
A014452	9026	4713 U S	ELDORADO NATL FOREST	8/29/1951	0.40	El Dorado	UNSP
A014902	9262	4533 U S	ELDORADO NATL FOREST	7/10/1952	483.70	El Dorado	ASPEN CREEK
A015490	10028	4996 U S	ELDORADO NATL FOREST	8/31/1953	55.00	El Dorado	SMITH LAKE
A015492	10029	4997 U S	ELDORADO NATL FOREST	8/31/1953	54.00	El Dorado	CLYDE LAKE
A015493	10030	4998 U S	ELDORADO NATL FOREST	8/31/1953	30.00	El Dorado	TOEM LAKE
A015494	10031	4999 U S	ELDORADO NATL FOREST	8/31/1953	160.00	El Dorado	WRIGHTS LAKE
A015495	10032	5000 U S	ELDORADO NATL FOREST	8/31/1953	80.00	El Dorado	ROPI LAKE
A015496	10033	5001 U S	ELDORADO NATL FOREST	8/31/1953	85.40	El Dorado	LOIS LAKE
A015497	10034	5002 U S	ELDORADO NATL FOREST	8/31/1953	203.60	El Dorado	LAKE SCHMIDELL
A015498	10035	5003 U S	ELDORADO NATL FOREST	8/31/1953	40.00	El Dorado	LYONS LAKE
A015499	10036	6199 U S	ELDORADO NATL FOREST	8/31/1953	110.00	El Dorado	BUCK ISLAND LAKE
A015500	10037	5004 U S	ELDORADO NATL FOREST	8/31/1953	38.00	El Dorado	LAWRENCE LAKE
A015501	10038	6058 U S	ELDORADO NATL FOREST	8/31/1953	190.00	El Dorado	SPIDER LAKE
A015503	10040	5005 U S	ELDORADO NATL FOREST	8/31/1953	30.00	El Dorado	BARRETT LAKE
A015506	10043	5006 U S	ELDORADO NATL FOREST	8/31/1953	148.40	El Dorado	MIDDLE VELMA LAKE
A015509	10046	6025 U S	ELDORADO NATL FOREST	8/31/1953	160.00	Alpine	WINNEMUCCA LAKE
A015512	10049	5011 U S	ELDORADO NATL FOREST	8/31/1953	60.00	El Dorado	ISLAND LAKE
A015513	10050	4985 U S	ELDORADO NATL FOREST	8/31/1953	21.00	El Dorado	UPPER TWIN LAKE

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A015514	10051	5164	U S ELDORADO NATL FOREST	8/31/1953	26.00	El Dorado	LOWER TWIN LAKE
A015616	10052	6200	U S ELDORADO NATL FOREST	11/23/1953	440.00	El Dorado	ROCKBOUND LAKE
A016564	10564	5531	U S ELDORADO NATL FOREST	8/31/1955	0.20	El Dorado	UNST
A017521	11280	8645	U S ELDORADO NATL FOREST	3/22/1957	2.80	El Dorado	GERLE CREEK
A017846	11577	6935	U S ELDORADO NATL FOREST	10/11/1957	0.20	El Dorado	ROCKY CANYON
A018022	11627	7172	U S ELDORADO NATL FOREST	3/3/1958	2.90	Amador	UNSP
A019541	12806	7807	U S ELDORADO NATL FOREST	7/13/1960	3.50	El Dorado	PILLIKEN SPRING
A019544	12808	7971	U S ELDORADO NATL FOREST	7/13/1960	0.40	Placer	JERRYS CANYON SPRING
A019546	12810	7972	U S ELDORADO NATL FOREST	7/13/1960	0.40	Placer	CHIPMUNK RIDGE SPRING
A019547	12811	7973	U S ELDORADO NATL FOREST	7/13/1960	0.40	Placer	LYNCHBURG SPRING
A019548	12812	7974	U S ELDORADO NATL FOREST	7/13/1960	0.40	Placer	BEAR SPRINGS
A019549	12813	7975	U S ELDORADO NATL FOREST	7/13/1960	0.40	Placer	DESERT COLD SPRING
A020659	13789	8325	U S ELDORADO NATL FOREST	3/19/1962	0.40	El Dorado	UNST
A020675	13795	8324	U S ELDORADO NATL FOREST	3/26/1962	0.20	El Dorado	OWENS CAMP SPRING
A023420	16189	10597	U S ELDORADO NATL FOREST	12/23/1969	4.50	Placer	SOUTH FORK LONG CANYON
A028204	19518	12944	U S ELDORADO NATL FOREST	8/3/1984	2.20	El Dorado	UNSP
<b>U S ELDORADO NATL FOREST Total</b>					2,565.40		
A007629	4209	1702	U S FOREST SERVICE	7/26/1933	0.10	El Dorado	UNST
A007848	4350	2138	U S FOREST SERVICE	2/14/1934	0.40	Placer	GREEK STORE SPRING
A009114	5095	2611	U S FOREST SERVICE	9/14/1937	13.40	Placer	BLUE CANYON RANGER STATION SP
A009816	5536	2599	U S FOREST SERVICE	1/29/1940	4.30	Placer	UNSP
A010126	5779	2886	U S FOREST SERVICE	2/20/1941	4.70	Placer	TEXAS HILL SPRING
A010129	5782	2655	U S FOREST SERVICE	2/20/1941	0.60	Placer	DAWSON SPRING
A010442	6014	4181	U S FOREST SERVICE	5/6/1942	0.10	Placer	NORTH FORK SPRING
A010443	6015	3037	U S FOREST SERVICE	5/6/1942	5.50	Placer	ONION VALLEY SPRING NO 3
A010445	6017	2890	U S FOREST SERVICE	5/6/1942	0.60	Placer	LONG VALLEY SPRING
A011157	6589	3207	U S FOREST SERVICE	9/19/1945	1.00	Placer	TADPOLE SPRING
A011787	6897	4862	U S FOREST SERVICE	3/19/1947	0.30	Placer	UNSP
A012036	7055	3250	U S FOREST SERVICE	8/12/1947	1.10	Placer	PAGGE CREEK
A014193	8704	4112	U S FOREST SERVICE	3/14/1951	11.00	Placer	ELLIOTT MEADOW SPRING
A014194	8705	4113	U S FOREST SERVICE	6/28/1955	34.10	Placer	ELLIOTT RANCH SPRING
A014195	9308	4964	U S FOREST SERVICE	3/14/1951	1.40	Placer	BEAR SPRING
A014196	8706	4126	U S FOREST SERVICE	3/14/1951	0.40	Placer	CHICKEN HAWK SPRING
A014197	8707	4127	U S FOREST SERVICE	3/14/1951	0.30	Placer	ORCHARD SPRING
A014198	8708	4876	U S FOREST SERVICE	3/14/1951	0.20	Placer	SECRET HOUSE SPRING
A016517	10278	7335	U S FOREST SERVICE	8/11/1955	96.80	Placer	CODY CREEK
A016691	10621	7367	U S FOREST SERVICE	10/26/1955	6.10	Placer	FULDA SPRING
A017304	11837	7098	U S FOREST SERVICE	1/14/1965	84.90	Placer	POWDERHORN CREEK
A021489	14495	8892	U S FOREST SERVICE	10/7/1963	5.20	Placer	BEARTRAP SPRING
A023221	16016	10309	U S FOREST SERVICE	1/30/1969	0.40	Placer	DELLER SPRING
A023222	16177	10620	U S FOREST SERVICE	1/30/1969	1.10	Placer	MT MILDRED CREEK
A023223	16178	10611	U S FOREST SERVICE	1/30/1969	4.20	Placer	DOLLY CREEK
A023224	16179	10618	U S FOREST SERVICE	1/30/1969	3.90	Placer	FRENCH MEADOW CREEK
A023227	16013	10543	U S FOREST SERVICE	1/30/1969	0.80	Placer	WILLMONT SPRING
A023228	16012	10310	U S FOREST SERVICE	1/30/1969	0.50	Placer	GIANT GAP SPRING #1
A023229	16011	10311	U S FOREST SERVICE	1/30/1969	0.50	Placer	GIANT GAP SPRING #2
<b>U S FOREST SERVICE Total</b>					283.90		
A013103	7803	4220	U.S. BUREAU OF RECLAMATION	3/21/1956	4.00	El Dorado	KNICKERBOCKER CREEK
A013370	11315		U.S. BUREAU OF RECLAMATION	4/22/1958	5,347,832.00	Contra Costa, Sacramento	AMERICAN RIVER, OLD RIVER, SACRAMENTO RIVER

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A013371	11316		U.S. BUREAU OF RECLAMATION	7/29/2002	680,435.30	Contra Costa, Sacramento	AMERICAN RIVER, Sacramento River
A013629	8151	6654	U.S. BUREAU OF RECLAMATION	3/1/1963	30.00	El Dorado	UNST
A014165	8572	4221	U.S. BUREAU OF RECLAMATION	3/21/1956	22.00	El Dorado	KNICKERBOCKER CREEK
A014515	8887	4798	U.S. BUREAU OF RECLAMATION	10/24/1957	14.30	El Dorado	UNST
A015028	9246	5878	U.S. BUREAU OF RECLAMATION	11/17/1959	15.00	El Dorado	UNST
A017371	10923	5824	U.S. BUREAU OF RECLAMATION	10/22/1959	19.60	El Dorado	MIDDLE FORK AMERICAN RIVER
A018196	12706	7596	U.S. BUREAU OF RECLAMATION	3/9/1966	0.10	Placer	UNSP (2)
A019977	13093	8229	U.S. BUREAU OF RECLAMATION	2/8/1961	21.70	Placer	CARLTON SPRING, NORTH FORK AMERICAN RIVER
A020011	13161		U.S. BUREAU OF RECLAMATION	2/28/1961	22.00	El Dorado	KNICKERBOCKER CREEK
A020478	13934	8588	U.S. BUREAU OF RECLAMATION	11/7/1961	0.10	Placer	NORTH FORK AMERICAN RIVER
A021189	14220	8871	U.S. BUREAU OF RECLAMATION	3/13/1963	18.00	El Dorado	UNST
			<b>U.S. BUREAU OF RECLAMATION Total</b>		6,028,434.10		
A005214	2776	1075	ULF ASPENLIND	9/17/1926	231.70	Placer	CANYON CREEK
			<b>ULF ASPENLIND Total</b>		231.70		
A023318	15937	11043	UNION PACIFIC RAILROAD COMPANY	6/4/1980	4.00	Placer	UNXX
			<b>UNION PACIFIC RAILROAD COMPANY Total</b>		4.00		
A027266	18612		US BUREAU OF LAND MANAGEMENT	11/4/1982	2,533.90	Placer	DARDANELLES CREEK, POND CREEK
			<b>US BUREAU OF LAND MANAGEMENT Total</b>		2,533.90		
A005981	3152	5560	USDA-FOREST SERVICE, LAKE TAHOE BASIN MANAGEMENT UNIT	7/16/1928	4.30	El Dorado	HAWLEY SPRING
A010290	5988	6099	USDA-FOREST SERVICE, LAKE TAHOE BASIN MANAGEMENT UNIT	9/24/1941	0.70	El Dorado	BENWOOD CREEK
A015510	10047	5009	USDA-FOREST SERVICE, LAKE TAHOE BASIN MANAGEMENT UNIT	8/31/1953	141.80	El Dorado	HEATHER LAKE
A027518	19091	12562	USDA-FOREST SERVICE, LAKE TAHOE BASIN MANAGEMENT UNIT	9/15/1982	0.30	El Dorado	HAWLEY SPRING
			<b>USDA-FOREST SERVICE, LAKE TAHOE BASIN MANAGEMENT UNIT Total</b>		147.10		
A004026	1899	738	VERYL T KUCHAR	10/5/1928	113.10	Placer	BIG CHIEF CREEK, BOULDER CREEK
A011258A	6528	9362	VERYL T KUCHAR	1/10/1946	61.00	Placer	UNST
			<b>VERYL T KUCHAR Total</b>		174.10		
A015953	9902	5786	VICKIE L LONGO	7/26/1954	3.80	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>VICKIE L LONGO Total</b>		3.80		
A005535	3114	1098	VICTOR HERRERO	6/17/1927	0.10	El Dorado	UNSP
			<b>VICTOR HERRERO Total</b>		0.10		
A017916	11348	7619	VINCENT J GRAVES	12/16/1957	2.20	Placer	BABIE CREEK
			<b>VINCENT J GRAVES Total</b>		2.20		
A028603	20086	13242	WAYNE BRUMMOND	10/28/1985	2.50	Placer	UNXX
			<b>WAYNE BRUMMOND Total</b>		2.50		
A011162	6477	3032	WAYNE HILLARD	9/27/1945	0.20	El Dorado	SOUTH FORK AMERICAN RIVER
			<b>WAYNE HILLARD Total</b>		0.20		
A024241	16911	12453	WILLIAM FAWX	11/8/1972	0.10	Placer	DUTCH RAVINE
			<b>WILLIAM FAWX Total</b>		0.10		
A027705	19112	12678	WILLIAM OZAWA	4/5/1983	1.30	El Dorado	UNST
			<b>WILLIAM OZAWA Total</b>		1.30		
A027173	18747	13544	WILLIAM SMITH	7/11/2003	19.00	El Dorado	ACORN CREEK

## American River - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A016891	10691	7265	<b>WILLIAM SMITH Total</b>		19.00		
			WILLIAM WHITAKER	2/14/1956	0.40	El Dorado	UNST
			<b>WILLIAM WHITAKER Total</b>		0.40		
A019850	13243		WILLIAM B ASHTON	11/21/1960	37.00	El Dorado	SILVER FORK OF SOUTH FORK AMERICAN RIVER, SUGAR LOAF CREEK
A001963	935	428	<b>WILLIAM B ASHTON Total</b>		37.00		
			WILLIAM B TIMBERLAKE	8/11/1920	2.90	El Dorado	NILSSON SPRING
			<b>WILLIAM B TIMBERLAKE Total</b>		2.90		
A005989	3394	1436	WILLIAM C SAWTELL	7/19/1928	0.20	El Dorado	UNST
			<b>WILLIAM C SAWTELL Total</b>		0.20		
A027491	19229	13413	WILLIAM P KLEIN JR	8/31/1982	0.80	Placer	UNST
A028034	20068	13411	WILLIAM P KLEIN JR	3/15/1984	12.00	Placer	UNST
A028035	20069	13412	WILLIAM P KLEIN JR	3/15/1984	11.00	Placer	UNST
			<b>WILLIAM P KLEIN JR Total</b>		23.80		
A027520	19118	13269	WILLIAM V DALLAS	9/16/1982	0.20	Placer	UNST
			<b>WILLIAM V DALLAS Total</b>		0.20		
A010121	5976	3045	WILLIS H LAMBERT	2/20/1941	0.70	El Dorado	UNST
			<b>WILLIS H LAMBERT Total</b>		0.70		
A014086	8441	4369	WILLOMAE DOBBS	12/1/1950	0.40	El Dorado	UNSP
A015918	9886	5630	WILLOMAE DOBBS	6/18/1954	0.70	El Dorado	UNSP
			<b>WILLOMAE DOBBS Total</b>		1.10		
A022029	15275	10683	WILSON GRANAT	1/15/1965	3.30	Placer	UNST
			<b>WILSON GRANAT Total</b>		3.30		
A013893	8603	4079	WOODBIDGE RANCH HOMEOWNERS ASSOCIATION	8/14/1950	33.00	Sacramento	UNCR
			<b>WOODBIDGE RANCH HOMEOWNERS ASSOCIATION Total</b>		33.00		
A008015	4390	2604	YANKEE HILL ESTATES OWNERS ASSOCIATION	7/9/1934	287.90	Placer	ANTELOPE CREEK
A013394	8207	4781	YANKEE HILL ESTATES OWNERS ASSOCIATION	10/11/1949	25.00	Placer	ANTELOPE CREEK
A016437	10551	5511	YANKEE HILL ESTATES OWNERS ASSOCIATION	6/23/1955	142.70	Placer	ANTELOPE CREEK
			<b>YANKEE HILL ESTATES OWNERS ASSOCIATION Total</b>		455.60		
			<b>Grand Total</b>		9,560,977.90		

## East Creeks of Sacramento River Basin - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A009802	5719	2809	BIRD HAVEN RANCH LLC	1/11/1940	852.90	Glenn	BUTTE CREEK
			<b>BIRD HAVEN RANCH LLC Total</b>		852.90		
A002234	1114	5236	BUTTE VALLEY IRRIGATION DISTRICT	2/28/1921	17,163.80	Siskiyou	BUTTE CREEK
A023025	16330	10776	BUTTE VALLEY IRRIGATION DISTRICT	4/10/1968	10,000.00	Siskiyou	BUTTE CREEK
			<b>BUTTE VALLEY IRRIGATION DISTRICT Total</b>		27,163.80		
A013794	8624	8176	CAMERON PARK COMMUNITY SERVICES DISTRICT	6/14/1950	240.00	El Dorado	DEER CREEK
			<b>CAMERON PARK COMMUNITY SERVICES DISTRICT Total</b>		240.00		
A009216	5153	6113	CITY OF CHICO	12/30/1937	258.90	Butte	BIG CHICO CREEK
			<b>CITY OF CHICO Total</b>		258.90		
A013675	8194	7075	COLUSA SHOOTING CLUB	4/7/1950	853.90	Colusa	BUTTE CREEK
A013728	8195	7076	COLUSA SHOOTING CLUB	5/10/1950	1,386.90	Colusa	BUTTE CREEK
			<b>COLUSA SHOOTING CLUB Total</b>		2,240.80		
A009625	5717	2984	Dept of Fish and Game	6/19/1939	5,474.50	Butte, Glenn	BUTTE CREEK
A013008	7747	8712	Dept of Fish and Game	7/24/1968	5,182.50	Butte, Glenn	BUTTE CREEK
A013323	7885	4793	Dept of Fish and Game	10/24/1957	2,554.80	Glenn	BUTTE CREEK DRAINAGE DISTRICT DITCH
A014354	9663	4794	Dept of Fish and Game	10/24/1957	2,700.70	Butte	BUTTE CREEK
A015467	14438	9973	Dept of Fish and Game	12/21/1972	5,463.00	Glenn	BUTTE CREEK DRAINAGE DISTRICT DITCH
A015468	14439	9974	Dept of Fish and Game	12/21/1972	5,463.00	Butte	BUTTE CREEK
A024590	17233		Dept of Fish and Game	4/10/1974	7,428.00	Butte	BUTTE CREEK
			<b>Dept of Fish and Game Total</b>		34,266.50		
A022564	16029	10433	GAIL BROWN	8/29/1966	493.00	Butte	BUTTE CREEK
			<b>GAIL BROWN Total</b>		493.00		
A002777	1779	2389	GORRILL LAND COMPANY	3/6/1922	4,581.90	Butte	BUTTE CREEK, HAMLIN SLOUGH
A004664	2448	2390	GORRILL LAND COMPANY	6/30/1925	4,523.50	Butte	HAMLIN SLOUGH
A004665	2449	2391	GORRILL LAND COMPANY	3/13/1942	3,930.10	Butte	BUTTE CREEK
A022321	16018	11044	GORRILL LAND COMPANY	10/25/1965	2,500.00	Butte	BUTTE CREEK
A025717	17845	11996	GORRILL LAND COMPANY	4/12/1978	4,400.00	Butte	HAMLIN SLOUGH
			<b>GORRILL LAND COMPANY Total</b>		19,935.50		
A022799	15502	9911	LOUIS A PAYEN	5/31/1967	45.00	Sacramento	LITTLE DEER CREEK
			<b>LOUIS A PAYEN Total</b>		45.00		
A023298	15950	10194	LUCIAN B VANDEGRIFT TRUST	6/17/1969	45.00	Butte	LITTLE BUTTE CREEK
			<b>LUCIAN B VANDEGRIFT TRUST Total</b>		45.00		
A005109	3210	2614	M & T INCORPORATED	7/17/1926	5,060.00	Butte	BUTTE CREEK
A008188	4700	2617	M & T INCORPORATED	12/1/1934	5,060.00	Butte	BUTTE CREEK
A008565	4744		M & T INCORPORATED	2/27/1936	3,074.40	Butte	BIG BUTTE CREEK

## East Creeks of Sacramento River Basin - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A009735	5847		M & T INCORPORATED	9/22/1939	13,587.00	Butte	BIG BUTTE CREEK
A015866	10390	9267	M & T INCORPORATED	5/10/1954	500.00	Butte	BUTTE CREEK
			<b>M &amp; T INCORPORATED Total</b>		27,281.40		
A014546	9664	5394	MCPHERRIN LAND CO	11/2/1951	6,396.80	Butte	BUTTE CREEK
A015710	14021	8676	MCPHERRIN LAND CO	6/25/1968	2,122.40	Butte	BUTTE CREEK
			<b>MCPHERRIN LAND CO Total</b>		8,519.20		
A019743	13039	10035	MELVIN D MYERS	9/19/1960	142.00	Lassen	BUTTE CREEK
			<b>MELVIN D MYERS Total</b>		142.00		
A023084	15727	10197	MICHAEL HARRIS	7/15/1968	32	Butte	LITTLE CHICO CREEK
			<b>MICHAEL HARRIS Total</b>		32		
A000476	271		Paradise Irrigation District	5/3/1917	9,500.00	Butte	LITTLE BUTTE CREEK
A022061	16040		Paradise Irrigation District	6/17/1970	8,800.00	Butte	LITTLE BUTTE CREEK
			<b>Paradise Irrigation District Total</b>		18,300.00		
A005110	3211	2615	PARROTT INVESTMENT COMPANY	7/17/1926	5,060.00	Butte	BUTTE CREEK
A008187	4699	2616	PARROTT INVESTMENT COMPANY	12/1/1934	5,060.00	Butte	BUTTE CREEK
A008559	4743		PARROTT INVESTMENT COMPANY	2/19/1936	3,074.40	Butte	BIG BUTTE CREEK
A009736	5848		PARROTT INVESTMENT COMPANY	9/22/1939	13,587.00	Butte	BIG BUTTE CREEK
A015867	10391	9268	PARROTT INVESTMENT COMPANY	5/10/1954	500.00	Butte	BUTTE CREEK
			<b>PARROTT INVESTMENT COMPANY Total</b>		27,281.40		
A001656	794	880	RANCHO ESQUON INC	2/5/1920	3,665.45	Butte	HAMLIN SLOUGH
A002576	1722	1027	RANCHO ESQUON INC	10/6/1921	1,832.80	Butte	BUTTE CREEK
A002805	1872	1028	RANCHO ESQUON INC	3/24/1922	3,832.10	Butte	BUTTE CREEK
A002909	2027	1029	RANCHO ESQUON INC	6/27/1922	3,014.90	Butte	BUTTE CREEK
A004663	2447	1030	RANCHO ESQUON INC	6/30/1925	4,598.48	Butte	HAMLIN SLOUGH
A022039	16039	11046	RANCHO ESQUON INC	2/5/1965	5,540.00	Butte	BUTTE CREEK
			<b>RANCHO ESQUON INC Total</b>		22,483.73		
A023201	16771		RECLAMATION DISTRICT #1004	12/1/1978	36,000.00	Colusa, Sutter	BUTTE CREEK, BUTTE SLOUGH
			<b>RECLAMATION DISTRICT #1004 Total</b>		36,000.00		
A007925	4365	1797	RECLAMATION DISTRICT #833	5/1/1934	2,217.20	Colusa	BUTTE CREEK
			<b>RECLAMATION DISTRICT #833 Total</b>		2,217.20		
A004989	2706	837	SIERRA PACIFIC INDUSTRIES	1/8/1965	1,831.70	Butte	WEST BRANCH BUTTE CREEK
			<b>SIERRA PACIFIC INDUSTRIES Total</b>		1,831.70		
A001041	542	485	STANFORD VINA RANCH IRRIGATION CO	8/5/1918	4,581.90	Tehama	DEER CREEK
			<b>STANFORD VINA RANCH IRRIGATION CO Total</b>		4,581.90		
A020531			STATE WATER RESOURCES CONTROL BOARD	12/19/1961	0.00	Lassen, Modoc	ASH CREEK, BUTTE CREEK, UNST, WILLOW CREEK
			<b>STATE WATER RESOURCES CONTROL BOARD Total</b>		0.00		
A022534	16022	10432	Stephen Meline IV	7/27/1966	1,695.00	Butte	BUTTE CREEK

## East Creeks of Sacramento River Basin - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>Stephen Meline IV Total</b>		1,695.00		
A012437	7368	3458	U S FISH & WILDLIFE SERVICE	3/25/1948	1,097.00	Colusa	BUTTE CREEK
A013540	8838	4472	U S FISH & WILDLIFE SERVICE	1/12/1950	44,162.60	Shasta, Tehama	BATTLE CREEK
A014316	9662	7053	U S FISH & WILDLIFE SERVICE	5/21/1951	590.30	Colusa	BUTTE CREEK
A017862	11615	6591	U S FISH & WILDLIFE SERVICE	10/25/1957	7,963.80	Shasta	BATTLE CREEK
A020288	13384	7993	U S FISH & WILDLIFE SERVICE	7/3/1961	21,719.30	Shasta	BATTLE CREEK, Battle Creek
A022227	15046	9561	U S FISH & WILDLIFE SERVICE	7/19/1965	14,479.60	Shasta	BATTLE CREEK, Battle Creek
			<b>U S FISH &amp; WILDLIFE SERVICE Total</b>		90,012.60		
A031071	21277		U S KLAMATH NATIONAL FOREST - GOOSENEST RECLAMATION DISTRICT	6/6/2011	185.00	Siskiyou	BUTTE CREEK
			<b>U S KLAMATH NATIONAL FOREST - GOOSENEST RECLAMATION DISTRICT Total</b>		185.00		
			<b>Grand Total</b>		326,104.54		



## West Creeks of Sacramento River Basin - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A017927	11586	9898	ANTHONY D CRUYSEN	12/26/1957	23.00	Shasta	CLEAR CREEK
			<b>ANTHONY D CRUYSEN Total</b>		23.00		
A023232	16007	10906	BENNETT FAMILY TRUST	2/6/1969	74.00	Shasta	SOUTH FORK CLEAR CREEK
			<b>BENNETT FAMILY TRUST Total</b>		74.00		
A016145	10125	9563	BILL GIBSON	11/18/1954	627.00	Shasta, Tehama	COTTONWOOD CREEK
			<b>BILL GIBSON Total</b>		627.00		
A013972	8537	4100	CALIF DEPT OF TRANSPORTATION	9/29/1950	5.80	Shasta	MIDDLE FORK COTTONWOOD CREEK
			<b>CALIF DEPT OF TRANSPORTATION Total</b>		5.80		
A016373D		006033D	CARPENTER FAMILY REVOCABLE TRUST	6/3/1991	167.20	Tehama	COTTONWOOD CREEK
			<b>CARPENTER FAMILY REVOCABLE TRUST Total</b>		167.20		
A016373C		006033C	CEVASCO ROBT CEVASCO REVOC TRUST 2/18/9	6/3/1991	45.70	Tehama	COTTONWOOD CREEK
			<b>CEVASCO ROBT CEVASCO REVOC TRUST 2/18/9 Total</b>		45.70		
A012074	7559	6320	CONAWAY PRESERVATION GROUP LLC	9/8/1947	3,728.93	Yolo	WILLOW SLOUGH
A026695	19372		CONAWAY PRESERVATION GROUP LLC	1/27/1981	10,000.00	Yolo	CACHE CREEK, YOLO BYPASS
			<b>CONAWAY PRESERVATION GROUP LLC Total</b>		13,728.93		
A027382	20308		COUNTY OF COLUSA	7/8/1982	10.00	Colusa	STONY CREEK UNDERFLOW
			<b>COUNTY OF COLUSA Total</b>		10.00		
A016373A		006033A	DENNIS C DIERKSEN	6/3/1991	64.10	Shasta	COTTONWOOD CREEK
			<b>DENNIS C DIERKSEN Total</b>		64.10		
A013764	8578	4460	DONALD KRENN	5/29/1950	18.30	Tehama	SOUTH FORK COTTONWOOD CREEK
			<b>DONALD KRENN Total</b>		18.30		
A024723	16873	11283	FRENCH GULCH-WHISKEYTOWN SCHOOL DISTRICT	12/11/1974	10.20	Shasta	CLEAR CREEK
			<b>FRENCH GULCH-WHISKEYTOWN SCHOOL DISTRICT Total</b>		10.20		
A007284	4198	2006	HAMMER FAMILY TRUST	6/8/1932	1,463.80	Tehama	SOUTH FORK COTTONWOOD CREEK
			<b>HAMMER FAMILY TRUST Total</b>		1,463.80		
A021223	14272	8831	HARRY A BAKER REVOCABLE TRUST	4/8/1963	2.70	Tehama	SOUTH FORK COTTONWOOD CREEK
			<b>HARRY A BAKER REVOCABLE TRUST Total</b>		2.70		
A030232	20993		Heart Consciousness Church, Inc.	3/8/1993	245.00	Lake	CRAZY CREEK, PUTAH CREEK, UNST
			<b>Heart Consciousness Church, Inc. Total</b>		245.00		
A013976	8588	6976	IGO ONO COMMUNITY SERVICE DISTRICT	10/3/1950	341.20	Shasta	COTTONWOOD CREEK
			<b>IGO ONO COMMUNITY SERVICE DISTRICT Total</b>		341.20		
A000334	157	153	JOSHUA L SOSKE JR	5/11/1916	24.60	Glenn, Sonoma	NORTH FORK STONY CREEK
			<b>JOSHUA L SOSKE JR Total</b>		24.60		
A013701	8225	4312	KENT W PFRIMMER	4/24/1950	122.20	Tehama	COTTONWOOD CREEK
			<b>KENT W PFRIMMER Total</b>		122.20		
A016373B		006033B	KEVIN J DEVINE	6/3/1991	41.30	Tehama	COTTONWOOD CREEK
			<b>KEVIN J DEVINE Total</b>		41.30		
A013110	7843	4736	LEMA 1992 TRUST	5/24/1949	219.90	Tehama	COTTONWOOD CREEK
			<b>LEMA 1992 TRUST Total</b>		219.90		
A023234	16005	10921	MARY ANN SMITH	2/6/1969	1.20	Shasta	SOUTH FORK CLEAR CREEK
			<b>MARY ANN SMITH Total</b>		1.20		
A031558			MIDDLETOWN FARM & CATTLE COMPANY	3/30/2007	434.00	Lake	HARBIN CREEK, PUTAH CREEK, UNST
			<b>MIDDLETOWN FARM &amp; CATTLE COMPANY Total</b>		434.00		
A023233	16000	10540	ROBERT W ANDERSON	2/6/1969	69.00	Shasta	SOUTH FORK CLEAR CREEK

## West Creeks of Sacramento River Basin - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A024785	16939	11368	ROBERT W ANDERSON	3/24/1975	2.20	Shasta	SOUTH FORK CLEAR CREEK, UNST
			<b>ROBERT W ANDERSON Total</b>		71.20		
A025261	17823		STONY CREEK WATER DISTRICT	2/14/1977	3,000.00	Colusa, Glenn	LITTLE STONY CREEK, STONY CREEK
			<b>STONY CREEK WATER DISTRICT Total</b>		3,000.00		
A020104	13490	8028	THE REVOCABLE TRUST OF ROBERT F RETZLOFF	4/27/1961	271.70	Glenn	STONY CREEK UNDERFLOW
			<b>THE REVOCABLE TRUST OF ROBERT F RETZLOFF Total</b>		271.70		
A019104	12653	7454	U S NATIONAL PARK SERVICE	11/24/1959	3.20	Shasta	CLEAR CREEK
			<b>U S NATIONAL PARK SERVICE Total</b>		3.20		
A002212	2339	2652	U.S. BUREAU OF RECLAMATION	2/17/1921	50,200.00	Glenn	STONY CREEK
A018115	13776		U.S. BUREAU OF RECLAMATION	4/30/1958	160,000.00	Contra Costa, Tehama	STONY CREEK
A017376	12364		U.S. BUREAU OF RECLAMATION	7/28/1960	1,335,371.20	Contra Costa, Shasta	CLEAR CREEK
A015424	12363	9957	U.S. BUREAU OF RECLAMATION	4/15/2002	1,230,761.80	Shasta	CLEAR CREEK
			<b>U.S. BUREAU OF RECLAMATION Total</b>		2,776,333.00		
A016373E		006033E	WAYNE ROCHLITZ	6/3/1991	85.00	Tehama	COTTONWOOD CREEK
			<b>WAYNE ROCHLITZ Total</b>		85.00		
A012994	7469	3822	WILLIAM T GRAY	3/23/1949	114.60	Shasta	COTTONWOOD CREEK
			<b>WILLIAM T GRAY Total</b>		114.60		
A011389	12848		YOLO COUNTY F C & W C DISTRICT	5/3/1946	431,000.00	Lake, Yolo	CACHE CREEK, NORTH FORK CACH
			<b>YOLO COUNTY F C &amp; W C DISTRICT Total</b>		431,000.00		
			<b>Grand Total</b>		3,228,548.83		

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A011384	6629	3641	A & L AG RENTAL & LEASING INC	4/25/1946	1,094.90	Colusa	SACRAMENTO RIVER
			<b>A &amp; L AG RENTAL &amp; LEASING INC Total</b>		1,094.90		
A000657	338	237	ALICE K MARKS	4/27/1917	136.50	Sutter	SACRAMENTO RIVER
			<b>ALICE K MARKS Total</b>		136.50		
A001976	1243	1206	ALLEN A EHRKE	5/31/1932	158.80	Colusa	SACRAMENTO RIVER
			<b>ALLEN A EHRKE Total</b>		158.80		
A012469A	7267	003722A	Anna C. Byrd 1997 Trust	4/13/1948	1,598.50	Sutter	SACRAMENTO RIVER
			<b>Anna C. Byrd 1997 Trust Total</b>		1,598.50		
A008931	4985	3169	ARNOLD ANDREOTTI	4/1/1937	1,094.90	Colusa	SACRAMENTO RIVER
A011618	6793	3170	ARNOLD ANDREOTTI	11/14/1946	2,007.30	Colusa	SACRAMENTO RIVER
			<b>ARNOLD ANDREOTTI Total</b>		3,102.20		
A013454	8010	7251	ARTHUR ANDREOTTI	11/9/1949	4,927.00	Colusa	SACRAMENTO RIVER
			<b>ARTHUR ANDREOTTI Total</b>		4,927.00		
A012482	7399	3655	BARRY A MCCLAIN	4/23/1948	182.50	Sacramento	SACRAMENTO RIVER
			<b>BARRY A MCCLAIN Total</b>		182.50		
A005100	2609	989	BURTIS RANCH	7/13/1926	140.50	Sutter	SACRAMENTO RIVER
			<b>BURTIS RANCH Total</b>		140.50		
A010900	6375	3569	BURTON H LAUPPE	10/9/1944	1,069.10	Sutter	SACRAMENTO RIVER
			<b>BURTON H LAUPPE Total</b>		1,069.10		
A000186	72	1753	CACHIL DEHE BAND OF WINTUN INDIANS OF	11/22/1915	3,198.40	Colusa	SACRAMENTO RIVER
			<b>CACHIL DEHE BAND OF WINTUN INDIANS OF Total</b>		3,198.40		
A014445A	16481		CALIF DEPT OF WATER RESOURCES	8/25/1951	1,575,212.40	Contra Costa, Sacramento	ITALIAN SLOUGH, SACRAMENTO RIVER DELTA CHANNELS
A017512	16482		CALIF DEPT OF WATER RESOURCES	3/15/1957	1,100,000.00	Madera, Merced, Sacramento	ITALIAN SLOUGH, SACRAMENTO RIVER DELTA CHANNELS, SAN LUIS CREEK
			<b>CALIF DEPT OF WATER RESOURCES Total</b>		2,675,212.40		
A014682	9061	6380	CARTER FAMILY TRUST & CARTER FAMILY MARTIAL TRUST	2/15/1952	2,498.20	Colusa	SACRAMENTO RIVER
			<b>CARTER FAMILY TRUST &amp; CARTER FAMILY MARTIAL TRUST Total</b>		2,498.20		
A000230B	204	001788B	CHARLES W SEAVER	1/10/1916	1,568.10	Colusa	SACRAMENTO RIVER
			<b>CHARLES W SEAVER Total</b>		1,568.10		
A001179	609	1478	CHARLES W TUTTLE JR	2/15/1919	4,169.50	Colusa	SACRAMENTO RIVER
			<b>CHARLES W TUTTLE JR Total</b>		4,169.50		
A006716	3630	1849	CITY OF REDDING	6/30/1930	53.70	Shasta	SACRAMENTO RIVER
A008884	5163	2640	CITY OF REDDING	1/26/1937	3,619.90	Shasta	SACRAMENTO RIVER
A010320	5921	2736	CITY OF REDDING	11/18/1941	325.80	Shasta	SACRAMENTO RIVER

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A015197	9821	5677	CITY OF REDDING	2/16/1953	211.70	Shasta	SACRAMENTO RIVER
			<b>CITY OF REDDING Total</b>		4,211.10		
A001743	992		CITY OF SACRAMENTO	10/30/2000	81,800.00	Sacramento	SACRAMENTO RIVER
			<b>CITY OF SACRAMENTO Total</b>		81,800.00		
A025616	18150		CITY OF WEST SACRAMENTO	12/22/1977	18,350.00	Yolo	SACRAMENTO RIVER
			<b>CITY OF WEST SACRAMENTO Total</b>		18,350.00		
A010363	5952	3585	COLUSA DRAIN MUTUAL WATER COMPANY	1/16/1942	5,668.10	Glenn	SACRAMENTO RIVER
A016305	14595	12087	COLUSA DRAIN MUTUAL WATER COMPANY	4/7/1955	3,660.00	Yolo	SACRAMENTO RIVER
			<b>COLUSA DRAIN MUTUAL WATER COMPANY Total</b>		9,328.10		
A015452	9647	7332	COLUSA PROPERTIES INC	8/6/1953	2,032.70	Colusa	SACRAMENTO RIVER
			<b>COLUSA PROPERTIES INC Total</b>		2,032.70		
A001199	614	904	CONAWAY PRESERVATION GROUP LLC	3/1/1919	43,557.70	Yolo	SACRAMENTO RIVER
A001588	792	905	CONAWAY PRESERVATION GROUP LLC	4/18/1930	5,354.00	Yolo	SACRAMENTO RIVER
A012073	7234	5487	CONAWAY PRESERVATION GROUP LLC	9/8/1947	70,143.50	Yolo	SACRAMENTO RIVER
			<b>CONAWAY PRESERVATION GROUP LLC Total</b>		119,055.20		
A001061	513	1062	COUNTY OF SACRAMENTO	6/6/1931	2,715.30	Sacramento	SACRAMENTO RIVER
A014494	8921	4060	COUNTY OF SACRAMENTO	8/19/1982	479.60	Sacramento	SACRAMENTO RIVER
			<b>COUNTY OF SACRAMENTO Total</b>		3,194.90		
A017210	13872	9926	Cranmore Farms LLC	8/6/1956	100.00	Sutter	SACRAMENTO RIVER
			<b>Cranmore Farms LLC Total</b>		100.00		
A004376	2021	1241	DANIEL A SERPA REV TRUST	12/15/1932	116.10	Sacramento	SACRAMENTO RIVER
			<b>DANIEL A SERPA REV TRUST Total</b>		116.10		
A017134	10734	6192	DIAMOND LANDS CORPORATION	6/14/1956	650.00	Tehama	SACRAMENTO RIVER
			<b>DIAMOND LANDS CORPORATION Total</b>		650.00		
A016199	13860	8205	DIANNE E BUTLER	9/7/1967	721.60	Colusa, Sutter	SACRAMENTO RIVER
			<b>DIANNE E BUTLER Total</b>		721.60		
A012469B	7267	003722B	DOLORES AZEVEDO	4/13/1948	91.20	Sutter	SACRAMENTO RIVER
			<b>DOLORES AZEVEDO Total</b>		91.20		
A005993	3112	2393	DONNA L REED	3/19/1942	857.70	Yolo	SACRAMENTO RIVER
			<b>DONNA L REED Total</b>		857.70		
A014314	8782	5080	DRISCOLL STRAWBERRY ASSOCIATES	5/21/1951	240.90	Tehama	SACRAMENTO RIVER
			<b>DRISCOLL STRAWBERRY ASSOCIATES Total</b>		240.90		
A007641A	4215	006389A	E D WILLEY & SON INC	8/4/1933	9,582.70	Sutter	SACRAMENTO RIVER

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A011274	6725	3527	<b>E D WILLEY &amp; SON INC Total</b> EASTSIDE MUTUAL WATER COMPANY	2/4/1946	9,582.70 5,474.50	Colusa	SACRAMENTO RIVER
A013796	8337	4758	<b>EASTSIDE MUTUAL WATER COMPANY Total</b> ELLIS FAMILY TRUST	6/16/1950	580.40	Sutter	SACRAMENTO RIVER
A005916	3066	1994	<b>ELLIS FAMILY TRUST Total</b> EMERY BURKE POUNDSTONE	5/16/1928	580.40 2,717.70	Colusa	SACRAMENTO RIVER
A009987	5664	2763	EMERY BURKE POUNDSTONE	8/22/1940	2,788.40	Colusa	SACRAMENTO RIVER
A006672	3588	10019	<b>EMERY BURKE POUNDSTONE Total</b> Erdman Family Trust	5/8/1930	5,506.10 1,400.00	Colusa	SACRAMENTO RIVER
A017150	13871	10221	<b>Erdman Family Trust Total</b> Faraz A Saeed	6/25/1956	1,400.00 997.00	Yolo	SACRAMENTO RIVER
A009032	5004	3674	<b>Faraz A Saeed Total</b> FEDORA FARMS INC	7/8/1937	997.00 547.50	Colusa, Sutter	SACRAMENTO RIVER
A013511	8061	3675	FEDORA FARMS INC	12/15/1949	328.50	Colusa, Sutter	SACRAMENTO RIVER
A013512	8062	3676	FEDORA FARMS INC	12/15/1949	587.60	Colusa, Sutter	SACRAMENTO RIVER
A006670	3654	1516	<b>FEDORA FARMS INC Total</b> Frank J. O'Brien Family Trust	5/6/1930	1,463.60 1,681.40	Sutter	SACRAMENTO RIVER
A014584	9188	5432	<b>Frank J. O'Brien Family Trust Total</b> FRANK LAMB TRUST	11/20/1951	1,681.40 1,527.30	Sutter	SACRAMENTO RIVER
A013487	7835	7216	<b>FRANK LAMB TRUST Total</b> GARY J RUMIANO	11/29/1949	1,527.30 726.00	Tehama	SACRAMENTO RIVER
A000018	29	2871	<b>GARY J RUMIANO Total</b> GLENN-COLUSA IRRIGATION DISTRICT	5/3/2006	726.00 53,673.00	Yuba	SACRAMENTO RIVER
A001554	796	7208	GLENN-COLUSA IRRIGATION DISTRICT	12/3/1919	28,078.20	Glenn	SACRAMENTO RIVER
A001624	797	7209	GLENN-COLUSA IRRIGATION DISTRICT	1/14/1920	10,793.60	Glenn	SACRAMENTO RIVER
A008688	4795	5387	GLENN-COLUSA IRRIGATION DISTRICT	5/28/1936	674.38	Colusa	HUNTERS CREEK
A012125	8272	4340	GLENN-COLUSA IRRIGATION DISTRICT	10/8/1947	3,360.00	Colusa	STONE CORRAL CREEK
A023005	15687	10635	GLENN-COLUSA IRRIGATION DISTRICT	3/12/1968	415.00	Colusa	UNST
A030838	21101		GLENN-COLUSA IRRIGATION DISTRICT	2/18/1999	182,900.00	Glenn	SACRAMENTO RIVER
A001653	1248	439	<b>GLENN-COLUSA IRRIGATION DISTRICT Total</b> GREEN VALLEY CORPORATION A CA CORP	2/5/1920	279,894.18 2,106.70	Colusa	SACRAMENTO RIVER
A011281	7288	5261	<b>GREEN VALLEY CORPORATION A CA CORP Total</b> HAMMOND RESERVOIR IRRIGATION ASSN	2/11/1946	2,106.70 5,742.20	Siskiyou	NORTH FORK SACRAMENTO RIVER
A016219	10679	6531	HAMMOND RESERVOIR IRRIGATION ASSN	1/26/1955	348.00	Siskiyou	NORTH FORK SACRAMENTO RIVER
A006696	3589	3566	<b>HAMMOND RESERVOIR IRRIGATION ASSN Total</b> HAROLD ARMSTRONG	6/12/1930	6,090.20 1,885.10	Colusa	SACRAMENTO RIVER
A003466	1552	646	<b>HAROLD ARMSTRONG Total</b> Heidrick & Heidrick Properties LP	6/5/1923	1,885.10 345.20	Sutter	SACRAMENTO RIVER
			<b>Heidrick &amp; Heidrick Properties LP Total</b>		345.20		

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A018154	14510	8798	HEIDRICK & MCGINNIS PROP LP <b>HEIDRICK &amp; MCGINNIS PROP LP Total</b>	1/2/1969	484.00 484.00	Sutter	SACRAMENTO RIVER
A006146	3234	1484	HENLE FAMILY LIMITED PARTNERSHIP <b>HENLE FAMILY LIMITED PARTNERSHIP Total</b>	12/27/1928	3,503.70 3,503.70	Sutter	SACRAMENTO RIVER
A006418A		001799A	HENRY D RICHTER JR	6/20/1991	3,178.80	Sutter	SACRAMENTO RIVER
A013646	8156	7218	HENRY D RICHTER JR <b>HENRY D RICHTER JR Total</b>	3/22/1950	239.80 3,418.60	Yolo	SACRAMENTO RIVER
A016361A	013861A		HERSHEY LAND COMPANY ROW CROP LLC <b>HERSHEY LAND COMPANY ROW CROP LLC Total</b>	6/10/2002	4,195.00 4,195.00	Sutter, Yolo	COLUSA BASIN DRAINAGE CANAL, SACRAMENTO RIVER
A001765B	1111	000613B	HIATT DOWNER RANCH LLC	4/9/1920	1,697.90	Sutter	SACRAMENTO RIVER
A003290B		002627B	HIATT DOWNER RANCH LLC <b>HIATT DOWNER RANCH LLC Total</b>	7/27/1990	1,184.30 2,882.20	Sutter	SACRAMENTO RIVER
A001617	1888	1407	JACK W BABER <b>JACK W BABER Total</b>	3/20/1934	1,959.90 1,959.90	Colusa	SACRAMENTO RIVER
A002317A	1259	001130A	JAMES T MUNSON <b>JAMES T MUNSON Total</b>	2/4/1980	82.50 82.50	Sutter	SACRAMENTO RIVER
A012899	7681	3766	JOHN ZUPPAN	1/13/1949	275.20	Butte, Tehama	SACRAMENTO RIVER
A014447	8840	8011	JOHN ZUPPAN <b>JOHN ZUPPAN Total</b>	8/27/1951	575.70 850.90	Tehama	SACRAMENTO RIVER
A017537	11071	5955	JOHN AND JANE FITZGERALD FAMILY REVOCABLE TRUST <b>JOHN AND JANE FITZGERALD FAMILY REVOCABLE TRUST Total</b>	4/2/1957	109.50 109.50	Sutter	OLD CHANNEL SACRAMENTO RIVER
A003994	1850	651	Johnathan Tucker <b>Johnathan Tucker Total</b>	1/13/1928	76.40 76.40	Glenn	SACRAMENTO RIVER
A007308	3980	1949	Joseph Alamo <b>Joseph Alamo Total</b>	6/29/1932	2,622.70 2,622.70	Colusa	SACRAMENTO RIVER
A006418B		001799B	KENNETH L WALLACE	6/20/1991	1,127.70	Sutter	SACRAMENTO RIVER
A014728	9002	4951	KENNETH L WALLACE <b>KENNETH L WALLACE Total</b>	3/24/1952	160.60 1,288.30	Sutter	SACRAMENTO RIVER
A014520	8928	5112	KENNETH R PYLMAN <b>KENNETH R PYLMAN Total</b>	10/15/1951	146.00 146.00	Yolo	SACRAMENTO RIVER
A004364	2227	981	Knights Landing Investors LLC <b>Knights Landing Investors LLC Total</b>	12/13/1924	3,537.60 3,537.60	Sutter, Yolo	SACRAMENTO RIVER
A006454	3388	1469	KRAMER RANCH <b>KRAMER RANCH Total</b>	10/8/1929	474.50 474.50	Yolo	SACRAMENTO RIVER
A013667B	8303	11188	LAKE CALIFORNIA PROPERTY OWNERS ASSN INC	3/26/1982	1,220.00	Tehama	SACRAMENTO RIVER
A023140	16056	11186	LAKE CALIFORNIA PROPERTY OWNERS ASSN INC <b>LAKE CALIFORNIA PROPERTY OWNERS ASSN INC Total</b>	9/23/1968	985.00 2,205.00	Tehama	SACRAMENTO RIVER
A004501	2285	1728	LAWRENCE SCHNEIDER AND RUTH SCHNEIDER FAMILY REV TRUST	4/19/1937	73.40	Yolo	SACRAMENTO RIVER
A012803	7563	4098	LAWRENCE SCHNEIDER AND RUTH SCHNEIDER FAMILY REV TRUST <b>LAWRENCE SCHNEIDER AND RUTH SCHNEIDER FAMILY REV TRUST Total</b>	11/17/1948	110.90 184.30	Yolo	SACRAMENTO RIVER

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A000882A	429	001205A	LEE W RICHTER <b>LEE W RICHTER Total</b>	12/30/1982	336.90 336.90	Sutter	SACRAMENTO RIVER
A001074A	591	004676A	LOMO COLD STORAGE A CAL GEN PARTNERSHIP	9/10/1918	1,951.80	Sutter	SACRAMENTO RIVER
A004613	2347	940	LOMO COLD STORAGE A CAL GEN PARTNERSHIP	11/28/1955	212.20	Sutter	SACRAMENTO RIVER
A004699	2364	1154	LOMO COLD STORAGE A CAL GEN PARTNERSHIP	3/21/1932	670.40	Sutter	SACRAMENTO RIVER
A006486	3615	4168	LOMO COLD STORAGE A CAL GEN PARTNERSHIP <b>LOMO COLD STORAGE A CAL GEN PARTNERSHIP Total</b>	11/14/1929	20,255.50 23,089.90	Sutter	SACRAMENTO RIVER
A007232	3903	1651	LORNA KELSO <b>LORNA KELSO Total</b>	4/7/1932	64.10 64.10	Yolo	SACRAMENTO RIVER
A003700	1633	1458	LOUISE A MARTIN-KOBELLAS <b>LOUISE A MARTIN-KOBELLAS Total</b>	10/31/1923	558.70 558.70	Sutter	SACRAMENTO RIVER
A002707	1162	1729	M & H REALTY PARTNERS VI L P <b>M &amp; H REALTY PARTNERS VI L P Total</b>	12/29/1921	305.50 305.50	Sacramento	SACRAMENTO RIVER
A008213	4516	2618	M & T INCORPORATED <b>M &amp; T INCORPORATED Total</b>	1/15/1935	1,450.00 1,450.00	Butte	SACRAMENTO RIVER
A007641D2		006389D 2	MARIA JOHN NICHOLAS KELLY RANCH LLC <b>MARIA JOHN NICHOLAS KELLY RANCH LLC Total</b>	1/5/2001	761.00 761.00	Sutter	SACRAMENTO RIVER
A012120	7127	4666	MARIETTE B HOLLINS <b>MARIETTE B HOLLINS Total</b>	10/7/1947	387.80 387.80	Colusa	SACRAMENTO RIVER
A008631	5128	7210	MAXWELL IRRIGATION DISTRICT	4/8/1936	28,990.80	Colusa	SACRAMENTO RIVER
A030445	21004		MAXWELL IRRIGATION DISTRICT	2/17/1995	13,630.00	Colusa	COLUSA BASIN DRAIN, LURLINE CREEK, SACRAMENTO RIVER, STONE CORRAL CREEK
A011956	8266	4586	MAXWELL IRRIGATION DISTRICT	6/24/1947	2,596.36	Colusa	RECLAMATION DISTRICT 2047 MAIN DRAIN
A014378	8808	4523	MAXWELL IRRIGATION DISTRICT	6/28/1951	1,636.36	Colusa	LATERAL DRAIN OF RECLAMATION DISTRICT 2047
A011955	8265	4643	MAXWELL IRRIGATION DISTRICT	6/24/1957	4,720.66	Colusa	RECLAMATION DISTRICT 2047 MAIN DRAIN
A011597	8267	4644	MAXWELL IRRIGATION DISTRICT	6/24/1957	22,085.95	Colusa	LOGAN AND HUNTER CREEK, AND RECLAMATION DISTRICT 2047 MAIN DRAIN CANAL
A011958	8268	4694	MAXWELL IRRIGATION DISTRICT	6/24/1957	5,226.45	Colusa	STONE CORRAL CREEK
A013919	9042	5692	MAXWELL IRRIGATION DISTRICT	8/25/1950	4,946.78	Colusa	LURLINE CREEK
A030445	21004		MAXWELL IRRIGATION DISTRICT <b>MAXWELL IRRIGATION DISTRICT Total</b>	5/30/1995	13,630.00 97,463.36	Colusa	SACRAMENTO RIVER, COLUSA BASIN DRAIN, STONE CORRAL CREEK, LURLINE CREEK
A015150	9391	4775	MCM PROPERTIES, A CALIF CORP	1/12/1953	1,094.90	Sutter	SACRAMENTO RIVER
A015152	9393	4776	MCM PROPERTIES, A CALIF CORP <b>MCM PROPERTIES, A CALIF CORP Total</b>	1/12/1953	474.50 1,569.40	Sutter	SACRAMENTO RIVER

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A001074B	591	004676B	MERIDIAN FARMS WATER CO <b>MERIDIAN FARMS WATER CO Total</b>	9/10/1918	67,335.90 67,335.90	Sutter	SACRAMENTO RIVER
A007641B	4215	006389B	MERILYN C SCHEIDEL <b>MERILYN C SCHEIDEL Total</b>	8/4/1933	3,484.60 3,484.60	Sutter	SACRAMENTO RIVER
A004355A		002881A	MICHAEL E LONON <b>MICHAEL E LONON Total</b>	6/9/2000	822.00 822.00	Sutter	SACRAMENTO RIVER
A007598	4220	1693	MILDRED HEIDRICK <b>MILDRED HEIDRICK Total</b>	6/23/1933	447.70 447.70	Yolo	SACRAMENTO RIVER
A015811	9814	5407	Moore Bros. <b>Moore Bros. Total</b>	3/31/1954	794.20 794.20	Colusa	SACRAMENTO RIVER
A004367	2012	1394	Narusuke Monguchi <b>Narusuke Monguchi Total</b>	12/15/1924	161.50 161.50	Yolo	SACRAMENTO RIVER UNDERFLOW
A000534	247	1050	NATOMAS CENTRAL MUTUAL WATER CO	5/28/1931	15,394.20	Sacramento, Sutter	NATOMAS CROSS CANAL, SACRAMENTO RIVER
A001056	511	2814	NATOMAS CENTRAL MUTUAL WATER CO	8/22/1918	16,205.20	Sacramento, Sutter	NATOMAS CROSS CANAL, SACRAMENTO RIVER
A001203	580	3109	NATOMAS CENTRAL MUTUAL WATER CO	3/5/1919	58,394.20	Sacramento, Sutter	NATOMAS CROSS CANAL, SACRAMENTO RIVER
A001413	1129	3110	NATOMAS CENTRAL MUTUAL WATER CO	8/27/1919	36,655.10	Sacramento, Sutter	NATOMAS CROSS CANAL, SACRAMENTO RIVER
A015572	15150	9794	NATOMAS CENTRAL MUTUAL WATER CO	10/8/1953	11,846.00	Sacramento, Sutter	NATOMAS CROSS CANAL, SACRAMENTO RIVER
A022309	15314	9989	NATOMAS CENTRAL MUTUAL WATER CO	10/8/1965	2,627.00	Sacramento, Sutter	RECLAMATION DISTRICT 1000 EAST DRAIN, RECLAMATION DISTRICT 1000 WEST DRAIN, RECLAMATION DISTRICT 1000 MAIN DRAIN
A025727	19400		NATOMAS CENTRAL MUTUAL WATER CO <b>NATOMAS CENTRAL MUTUAL WATER CO Total</b>	2/7/1985	10,000.00 151,121.70	Sacramento, Sutter	NATOMAS CROSS CANAL, RD 1000 EAST DRAIN, RD 1000 MAIN DRAIN, RD 1000 WEST DRAIN, SACRAMENTO RIVER
A007641D1		006389D 1	NICOLI G NICHOLAS <b>NICOLI G NICHOLAS Total</b>	1/5/2001	761.00 761.00	Sutter	SACRAMENTO RIVER
A000880B	418	002820B	OJI BROTHERS, A CO-PARTNERSHIP	3/6/1946	636.60	Sutter	SACRAMENTO RIVER
A000880C	418	002820C	OJI BROTHERS, A CO-PARTNERSHIP	1/3/1918	1,880.70	Sutter	SACRAMENTO RIVER
A003290A		002627A	OJI BROTHERS, A CO-PARTNERSHIP	7/27/1990	3,985.80	Sutter	SACRAMENTO RIVER
A010951	6377	3242	OJI BROTHERS, A CO-PARTNERSHIP	1/11/1945	2,854.00	Sutter	SACRAMENTO RIVER
A013590	8137	3835	OJI BROTHERS, A CO-PARTNERSHIP <b>OJI BROTHERS, A CO-PARTNERSHIP Total</b>	2/20/1950	1,047.50 10,404.60	Sutter	SACRAMENTO RIVER
A001765A	1111	000613A	PELGER MUTUAL WATER COMPANY	3/13/1972	1,697.90	Sutter	SACRAMENTO RIVER
A012470B	007268B	008547B	PELGER MUTUAL WATER COMPANY	4/13/1948	22,815.20	Sutter	SACRAMENTO RIVER



## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A030410	20933		PELGER MUTUAL WATER COMPANY	9/16/1994	5,000.00	Sutter	SACRAMENTO RIVER
			<b>PELGER MUTUAL WATER COMPANY Total</b>		29,513.10		
A000882B	429	001205B	PHIL KNOX LEISER TRUST	12/30/1982	307.10	Sutter	SACRAMENTO RIVER
			<b>PHIL KNOX LEISER TRUST Total</b>		307.10		
A000244	463	2646	PRINCETON-CODORA-GLENN IRRIGATION DISTRICT	12/17/2001	50,936.30	Glenn	SACRAMENTO RIVER
A000770	464	4161	PRINCETON-CODORA-GLENN IRRIGATION DISTRICT	12/17/2001	20,936.30	Glenn	SACRAMENTO RIVER
A017066	13869	8989	PRINCETON-CODORA-GLENN IRRIGATION DISTRICT	5/2/1956	15,074.38	Colusa, Glenn	COLUSA BASIN DRAIN
A030812	21132		PRINCETON-CODORA-GLENN IRRIGATION DISTRICT	11/19/1998	24,370.00	Colusa, Glenn	COLUSA BASIN DRAIN, SACRAMENTO RIVER
			<b>PRINCETON-CODORA-GLENN IRRIGATION DISTRICT Total</b>		111,316.98		
A000462	303	7205	PROVIDENT IRRIGATION DISTRICT	2/27/2001	88,000.00	Glenn	COLUSA DRAIN, DRAIN NO 13, DRAIN NO 55, SACRAMENTO RIVER, UNDR, WILLOW CREEK
A000640	304	7206	PROVIDENT IRRIGATION DISTRICT	2/27/2001	36,496.00	Glenn	COLUSA DRAIN, DRAIN NO 13, DRAIN NO 55, SACRAMENTO RIVER, UNDR, WILLOW CREEK
A000892	416	7207	PROVIDENT IRRIGATION DISTRICT	1/18/1918	40,146.00	Glenn	COLUSA DRAIN, DRAIN 13, DRAIN NO 55, SACRAMENTO RIVER, UNDR, WILLOW CREEK
A001422	847	1109	PROVIDENT IRRIGATION DISTRICT	9/2/1919	3,371.90	Glenn	COLUSA DRAIN
A030813	21133		PROVIDENT IRRIGATION DISTRICT	11/19/1998	26,747.00	Glenn	COLUSA BASIN DRAIN, DRAIN NO 13, DRAIN NO 55, SACRAMENTO RIVER, UNDR, WILLOWS CREEK
			<b>PROVIDENT IRRIGATION DISTRICT Total</b>		194,760.90		
A004226	2024	2790	PURHIRAN FARMS LLC	6/28/1945	525.40	Yolo	SACRAMENTO RIVER
			<b>PURHIRAN FARMS LLC Total</b>		525.40		
A018062	14507	8795	QUAD H RANCHES, INC	1/2/1969	307.70	Sutter	SACRAMENTO RIVER
			<b>QUAD H RANCHES, INC Total</b>		307.70		
A004372	2017	1393	R W ROSE	12/15/1924	80.70	Yolo	SACRAMENTO RIVER
			<b>R W ROSE Total</b>		80.70		
A010408	6118	2966	RALPH BECKLEY	3/18/1942	549.30	Colusa	SACRAMENTO RIVER
			<b>RALPH BECKLEY Total</b>		549.30		
A004355B		002881B	RAY E AND JANICE R ANDERSON FAMILY TRUST	6/9/2000	286.40	Sutter	SACRAMENTO RIVER
			<b>RAY E AND JANICE R ANDERSON FAMILY TRUST Total</b>		286.40		
A015151	9392	5596	Rebekah Leiser	1/12/1953	36.70	Sutter	SACRAMENTO RIVER
			<b>Rebekah Leiser Total</b>		36.70		
A000027	31	3165	RECLAMATION DISTRICT #1004	4/2/1915	56,000.00	Colusa, Glenn	SACRAMENTO RIVER
A023201	16771		RECLAMATION DISTRICT #1004	12/26/1968	21,000.00	Colusa	

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
<b>RECLAMATION DISTRICT #1004 Total</b>					77,000.00		
A000576	315	3065	RECLAMATION DISTRICT #108	1/25/1917	97,469.20	Colusa, Yolo	SACRAMENTO RIVER
A000763	388	3066	RECLAMATION DISTRICT #108	8/27/1917	270,747.80	Colusa, Yolo	SACRAMENTO RIVER
A001589	1885	3067	RECLAMATION DISTRICT #108	2/24/1950	77,968.40	Colusa, Yolo	SACRAMENTO RIVER
A011899	8251	7060	RECLAMATION DISTRICT #108	5/26/1947	27,371.90	Colusa	BACK LEVEE BORROW PIT OF RECLAMATION DISTRICT NO. 108 (COLUSA BASIN DRAIN)
A031436	21274		RECLAMATION DISTRICT #108 <b>RECLAMATION DISTRICT #108 Total</b>	10/18/2010	36,000.00 509,557.30	Colusa	SACRAMENTO RIVER
A001666	884	1301	RECLAMATION DISTRICT #999	2/11/1920	58,394.20	Solano, Yolo	ELK SLOUGH, MINER SLOUGH, SACRAMENTO RIVER, SACRAMENTO RIVER DEEP WATER SHIP CHANNEL, SUTTER SLOUGH
A004099	1890	1302	RECLAMATION DISTRICT #999	4/1/1966	1,472.30	Yolo	SACRAMENTO RIVER DEEP WATER SHIP CHANNEL
A004100	1891	1303	RECLAMATION DISTRICT #999	4/1/1966	34,174.80	Solano, Yolo	ELK SLOUGH, MINER SLOUGH, SACRAMENTO RIVER, SACRAMENTO RIVER DEEP WATER SHIP CHANNEL, SUTTER SLOUGH
A004101	1892	1304	RECLAMATION DISTRICT #999	7/18/1924	3,909.90	Yolo	SACRAMENTO RIVER, SACRAMENTO RIVER DEEP WATER SHIP CHANNEL
<b>RECLAMATION DISTRICT #999 Total</b>					97,951.20		
A020087	13942	9643	RICHARD SWIERSTRA	4/17/1961	45.10	Tehama	SACRAMENTO RIVER
<b>RICHARD SWIERSTRA Total</b>					45.10		
A018061	14506	8794	RICHARD & SANDRA GIUSTI FAMILY TRUST DATED 8/13/90	1/2/1969	307.70	Sutter	SACRAMENTO RIVER
<b>RICHARD &amp; SANDRA GIUSTI FAMILY TRUST DATED 8/13/90 Total</b>					307.70		
A000575	314	1718	RIVER GARDEN FARMS COMPANY	1/25/1917	15,550.60	Yolo	SACRAMENTO RIVER
A000577	316	3123	RIVER GARDEN FARMS COMPANY	1/25/1917	13,745.70	Yolo	SACRAMENTO RIVER
A011910	8258	4636	RIVER GARDEN FARMS COMPANY	5/29/1947	6,331.24	Yolo	KNIGHTS LANDING RIDGE CUT, SACRAMENTO RIVER
<b>RIVER GARDEN FARMS COMPANY Total</b>					35,627.54		
A013239	7849	5140	RIVER MAID LAND LTD	7/19/1949	63.40	Sacramento	SACRAMENTO RIVER
<b>RIVER MAID LAND LTD Total</b>					63.40		
A007641C	4215	006389C	RIVER RANCH PARTNERSHIP	8/4/1933	2,795.00	Sutter	SACRAMENTO RIVER
<b>RIVER RANCH PARTNERSHIP Total</b>					2,795.00		
A002317C	1259	001130C	ROBERTA SCHREINER	2/4/1980	36.70	Sutter	SACRAMENTO RIVER
<b>ROBERTA SCHREINER Total</b>					36.70		
A003201	2172	1060	ROGER L MATTEOLI	12/27/1922	131.40	Yolo	SACRAMENTO RIVER

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A014836	9153	5437	<b>ROGER L MATTEOLI Total</b> SACRAMENTO & SAN JOAQUIN DRAINAGE DISTRICT	6/2/1952	131.40 277.70	Sutter	SACRAMENTO RIVER
			<b>SACRAMENTO &amp; SAN JOAQUIN DRAINAGE DISTRICT Total</b>		277.70		
A030454	21209		SACRAMENTO COUNTY WATER AGENCY	2/15/2008	71,000.00	Sacramento	SACRAMENTO RIVER
			<b>SACRAMENTO COUNTY WATER AGENCY Total</b>		71,000.00		
A003423	1646	9994	SACRAMENTO RIVER RANCH II LLC	5/17/1923	2,646.00	Yolo	KNIGHTS LANDING RIDGE CUT, SACRAMENTO RIVER
A004901	2514	9995	SACRAMENTO RIVER RANCH II LLC	3/1/1973	9,338.30	Yolo	KNIGHTS LANDING RIDGE CUT, SACRAMENTO RIVER
A004902	2515	9996	SACRAMENTO RIVER RANCH II LLC	3/1/1973	3,446.70	Yolo	KNIGHTS LANDING RIDGE CUT, SACRAMENTO RIVER
A005359	2811	9997	SACRAMENTO RIVER RANCH II LLC	2/17/1927	1,808.20	Yolo	KNIGHTS LANDING RIDGE CUT, SACRAMENTO RIVER
			<b>SACRAMENTO RIVER RANCH II LLC Total</b>		17,239.20		
A004351	2098	1200	SACRAMENTO RIVER RANCH LLC	12/4/1924	113.00	Sutter, Yolo	SACRAMENTO RIVER
			<b>SACRAMENTO RIVER RANCH LLC Total</b>		113.00		
A001060	512	1187	SIDDIQUI FAMILY PARTNERSHIP	8/28/1918	98.50	Sacramento	SACRAMENTO RIVER
A001094	518	570	SIDDIQUI FAMILY PARTNERSHIP	9/26/1918	1,198.70	Sacramento	SACRAMENTO RIVER
			<b>SIDDIQUI FAMILY PARTNERSHIP Total</b>		1,297.20		
A003200	2171	1653	SIOUX CREEK PROPERTY LLC	12/27/1922	351.30	Sutter	SACRAMENTO RIVER
A005696	2931	1157	SIOUX CREEK PROPERTY LLC	9/16/1927	311.60	Sutter	SACRAMENTO RIVER
			<b>SIOUX CREEK PROPERTY LLC Total</b>		662.90		
A022503	15151	9726	SISKIYOU COUNTY F C & W C D	6/22/1966	26,000.00	Siskiyou	SACRAMENTO RIVER
A023016	15992		SISKIYOU COUNTY F C & W C D	4/3/1968	14.00	Siskiyou	SCOTT CAMP CREEK
A024354	18371	12062	SISKIYOU COUNTY F C & W C D	6/20/1986	25.00	Siskiyou	LITTLE CASTLE CREEK
			<b>SISKIYOU COUNTY F C &amp; W C D Total</b>		26,039.00		
A013658	8302	6169	SMITH RANCHES AND WOOD ORCHARD	3/29/1950	478.10	Tehama	SACRAMENTO RIVER
			<b>SMITH RANCHES AND WOOD ORCHARD Total</b>		478.10		
A006726	3621	4541	STEVE TARKE	7/10/1930	1,824.80	Sutter	SACRAMENTO RIVER
A011450	6726	4542	STEVE TARKE	6/27/1946	2,919.70	Sutter	SACRAMENTO RIVER
			<b>STEVE TARKE Total</b>		4,744.50		
A000230A	204	001788A	STEVEN J RUDEK	1/10/1916	484.00	Colusa	SACRAMENTO RIVER
A014205	8767	4390	STEVEN J RUDEK	3/20/1951	1,277.40	Colusa	SACRAMENTO RIVER
			<b>STEVEN J RUDEK Total</b>		1,761.40		
A005160B	002649B	001183B	SUTTER BASIN GROWERS COOPERATIVE	8/18/1926	182.50	Sutter	SACRAMENTO RIVER
			<b>SUTTER BASIN GROWERS COOPERATIVE Total</b>		182.50		
A000581	287	2817	SUTTER MUTUAL WATER COMPANY	2/1/1917	21,868.10	Sutter	SACRAMENTO RIVER
A000878	419	2818	SUTTER MUTUAL WATER COMPANY	1/3/1918	56,721.00	Sutter	SACRAMENTO RIVER
A000879	420	2819	SUTTER MUTUAL WATER COMPANY	1/3/1918	12,270.40	Sutter	SACRAMENTO RIVER
A000880A	418	002820A	SUTTER MUTUAL WATER COMPANY	1/3/1918	196,725.30	Sutter	SACRAMENTO RIVER
A001160	569	2822	SUTTER MUTUAL WATER COMPANY	1/24/1919	19,681.30	Sutter	SACRAMENTO RIVER
A001758	1103	552	SUTTER MUTUAL WATER COMPANY	4/9/1920	636.70	Sutter	SACRAMENTO RIVER

## Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A001763	1108	1110	SUTTER MUTUAL WATER COMPANY	4/9/1920	916.40	Sutter	SACRAMENTO RIVER
A001769	1117	547	SUTTER MUTUAL WATER COMPANY	6/22/1926	3,255.10	Sutter	SACRAMENTO RIVER
A001772	1120	657	SUTTER MUTUAL WATER COMPANY	1/31/1928	94.70	Sutter	SACRAMENTO RIVER
A003195	2169	882	SUTTER MUTUAL WATER COMPANY	11/30/1929	585.80	Sutter	SACRAMENTO RIVER
A007886	4354	2240	SUTTER MUTUAL WATER COMPANY	3/29/1934	3,121.60	Sutter	SACRAMENTO RIVER
A009760	5510	2821	SUTTER MUTUAL WATER COMPANY	11/3/1939	180,994.40	Sutter	SACRAMENTO RIVER
A010658	6189	2823	SUTTER MUTUAL WATER COMPANY	6/16/1943	3,654.40	Sutter	SACRAMENTO RIVER
A011953	7194	4562	SUTTER MUTUAL WATER COMPANY	6/23/1947	2,737.20	Sutter	SACRAMENTO RIVER, WEST BORROW PIT SUTTER BYPASS
A012470A	007268A	008547A	SUTTER MUTUAL WATER COMPANY	4/13/1948	15,309.70	Sutter	SACRAMENTO RIVER
A016677	13867	8220	SUTTER MUTUAL WATER COMPANY	9/7/1967	2,038.10	Sutter	SACRAMENTO RIVER
			<b>SUTTER MUTUAL WATER COMPANY Total</b>		520,610.20		
A013667A	8303	11187	SUZANNE GOELET	3/26/1982	410.00	Tehama	SACRAMENTO RIVER
			<b>SUZANNE GOELET Total</b>		410.00		
A001659	1981	8129	Sycamore Mutual Water Company	2/9/1920	42,521.20	Colusa	SACRAMENTO RIVER
A012412	8277	4056	Sycamore Mutual Water Company	3/17/1948	2,189.75	Colusa	R D 2047 MAIN CANAL
A013000	8285	5796	Sycamore Mutual Water Company	3/25/1949	1,824.79	Colusa	R D 2047 MAIN CANAL
A013001	8285	7062	Sycamore Mutual Water Company	3/25/1949	98.54	Colusa	R D 2047 MAIN CANAL
A013002	8285	4057	Sycamore Mutual Water Company	3/25/1949	364.96	Colusa	R D 2047 MAIN CANAL
A018372	14514	9977	Sycamore Mutual Water Company	12/22/1972	1,013.00	Colusa	SACRAMENTO RIVER
			<b>Sycamore Mutual Water Company Total</b>		48,012.24		
A014789	9069	7219	THOMAS L NELSON & HAZEL M NELSON TRUST	5/1/1952	656.70	Sutter	SACRAMENTO RIVER
			<b>THOMAS L NELSON &amp; HAZEL M NELSON TRUST Total</b>		656.70		
A007641D3		006389D 3	THOMAS S ATKINSON II	1/5/2001	761.00	Sutter	SACRAMENTO RIVER
			<b>THOMAS S ATKINSON II Total</b>		761.00		
A000742	382	1211	TISDALE IRRIGATION & DRAINAGE CO	7/26/1917	12,473.70	Sutter	SACRAMENTO RIVER
A016985	13868	9335	TISDALE IRRIGATION & DRAINAGE CO	4/3/1956	1,350.00	Sutter	SACRAMENTO RIVER
			<b>TISDALE IRRIGATION &amp; DRAINAGE CO Total</b>		13,823.70		
A009169	5099	2695	TOWNE ENTERPRISES	11/3/1937	386.90	Sacramento	SACRAMENTO RIVER
			<b>TOWNE ENTERPRISES Total</b>		386.90		
A016168	14505	10001	TRILOGY HOMES INC	12/6/1954	1,450.00	Sacramento	SACRAMENTO RIVER
			<b>TRILOGY HOMES INC Total</b>		1,450.00		
A005625	12720		U.S. BUREAU OF RECLAMATION	7/30/1927	11,153,752.50	Shasta	SACRAMENTO RIVER
A005626	12721		U.S. BUREAU OF RECLAMATION	4/12/1961	7,998,004.00	Contra Costa, Glenn, Sacramento, Shasta, Tehama	OLD RIVER, SACRAMENTO RIVER

Sacramento River - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A009363	12722		U.S. BUREAU OF RECLAMATION	4/12/1961	1,033,977.50	Contra Costa, Sacramento, San Joaquin, Shasta, Tehama	OLD RIVER, SACRAMENTO RIVER, Victoria Canal
A009364	12723		U.S. BUREAU OF RECLAMATION	8/2/1938	7,818,797.50	Contra Costa, Sacramento, San Joaquin, Shasta, Tehama	OLD RIVER, SACRAMENTO RIVER, Victoria Canal
			<b>U.S. BUREAU OF RECLAMATION Total</b>		28,004,531.50		
A006527	3597	2145	VAN RUITEN BROS	1/8/1930	1,094.90	Sutter, Yolo	SACRAMENTO RIVER
			<b>VAN RUITEN BROS Total</b>		1,094.90		
A000771	389	4160	W.A. YERXA	9/5/1917	9,084.40	Colusa	SACRAMENTO RIVER
			<b>W.A. YERXA Total</b>		9,084.40		
A015711	9751	5593	WALLACE L EDSON	2/2/1954	142.70	Sutter	OLD RIVER, SACRAMENTO RIVER
			<b>WALLACE L EDSON Total</b>		142.70		
A002317B	1259	001130B	WAYMON LYNCH	2/4/1980	30.60	Sutter	SACRAMENTO RIVER
			<b>WAYMON LYNCH Total</b>		30.60		
A004369	2014	1331	WILLIAM J CORREA	12/15/1924	44.00	Sacramento	SACRAMENTO RIVER
			<b>WILLIAM J CORREA Total</b>		44.00		
A002884	1347	968	WILLIAM P LOCKETT	6/17/1922	116.10	Sutter	SACRAMENTO RIVER
A005160A	2649	001183A	WILLIAM P LOCKETT	8/18/1926	365.00	Sutter	SACRAMENTO RIVER
			<b>WILLIAM P LOCKETT Total</b>		481.10		
A028238	20073	13351	WILLOW CREEK MUTUAL WATER CO	9/7/1984	5,000.00	Glenn	SACRAMENTO RIVER
			<b>WILLOW CREEK MUTUAL WATER CO Total</b>		5,000.00		
A008141	4459	2631	WILSON RANCH PARTNERSHIP	10/24/1934	2,717.40	Yolo	SACRAMENTO RIVER
			<b>WILSON RANCH PARTNERSHIP Total</b>		2,717.40		
A003247	1695	4255	WINDSWEPT LAND AND CATTLE COMPANY	3/21/1956	3,209.00	Sutter, Yolo	SACRAMENTO RIVER
			<b>WINDSWEPT LAND AND CATTLE COMPANY Total</b>		3,209.00		
A004257	2066	1939	Woodland Development Company, LLC	4/6/1939	666.50	Yolo	SACRAMENTO RIVER
			<b>Woodland Development Company, LLC Total</b>		666.50		
A030358	20281		Woodland-Davis Clean Water Agency	4/14/2011	45,000.00	Yolo	SACRAMENTO RIVER
			<b>Woodland-Davis Clean Water Agency Total</b>		45,000.00		
A013031	7461	4721	Yolo Land Trust	4/18/1949	1,011.60	Yolo	SACRAMENTO RIVER
			<b>Yolo Land Trust Total</b>		1,011.60		
A014619	8957	11038	ZUMWALT MUTUAL WATER COMPANY	1/14/1952	63.00	Colusa	SACRAMENTO RIVER
			<b>ZUMWALT MUTUAL WATER COMPANY Total</b>		63.00		
			<b>Grand Total</b>		33,492,590.01		

## Stanislaus River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	Season	Purpose of Use	County	Source
A020496	13915	8274	ALEX NACCARATO	11/15/61	13.00			Tuolumne	OWL CREEK
A029917	20928		ALEX NACCARATO	3/14/91	20.00			Tuolumne	OWL CREEK
			<b>ALEX NACCARATO Total</b>		33.00				
A018809	12223	6502	ALMA A RYALS	6/18/59	1.10			Tuolumne	UNSP
			<b>ALMA A RYALS Total</b>		1.10				
A016295	10192	10158	BEAR VALLEY HOMEOWNERS ASSOCIATION	4/1/55	2.50			Alpine	UNSP
A022290	15190	10159	BEAR VALLEY HOMEOWNERS ASSOCIATION	9/17/65	1.30			Alpine	UNSP
A022291	15449	10160	BEAR VALLEY HOMEOWNERS ASSOCIATION	9/17/65	3.20			Alpine	UNSP
A029813	20542	13866	BEAR VALLEY HOMEOWNERS ASSOCIATION	8/20/12	7.80			Alpine	UNSP
			<b>BEAR VALLEY HOMEOWNERS ASSOCIATION Total</b>		14.80				
A018366	12170	7514	BERNICE JANE BOTTOMLEY	10/9/58	47.00			Calaveras	CARSON CREEK
			<b>BERNICE JANE BOTTOMLEY Total</b>		47.00				
A012550	7440	4929	BLUE LAKE SPRINGS HOMEOWNERS ASSOCIATION	6/16/48	45.00			Calaveras	MORAN CREEK
A014576	9049	4698	BLUE LAKE SPRINGS HOMEOWNERS ASSOCIATION	11/13/51	51.20			Calaveras	MORAN CREEK
			<b>BLUE LAKE SPRINGS HOMEOWNERS ASSOCIATION Total</b>		96.20				
A027131	18603	12280	BRETT D THOMSON	12/2/81	1.00			Calaveras	UNST
			<b>BRETT D THOMSON Total</b>		1.00				
A011792B	15013		CALAVERAS COUNTY WATER DISTRICT	3/24/47	78,500.00			Calaveras, Tuolumne	HIGHLAND CREEK, NORTH FORK STANISLAUS RIVER
A012911	15016		CALAVERAS COUNTY WATER DISTRICT	1/25/49	368,091.00			Calaveras, Tuolumne	HIGHLAND CREEK, NORTH FORK STANISLAUS RIVER
A012912	15017		CALAVERAS COUNTY WATER DISTRICT	1/25/49	3,373.90			Tuolumne	NORTH FORK STANISLAUS RIVER
A012912A	14769		CALAVERAS COUNTY WATER DISTRICT	1/25/49	1,446.00			Tuolumne	NORTH FORK STANISLAUS RIVER
A013091	15018		CALAVERAS COUNTY WATER DISTRICT	5/13/49	63,000.00			Tuolumne	HIGHLAND CREEK
A013092	15019		CALAVERAS COUNTY WATER DISTRICT	5/13/49	63,000.00			Tuolumne	HIGHLAND CREEK
A013093	15020		CALAVERAS COUNTY WATER DISTRICT	5/13/49	50,050.00			Alpine, Tuolumne	HIGHLAND CREEK, NORTH FORK STANISLAUS RIVER
A018727	15021		CALAVERAS COUNTY WATER DISTRICT	5/20/59	506,809.30			Tuolumne	BEAVER CREEK, NORTH FORK STANISLAUS RIVER
A019148	15023		CALAVERAS COUNTY WATER DISTRICT	12/23/59	732,538.90			Alpine, Tuolumne	BEAVER CREEK, HIGHLAND CREEK, NORTH FORK STANISLAUS RIVER
A019149	15024		CALAVERAS COUNTY WATER DISTRICT	12/23/59	50,050.00			Alpine, Tuolumne	HIGHLAND CREEK, NORTH FORK STANISLAUS RIVER
			<b>CALAVERAS COUNTY WATER DISTRICT Total</b>		1,916,859.10				
A018148	11642	6479	CASTLE & COOKE CALAVERAS INC	5/22/58	50.00			Calaveras	SAWMILL CREEK
			<b>CASTLE &amp; COOKE CALAVERAS INC Total</b>		50.00				
A030100	20788		CASTLE & COOKE CALIFORNIA INC	4/8/92	98.00			Calaveras	SAW MILL CREEK
			<b>CASTLE &amp; COOKE CALIFORNIA INC Total</b>		98.00				
A014898	9610	4993	CEDAR RIDGE IMPROVEMENT ASSOCIATION	7/9/52	27.50			Tuolumne	FIVEMILE CREEK
A018514	12003	9773	CEDAR RIDGE IMPROVEMENT ASSOCIATION	1/30/59	15.00			Tuolumne	UNSP (3)
			<b>CEDAR RIDGE IMPROVEMENT ASSOCIATION Total</b>		42.50				
A004895	2599	1308	CLIFFORD D CHENEY	1/26/26	3.40			Tuolumne	UNSP
			<b>CLIFFORD D CHENEY Total</b>		3.40				
A021647	14633	9120	COLD SPRINGS WATER COMPANY INC	2/20/64	106.00			Tuolumne	UNST
			<b>COLD SPRINGS WATER COMPANY INC Total</b>		106.00				
A019732	13038	8088	DANA KAUFFMANN	9/8/60	29.00			Tuolumne	KNIGHT CREEK
			<b>DANA KAUFFMANN Total</b>		29.00				
A018808	12222	6501	DAVE D FICKEL	6/18/59	0.80			Tuolumne	UNSP
			<b>DAVE D FICKEL Total</b>		0.80				
A020819	13802	10299	DAVIES PROPERTIES	6/14/62	6.40			Calaveras	LOVE CREEK
			<b>DAVIES PROPERTIES Total</b>		6.40				
A016982	10614	5887	Donald Paul Deshon	4/2/56	6.00			Tuolumne	UNST
			<b>Donald Paul Deshon Total</b>		6.00				
A019168	12437	7468	EARL D GARRISON	1/4/60	6.00			Calaveras	UNST
			<b>EARL D GARRISON Total</b>		6.00				
A012659	7486	4989	ESTATE OF E ALFORD	8/19/48	24.00			Calaveras	LOVE CREEK
			<b>ESTATE OF E ALFORD Total</b>		24.00				
A021338	14498	10248	Eureka Valley LLC	5/9/74	15.00			Tuolumne	UNST
			<b>Eureka Valley LLC Total</b>		15.00				
A025335	17026	11288	GEORGE A ATHERTON	4/21/77	32.00			Tuolumne	SOUTH FORK WILDCAT CREEK

## Stanislaus River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	Season	Purpose of Use	County	Source
A017554	11689	8666	<b>GEORGE A ATHERTON Total</b>		32.00				
			GERALD B ENGLER	4/18/57	25.00			Tuolumne	MORMON CREEK
			<b>GERALD B ENGLER Total</b>		25.00				
A015583	9715	6899	GREENHORN CREEK ASSOCIATES L P	10/23/53	45.00			Calaveras	UNXX
			<b>GREENHORN CREEK ASSOCIATES L P Total</b>		45.00				
A029013	21114		GUADALUPE RAMIREZ	4/23/87	18.00			Calaveras	LOVE CREEK
			<b>GUADALUPE RAMIREZ Total</b>		18.00				
A009620	5396	5298	IRVING M TERZICH	6/15/39	426.50			Tuolumne	EAGLE CREEK
			<b>IRVING M TERZICH Total</b>		426.50				
A022343	15266	9934	JANICE M ZUKAL	11/24/65	7.00			Tuolumne	MINE TUNNEL
			<b>JANICE M ZUKAL Total</b>		7.00				
A019307	12552	7663	JEFF R WILSON	3/14/60	14.10			Tuolumne	UNST
			<b>JEFF R WILSON Total</b>		14.10				
A021779	15162	10782	JEROME P SOLARI	5/19/64	22.50			Tuolumne	DEADMAN GULCH
			<b>JEROME P SOLARI Total</b>		22.50				
A018573	11984	6635	JOANNA VIDITO	3/9/59	4.00			Tuolumne	UNST
			<b>JOANNA VIDITO Total</b>		4.00				
A025626	17480	11277	JOHN WILLMS RANCH INC	12/30/77	11.00			Stanislaus	UNST
			<b>JOHN WILLMS RANCH INC Total</b>		11.00				
A020041	13786	9752	JON H JANOFSKY	3/17/61	20.00			Calaveras	PENNY CREEK
			<b>JON H JANOFSKY Total</b>		20.00				
A013517	8095	4279	JON V ELLIS	12/27/49	35.00			Calaveras	UNST
			<b>JON V ELLIS Total</b>		35.00				
A019469	16009	10448	JOSEPH W MARTIN JR	6/2/60	9.60			Tuolumne	ANDREWS CREEK
			<b>JOSEPH W MARTIN JR Total</b>		9.60				
A018574	11985	7360	KAREN REESE	3/9/59	48.00			Tuolumne	GREEN SPRING RUN
			<b>KAREN REESE Total</b>		48.00				
A021149	14736	8849	KATHARINE K STEVENS	2/4/63	2.00			Tuolumne	UNSP
			<b>KATHARINE K STEVENS Total</b>		2.00				
A011661	6863	4230	KATHERINE R REID	12/16/46	36.90			Tuolumne	EAGLE CREEK
			<b>KATHERINE R REID Total</b>		36.90				
A020312	13903	10840	LAKE ALPINE WATER COMPANY	7/21/61	42.00			Alpine	UNSP
A021485	14541	11007	LAKE ALPINE WATER COMPANY	10/7/63	261.00			Alpine	BEAR CREEK
A005648G	21237		LAKE ALPINE WATER COMPANY	6/10/09	395.00			Alpine	BEAR CREEK
			<b>LAKE ALPINE WATER COMPANY Total</b>		698.00				
A020450	13818	12186	LELAND MEADOW WATER DISTRICT	10/24/61	2.30			Tuolumne	UNSP
A023195	16065	11345	LELAND MEADOW WATER DISTRICT	12/17/68	68.00			Tuolumne	LELAND CREEK
A026373	18277	12187	LELAND MEADOW WATER DISTRICT	5/21/80	2.70			Tuolumne	UNSP
			<b>LELAND MEADOW WATER DISTRICT Total</b>		73.00				
A008919	4961	2482	LENORA HOLMES	3/13/37	0.20			Alpine	UNSP
A009217	5129	2483	LENORA HOLMES	12/30/37	0.20			Alpine	UNSP
A009851	5546	3153	LENORA HOLMES	3/14/40	0.70			Alpine	UNSP
			<b>LENORA HOLMES Total</b>		1.10				
A003602	1849	895	MATTHEW T BLOOM	4/17/03	0.30			Tuolumne	UNST
			<b>MATTHEW T BLOOM Total</b>		0.30				
A015841	10169	6882	MICHAEL P TRACY	4/23/07	18.00			Tuolumne	MORMON CREEK
			<b>MICHAEL P TRACY Total</b>		18.00				
A026084	18024	12790	MIKEL C WILLIAMS	9/6/79	0.50			Tuolumne	MORMON CREEK, UNST
			<b>MIKEL C WILLIAMS Total</b>		0.50				
A000077A	1303	9966	Northern California Power Agency	8/4/15	4,062.00			Tuolumne	HIGHLAND CREEK
			<b>Northern California Power Agency Total</b>		4,062.00				
A001081	2104	2012	OAKDALE IRRIGATION DISTRICT	9/20/18	96,195.00			Calaveras	STANISLAUS RIVER
A003091	2106	2013	OAKDALE IRRIGATION DISTRICT	10/19/22	10,754.00			Calaveras	STANISLAUS RIVER
A005648A	13692	12385	OAKDALE IRRIGATION DISTRICT	7/30/27	60,000.00			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A010872	9360	7856	OAKDALE IRRIGATION DISTRICT	8/31/01	80,000.00			Tuolumne	STANISLAUS RIVER
A010978	6448	3986	OAKDALE IRRIGATION DISTRICT	8/31/01	25,000.00			Calaveras	STANISLAUS RIVER
A011105	9361	7857	OAKDALE IRRIGATION DISTRICT	8/31/01	98,000.00			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A012490	9362	10166	OAKDALE IRRIGATION DISTRICT	8/31/01	64,500.00			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A012614	9363	7858	OAKDALE IRRIGATION DISTRICT	7/23/48	496,187.60			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A012873	9364	10167	OAKDALE IRRIGATION DISTRICT	12/22/48	354,091.00			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A013309	9365	7859	OAKDALE IRRIGATION DISTRICT	8/22/49	144,795.50			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A013310	9366	7860	OAKDALE IRRIGATION DISTRICT	8/22/49	1,165,966.30			Tuolumne	STANISLAUS RIVER
A026791	19046		OAKDALE IRRIGATION DISTRICT	4/15/81	1,303,159.50			Calaveras	STANISLAUS RIVER

## Stanislaus River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	Season	Purpose of Use	County	Source
A031502	21188		OAKDALE IRRIGATION DISTRICT	8/30/07	50,000.00			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A031770	21299		OAKDALE IRRIGATION DISTRICT	4/25/12	506,000.00			Tuolumne	
			<b>OAKDALE IRRIGATION DISTRICT Total</b>		4,454,648.90				
A001339	668	1391	PACIFIC GAS AND ELECTRIC COMPANY	1/3/34	40,904.70			Tuolumne	SOUTH FORK STANISLAUS RIVER
A006129	3507	1541	PACIFIC GAS AND ELECTRIC COMPANY	12/4/28	3,919.00			Tuolumne	SOUTH FORK STANISLAUS RIVER
A006130	3508	1542	PACIFIC GAS AND ELECTRIC COMPANY	12/4/28	5,360.00			Tuolumne	SOUTH FORK STANISLAUS RIVER
A010122	6107	2862	PACIFIC GAS AND ELECTRIC COMPANY	2/19/41	115,836.40			Tuolumne	MIDDLE FORK STANISLAUS RIVER
A031405	21170		PACIFIC GAS AND ELECTRIC COMPANY	4/5/05	4,706.00			Tuolumne	SOUTH FORK STANISLAUS RIVER
			<b>PACIFIC GAS AND ELECTRIC COMPANY Total</b>		170,726.10				
A022245	15262	9709	PATRICIA D DAVEY	3/31/71	12.00			Tuolumne	UNST
			<b>PATRICIA D DAVEY Total</b>		12.00				
A023320	16216	12444	PETER G VON DER LINDE	7/29/69	11.10			Tuolumne	UNNAMED MINE TUNNEL
			<b>PETER G VON DER LINDE Total</b>		11.10				
A025177	17033	13451	RICHARD M GONZALES	10/20/76	10.00			Calaveras	YORK CREEK
			<b>RICHARD M GONZALES Total</b>		10.00				
A020416	13653	8499	RNE INVESTMENTS LLC	10/2/61	46.00			Calaveras	SAWMILL CREEK
			<b>RNE INVESTMENTS LLC Total</b>		46.00				
A024335	16788	11194	ROSS A CARKEET JR	4/3/73	0.20			Tuolumne	UNSP
			<b>ROSS A CARKEET JR Total</b>		0.20				
A013353	8073	10902	SHERMAN ACRES MUTUAL WATER ASSN	9/14/49	1.50			Calaveras	UNSP
			<b>SHERMAN ACRES MUTUAL WATER ASSN Total</b>		1.50				
A024930	17704	11731	Sierra Golf Management, Inc.	11/17/75	108.00			Calaveras	ANGELS CREEK
			<b>Sierra Golf Management, Inc. Total</b>		108.00				
A012739	7567	5256	SIERRA PACIFIC INDUSTRIES	10/8/48	8.10			Tuolumne	UNSP
			<b>SIERRA PACIFIC INDUSTRIES Total</b>		8.10				
A005648X01			SIX MILE LAND COMPANY	5/9/01	81.00			Calaveras	SIX MILE CREEK
A031182			SIX MILE LAND COMPANY	5/9/01	41.00			Calaveras	SIX MILE CREEK
			<b>SIX MILE LAND COMPANY Total</b>		122.00				
A002524	1147	604	SOUTH SAN JOAQUIN IRRIGATION DISTRICT	8/29/21	36,000.00			Calaveras	STANISLAUS RIVER
			<b>SOUTH SAN JOAQUIN IRRIGATION DISTRICT Total</b>		36,000.00				
A030603A			STOCKTON EAST WATER DISTRICT	9/10/04	111,900.00			Calaveras	STANISLAUS RIVER
A030603B			STOCKTON EAST WATER DISTRICT	9/10/04	407,000.00			Calaveras, Tuolumne	STANISLAUS RIVER
			<b>STOCKTON EAST WATER DISTRICT Total</b>		518,900.00				
A010168	5974	3560	TAMARACK CABIN OWNERS ASSN	3/25/41	7.30			Calaveras	UNSP
			<b>TAMARACK CABIN OWNERS ASSN Total</b>		7.30				
A016563	10518		TAMARACK SPRINGS MUTUAL WATER CO	8/31/55	4.60			Calaveras	UNSP (2), UNXX
			<b>TAMARACK SPRINGS MUTUAL WATER CO Total</b>		4.60				
A019990	13140	8194	The Donald A. Bottomley 1992 Trust	2/16/61	4.00			Calaveras	UNST
			<b>The Donald A. Bottomley 1992 Trust Total</b>		4.00				
A018815	12329	7401	THOMAS P KLEIN	6/22/59	2.20			Tuolumne	UNST
			<b>THOMAS P KLEIN Total</b>		2.20				
A005648X02			THOMSON FAMILY TRUST	10/26/00	28.10			Calaveras	SIXMILE CREEK, UNST
A031364			THOMSON FAMILY TRUST	10/2/02	28.10			Calaveras	SIXMILE CREEK, UNST
			<b>THOMSON FAMILY TRUST Total</b>		56.20				
A003912	1781	1182	U S STANISLAUS NATL FOREST	4/18/32	32.80			Tuolumne	GOOSEBERRY SPRING
A010384	5982	3941	U S STANISLAUS NATL FOREST	2/6/42	6.60			Tuolumne	COW CREEK
A010386	5983	3917	U S STANISLAUS NATL FOREST	2/6/42	4.50			Tuolumne	LELAND CREEK
A010421	5986	3561	U S STANISLAUS NATL FOREST	4/1/42	1.10			Calaveras	BIG MEADOW CREEK
A010437	5987	3931	U S STANISLAUS NATL FOREST	4/25/42	0.70			Alpine	BEE CREEK
A010490	6038	3282	U S STANISLAUS NATL FOREST	7/8/42	1.10			Tuolumne	UNSP
A010491	6039	3012	U S STANISLAUS NATL FOREST	7/8/42	1.00			Tuolumne	UNST
A010492	6040	3013	U S STANISLAUS NATL FOREST	7/9/42	0.90			Tuolumne	UNST
A010495	6041	2977	U S STANISLAUS NATL FOREST	7/15/42	3.10			Tuolumne	UNST
A010556	6104	5015	U S STANISLAUS NATL FOREST	11/12/42	3.00			Tuolumne	BUMBLEBEE CREEK
A010557	6105	2974	U S STANISLAUS NATL FOREST	11/12/42	1.60			Tuolumne	CASCADE CREEK
A010575	6159	2975	U S STANISLAUS NATL FOREST	12/28/42	0.80			Tuolumne	UNST
A010576	6160	3903	U S STANISLAUS NATL FOREST	12/28/42	0.90			Tuolumne	UNST
A010584	6161	3283	U S STANISLAUS NATL FOREST	1/2/43	2.10			Tuolumne	UNST
A013833	8360	3860	U S STANISLAUS NATL FOREST	7/5/50	3.10			Tuolumne	UNST
A014167	8618	4660	U S STANISLAUS NATL FOREST	2/20/51	1.90			Tuolumne	UNSP
A016980	10760	7337	U S STANISLAUS NATL FOREST	3/30/56	0.70			Tuolumne	UNST



## Stanislaus River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	Season	Purpose of Use	County	Source
A017484	11017	7115	U S STANISLAUS NATL FOREST	2/27/57	11.40			Alpine	UNST
A018680	12115	7497	U S STANISLAUS NATL FOREST	4/30/59	0.90			Alpine	INSPIRATION SPRING
A018882	12197	7863	U S STANISLAUS NATL FOREST	8/3/59	1.20			Tuolumne	CRANDALL SPRING
A018883	12198	7255	U S STANISLAUS NATL FOREST	8/3/59	1.20			Tuolumne	SCHAFFER SPRING
A018893	12199	7260	U S STANISLAUS NATL FOREST	8/3/59	1.20			Tuolumne	FRASER SPRING
A019702	13033	8003	U S STANISLAUS NATL FOREST	8/22/60	2.30			Tuolumne	UNST
A019703	13034	7977	U S STANISLAUS NATL FOREST	8/22/60	0.70			Tuolumne	UNSP
A019704	13035	8232	U S STANISLAUS NATL FOREST	8/22/60	1.90			Alpine	UNST
A019706	13037	8142	U S STANISLAUS NATL FOREST	8/22/60	1.40			Tuolumne	UNST
A020426	13565	8080	U S STANISLAUS NATL FOREST	10/5/61	0.90			Calaveras	UNSP
A021918	14918	9098	U S STANISLAUS NATL FOREST	9/29/64	0.50			Tuolumne	UNSP
A022030	14969	9097	U S STANISLAUS NATL FOREST	1/18/65	0.20			Tuolumne	UNSP
			<b>U S STANISLAUS NATL FOREST Total</b>		89.70				
A014858A	16597		U.S. BUREAU OF RECLAMATION	4/4/73	980,000.00			Calaveras	STANISLAUS RIVER
A014858B	20245		U.S. BUREAU OF RECLAMATION	7/18/88	1,000,000.00			Calaveras, San Joaquin	STANISLAUS RIVER
A014859	16598		U.S. BUREAU OF RECLAMATION	6/16/52	5,323,865.00			Calaveras	STANISLAUS RIVER
A019303	16599		U.S. BUREAU OF RECLAMATION	7/19/73	1,420,000.00			Calaveras	STANISLAUS RIVER
A019304	16600		U.S. BUREAU OF RECLAMATION	3/11/60	1,420,000.00			Calaveras, Contra Costa	STANISLAUS RIVER
A027319	20246		U.S. BUREAU OF RECLAMATION	7/18/88	2,895,910.00			Calaveras	STANISLAUS RIVER
			<b>U.S. BUREAU OF RECLAMATION Total</b>		13,039,775.00				
A028182	20144		VENTURE 4 MINING, A PARTNERSHIP	7/3/84	2.50			Tuolumne	UNST (AKA GREENHORN GULCH)
			<b>VENTURE 4 MINING, A PARTNERSHIP Total</b>		2.50				
A025369	17409	11514	WILLIAM MICHAEL ROBISON	5/27/77	28.00			Tuolumne	OWL CREEK, UNST
A025370	17410	12006	WILLIAM MICHAEL ROBISON	5/27/77	48.00			Tuolumne	OWL CREEK
A025371	17411	12007	WILLIAM MICHAEL ROBISON	5/27/77	20.00			Tuolumne	NORTH FORK WILDCAT CREEK
A025386	17412	11515	WILLIAM MICHAEL ROBISON	6/9/77	0.70			Tuolumne	NORTH FORK WILDCAT CREEK
			<b>WILLIAM MICHAEL ROBISON Total</b>		96.70				
A028278	19471	12939	YOUNG BERTRAND TRUSTEE ETAL	10/2/84	0.10			Calaveras	LOVE CREEK
			<b>YOUNG BERTRAND TRUSTEE ETAL Total</b>		0.10				
			<b>Grand Total</b>		20,143,681.00				

## Tuolumne River Watershed - Post-1914 Appropriative Water Rights

Application ID	Permit ID	License ID	Water Right Type	Status	Holder Name	Date	Face Amt	County	Source
A014162	9583	5049	Appropriative	Licensed	Aaron Lentz	2/15/51	3.7	Tuolumne	CURTIS CREEK
					<b>Aaron Lentz Total</b>		3.7		
A022486	15299	9177	Appropriative	Licensed	BANK OF AMERICA NT & SA	6/8/66	15	Tuolumne	UNST
A022487	15300	9161	Appropriative	Licensed	BANK OF AMERICA NT & SA	6/8/66	20	Stanislaus	UNST
					<b>BANK OF AMERICA NT &amp; SA Total</b>		35		
A018644	12028	7382	Appropriative	Licensed	BARBARA THORNTON	4/14/59	9	Tuolumne	GARROTTE CREEK
					<b>BARBARA THORNTON Total</b>		9		
A020279	13976	10278	Appropriative	Licensed	BERNHARD KISSINGER	6/26/61	1.5	Tuolumne	UNST
					<b>BERNHARD KISSINGER Total</b>		1.5		
A020324	13395	8154	Appropriative	Licensed	BIG CREEK ASSOCIATES	7/25/61	24.5	Tuolumne	BIG CREEK DRAINAGE, UNST
					<b>BIG CREEK ASSOCIATES Total</b>		24.5		
A018738B	12118	008164B	Appropriative	Licensed	BOBBY E MADEWELL	5/25/59	1	Tuolumne	UNST
					<b>BOBBY E MADEWELL Total</b>		1		
A012961	7549	4032	Appropriative	Licensed	BOY SCOUT MEMORIAL FOUNDATION	3/4/49	6	Tuolumne	UNST
A016137	10124	6866	Appropriative	Licensed	BOY SCOUT MEMORIAL FOUNDATION	11/15/54	7.9	Tuolumne	UNST
					<b>BOY SCOUT MEMORIAL FOUNDATION Total</b>		13.9		
A012962	7550	4033	Appropriative	Licensed	BOY SCOUT OF AMERICA MEMORIAL FOUNDATION	3/4/49	2.7	Tuolumne	NORTH FORK TUOLUMNE RIVER
					<b>BOY SCOUT OF AMERICA MEMORIAL FOUNDATION Total</b>		2.7		
A019217	12502	7478	Appropriative	Licensed	BRENT LOOP	2/4/60	3.6	Tuolumne	UNST
					<b>BRENT LOOP Total</b>		3.6		
A021372	14266	9116	Appropriative	Licensed	BRENTWOOD LAKE CLUB INC	6/28/63	100	Tuolumne	UNST
					<b>BRENTWOOD LAKE CLUB INC Total</b>		100		
A010902	6346	3579	Appropriative	Licensed	CAMP TAWONGA-TAWONGA JEWISH COMMUNITY CORP	10/16/44	21.7	Tuolumne	MIDDLE FORK TUOLUMNE RIVER
A011108	6525	3743	Appropriative	Licensed	CAMP TAWONGA-TAWONGA JEWISH COMMUNITY CORP	7/17/45	11	Tuolumne	UNST
A013365	7958	4251	Appropriative	Licensed	CAMP TAWONGA-TAWONGA JEWISH COMMUNITY CORP	9/27/49	21.7	Tuolumne	UNST
A015078	9901	5326	Appropriative	Licensed	CAMP TAWONGA-TAWONGA JEWISH COMMUNITY CORP	11/6/52	12.3	Tuolumne	UNST
					<b>CAMP TAWONGA-TAWONGA JEWISH COMMUNITY CORP Total</b>		66.7		
A020332	13421	9601	Appropriative	Licensed	CAROLE CANEPA	7/28/61	22	Tuolumne	UNST
					<b>CAROLE CANEPA Total</b>		22		
A020841	14114	8616	Appropriative	Licensed	CAROLYN SUE MOSLEY	7/3/62	0.3	Tuolumne	CURTIS CREEK
					<b>CAROLYN SUE MOSLEY Total</b>		0.3		
A018757B	12099	006636B	Appropriative	Licensed	CHARLES G YONEDA	10/28/88	0.7	Tuolumne	UNST
					<b>CHARLES G YONEDA Total</b>		0.7		
A013101	7796	5279	Appropriative	Licensed	CHARLES J HURST	5/19/49	4	Tuolumne	WOODS CREEK
A023560	16134	10546	Appropriative	Licensed	CHARLES J HURST	7/17/70	8	Tuolumne	UNST
					<b>CHARLES J HURST Total</b>		12		
A016104	10108	9181	Appropriative	Licensed	CHRISTOPHER R ROSS	2/6/03	8	Tuolumne	UNST (AKA LITTLE SUGAR PINE CREEK)
					<b>CHRISTOPHER R ROSS Total</b>		8		
A020574	13616	8190	Appropriative	Licensed	CLIFTON E J HODGE	1/29/62	6	Tuolumne	UNST
					<b>CLIFTON E J HODGE Total</b>		6		
A020617	13658	8259	Appropriative	Licensed	COUNTY OF TUOLUMNE	2/15/62	10	Tuolumne	UNST
A028689	20146	13073	Appropriative	Licensed	COUNTY OF TUOLUMNE	1/3/86	2	Tuolumne	UNST
					<b>COUNTY OF TUOLUMNE Total</b>		12		
A018604	12335	7329	Appropriative	Licensed	CRAIG AND PATRICIA DAMBACHER 1993 FAMILY TRUST	3/20/59	16	Tuolumne	UNST (2)
					<b>CRAIG AND PATRICIA DAMBACHER 1993 FAMILY TRUST Total</b>		16		
A000862	516	283	Appropriative	Licensed	CROOK REVOCABLE 1992 TRUST	12/15/17	196.4	Tuolumne	JAWBONE CREEK
A021329	14878	10317	Appropriative	Licensed	CROOK REVOCABLE 1992 TRUST	6/10/63	28	Tuolumne	UNST
					<b>CROOK REVOCABLE 1992 TRUST Total</b>		224.4		
A021227	14243	9178	Appropriative	Licensed	DANIEL A SCHULTZ	4/9/63	8	Tuolumne	UNST
					<b>DANIEL A SCHULTZ Total</b>		8		
A020883	13885	8492	Appropriative	Licensed	DAVID C HARDEN	8/1/62	8.4	Tuolumne	UNST
					<b>DAVID C HARDEN Total</b>		8.4		
A019299	12441	7485	Appropriative	Licensed	DAVID ERNEST HERBERT	3/9/60	1.5	Tuolumne	UNST
					<b>DAVID ERNEST HERBERT Total</b>		1.5		
A020381	13434	7885	Appropriative	Licensed	DENNIS S DAOUST	9/6/61	1	Tuolumne	UNST
					<b>DENNIS S DAOUST Total</b>		1		
A027785	19155		Appropriative	Permitted	DONALD F MC CLURE	6/30/83	8.1	Tuolumne	MOSS SPRING
					<b>DONALD F MC CLURE Total</b>		8.1		

## Tuolumne River Watershed - Post-1914 Appropriative Water Rights

A020497	13654	8293	Appropriative	Licensed	EDWARD J FILIBERTI	11/15/61	5.8	Tuolumne	UNST
					<b>EDWARD J FILIBERTI Total</b>		5.8		
A020784	13766	8593	Appropriative	Licensed	Eric J Coffill	5/21/62	17	Tuolumne	UNST
					<b>Eric J Coffill Total</b>		17		
A020575	13569	9158	Appropriative	Licensed	ESTATE OF LAVERNE LITTERAL	1/29/62	5.5	Tuolumne	UNST
A020587	13696	10008	Appropriative	Licensed	ESTATE OF LAVERNE LITTERAL	2/5/62	5.4	Tuolumne	BLUE GULCH
					<b>ESTATE OF LAVERNE LITTERAL Total</b>		10.9		
A022468	15546	10097	Appropriative	Licensed	ESTATES OF ELDON E & ANNA V AMOS	5/11/73	4	Tuolumne	UNSP
					<b>ESTATES OF ELDON E &amp; ANNA V AMOS Total</b>		4		
A029977	20784		Appropriative	Permitted	G SCOTT FAHEY	3/6/02	44.8	Tuolumne	DEADWOOD SPRING, UNSP (AKA SUGAR PINE SPRING)
A031491	21289		Appropriative	Permitted	G SCOTT FAHEY	8/1/11	64.5	Tuolumne	UNSP
					<b>G SCOTT FAHEY Total</b>		109.3		
A018757A03	12099	006636A03	Appropriative	Licensed	GRAY A CLOSSMAN	5/9/90	1	Tuolumne	UNST
					<b>GRAY A CLOSSMAN Total</b>		1		
A019214	12433	7555	Appropriative	Licensed	Gregory C. Henley	2/3/60	30	Tuolumne	UNST
					<b>Gregory C. Henley Total</b>		30		
A018757C	12099	006636C	Appropriative	Licensed	GREGORY L CARR	10/28/88	0.7	Tuolumne	UNST
					<b>GREGORY L CARR Total</b>		0.7		
A019253	12662	7705	Appropriative	Licensed	HELGA ANKER TRUST	2/26/60	8.6	Tuolumne	RATTLESNAKE CREEK
					<b>HELGA ANKER TRUST Total</b>		8.6		
A019192	12410	7502	Appropriative	Licensed	HOLLY HAYDEN-FITZSIMMONS	1/26/60	1.1	Tuolumne	SONORA CREEK
					<b>HOLLY HAYDEN-FITZSIMMONS Total</b>		1.1		
A015987	10073	5215	Appropriative	Licensed	INGALLS FAMILY TRUST	8/9/54	213.2	Tuolumne	DUCKWALL CREEK
					<b>INGALLS FAMILY TRUST Total</b>		213.2		
A013343	7890	5344	Appropriative	Licensed	JACK G MILES	9/8/49	6.8	Tuolumne	UNST
					<b>JACK G MILES Total</b>		6.8		
A016932	10632	5991	Appropriative	Licensed	JACK J GARDELLA JR	3/13/56	24.1	Tuolumne	UNST
A016935	10635	5994	Appropriative	Licensed	JACK J GARDELLA JR	3/13/56	24.6	Tuolumne	UNST
A019043	12594	6946	Appropriative	Licensed	JACK J GARDELLA JR	10/21/59	60	Tuolumne	UNST
A025898	18041	11845	Appropriative	Licensed	JACK J GARDELLA JR	1/5/79	75	Tuolumne	UNST
					<b>JACK J GARDELLA JR Total</b>		183.7		
A020272	13381	8125	Appropriative	Licensed	JAMES CURTONI	6/20/61	30	Tuolumne	UNST
A022472	15391	9206	Appropriative	Licensed	JAMES CURTONI	5/19/66	18	Tuolumne	UNST
					<b>JAMES CURTONI Total</b>		48		
A020943	14166	9170	Appropriative	Licensed	JAY HALE	9/13/62	4	Tuolumne	UNSP
					<b>JAY HALE Total</b>		4		
A020459B	13513	008111B	Appropriative	Licensed	JELITO LIVING TRUST DATED 7/29/89	7/8/85	2.3	Tuolumne	UNST
					<b>JELITO LIVING TRUST DATED 7/29/89 Total</b>		2.3		
A020286	13436	8562	Appropriative	Licensed	JIM LUPO	7/3/61	11	Tuolumne	CURTIS CREEK
A020843	13986	9781	Appropriative	Licensed	JIM LUPO	7/5/62	24	Tuolumne	CURTIS CREEK
					<b>JIM LUPO Total</b>		35		
A020785	13767	8594	Appropriative	Licensed	JOANE SANTOS TRUST	5/21/62	3.6	Tuolumne	UNST
					<b>JOANE SANTOS TRUST Total</b>		3.6		
A018947	12204	6838	Appropriative	Licensed	JOHN B GROHL SR FAMILY RESIDUAL TRUST	8/27/59	49	Modoc, Tuolumne	QUIGLEY CREEK, UNST
A020598	13699	8746	Appropriative	Licensed	JOHN B GROHL SR FAMILY RESIDUAL TRUST	2/7/62	64	Tuolumne	NORTH FORK DRY CREEK, UNST
A021190	14209	9149	Appropriative	Licensed	JOHN B GROHL SR FAMILY RESIDUAL TRUST	2/27/70	26	Tuolumne	UNST
					<b>JOHN B GROHL SR FAMILY RESIDUAL TRUST Total</b>		139		
A018757A01A		006636A01A	Appropriative	Licensed	JOHN C BRUNK	8/17/92	1.4	Tuolumne	UNST
					<b>JOHN C BRUNK Total</b>		1.4		
A025191	17000	11404	Appropriative	Licensed	JOHN ROSS BAKER	10/28/76	24	Tuolumne	UNST
A027519	18792	12548	Appropriative	Licensed	JOHN ROSS BAKER	9/15/82	6	Tuolumne	UNST
A029743	20879		Appropriative	Permitted	JOHN ROSS BAKER	5/14/90	204	Tuolumne	TURNBACK CREEK, UNST
					<b>JOHN ROSS BAKER Total</b>		234		
A025627	17481	11284	Appropriative	Licensed	JOHN WILLMS RANCH INC	12/30/77	6.1	Stanislaus	UNST
					<b>JOHN WILLMS RANCH INC Total</b>		6.1		
A019662	12846	7789	Appropriative	Licensed	JOSEPH M MURRAY JR	8/16/60	19	Stanislaus	UNST
					<b>JOSEPH M MURRAY JR Total</b>		19		
A020407	13406	8086	Appropriative	Licensed	JUSTUS W HOUCK	9/26/61	1.2	Tuolumne	UNST
					<b>JUSTUS W HOUCK Total</b>		1.2		
A018575	11986	6776	Appropriative	Licensed	KAREN REESE	3/9/59	18	Tuolumne	UNST
					<b>KAREN REESE Total</b>		18		
A018602	13128	8018	Appropriative	Licensed	LAKEWOOD PARK ASSOCIATION	3/20/59	7	Tuolumne	SULLIVAN CREEK

## Tuolumne River Watershed - Post-1914 Appropriative Water Rights

A018911	12332	7420	Appropriative	Licensed	<b>LAKWOOD PARK ASSOCIATION Total</b> LEROY L BELT III	8/12/59	7 0.4	Tuolumne	UNSP (2)
A014262	8759	5372	Appropriative	Licensed	<b>LEROY L BELT III Total</b> LOUISE ROSASCO CUNNINGHAM	4/20/51	0.4 89	Tuolumne	UNSP
A017718	11083	5971	Appropriative	Licensed	<b>LOUISE ROSASCO CUNNINGHAM Total</b> LUCILLE MURPHY HATLER	7/15/57	89 6	Tuolumne	UNST
A017719	11084	5972	Appropriative	Licensed	LUCILLE MURPHY HATLER	7/15/57	40	Tuolumne	UNST
A017720	11085	6098	Appropriative	Licensed	LUCILLE MURPHY HATLER	7/15/57	26	Tuolumne	UNST
A017721	11086	5974	Appropriative	Licensed	LUCILLE MURPHY HATLER	7/15/57	2.3	Stanislaus	UNST
A025569	17507	11687	Appropriative	Licensed	<b>LUCILLE MURPHY HATLER Total</b> MARILYN K RICE	11/15/77	74.3 16	Tuolumne	UNSP
A020355	13179	9207	Appropriative	Licensed	<b>MARILYN K RICE Total</b> MARK R VANN	8/16/61	16 1.1	Tuolumne	ROUGH & READY CREEK
A021289	14265	9146	Appropriative	Licensed	<b>MARK R VANN Total</b> MARY CURTIN	5/27/63	1.1 6.7	Tuolumne	UNST
A020488	13752	9943	Appropriative	Licensed	<b>MARY CURTIN Total</b> MATTHEW D BEAUCHAMP	11/10/61	6.7 51	Tuolumne	CURTIS CREEK
A005726	2973	1132	Appropriative	Licensed	<b>MATTHEW D BEAUCHAMP Total</b> MDL TRUST	10/18/27	51 10.1	Tuolumne	UNSP (2)
A022326	15125	10764	Appropriative	Licensed	<b>MDL TRUST Total</b> MICHAEL P SARDELLA	10/29/65	10.1 9.6	Tuolumne	ROUGH & READY CREEK
A026084	18024	12790	Appropriative	Licensed	<b>MICHAEL P SARDELLA Total</b> MIKEL C WILLIAMS	9/6/79	9.6 0.5	Tuolumne	MORMON CREEK, UNST
A020590	13722	9244	Appropriative	Licensed	<b>MIKEL C WILLIAMS Total</b> Mountain Springs Community LP	2/5/62	0.5 133	Tuolumne	FLORAL CREEK, UNST, Unnamed Stream
A031384			Appropriative	Pending	<b>Mountain Springs Community LP Total</b> MOUNTAIN SPRINGS GOLF LLC	1/21/03	133 99	Tuolumne	SULLIVAN CREEK, UNST, UNST (AKA FLORES CREEK)
A018554	13137	8109	Appropriative	Licensed	<b>MOUNTAIN SPRINGS GOLF LLC Total</b> O J SPARROW	2/26/59	99 10	Tuolumne	SULLIVAN CREEK
A016170	10369	6249	Appropriative	Licensed	<b>O J SPARROW Total</b> ODD FELLOWS SIERRA RECREATION ASSN	12/7/54	10 17.8	Tuolumne	SUGARPINE CREEK
A016172	10370	9772	Appropriative	Licensed	ODD FELLOWS SIERRA RECREATION ASSN	12/7/54	15	Tuolumne	UNSP
A018547	13125	8112	Appropriative	Licensed	<b>ODD FELLOWS SIERRA RECREATION ASSN Total</b> Pamela Prime and David Kirkpatrick Trust	2/20/59	32.8 12	Tuolumne	UNST
A019946	13110	8032	Appropriative	Licensed	<b>Pamela Prime and David Kirkpatrick Trust Total</b> PATRICIA B BROOKS	1/31/61	12 30.2	Tuolumne	UNST
A020885C	14018	9963	Appropriative	Licensed	<b>PATRICIA B BROOKS Total</b> PINE MOUNTAIN LAKE ASSOCIATION	8/2/62	30.2 14	Tuolumne	UNST
A022980	15823	10634	Appropriative	Licensed	PINE MOUNTAIN LAKE ASSOCIATION	2/7/68	7,650.00	Tuolumne	BIG CREEK
A030367	21220		Appropriative	Permitted	<b>PINE MOUNTAIN LAKE ASSOCIATION Total</b> PLGC Partners	8/27/08	7,664.00 36.8	Tuolumne	UNST
A030699	21221		Appropriative	Permitted	PLGC Partners	8/29/08	28	Tuolumne	UNST
A023262	15978	10774	Appropriative	Licensed	<b>PLGC Partners Total</b> RACHEL M VUYOVICH	4/16/69	64.8 21	Tuolumne	UNST
A025092	17006	11369	Appropriative	Licensed	RACHEL M VUYOVICH	7/6/76	10	Tuolumne	UNST
A021028	14037	9698	Appropriative	Licensed	<b>RACHEL M VUYOVICH Total</b> RICHARD J NORTON	11/23/62	31 8.5	Tuolumne	UNST
A021183	14150	8329	Appropriative	Licensed	<b>RICHARD J NORTON Total</b> Robert E Thomason	3/8/63	8.5 30	Tuolumne	KANAKA CREEK
A018614	12019	6496	Appropriative	Licensed	<b>Robert E Thomason Total</b> RON GROHL	3/31/59	30 3	Tuolumne	UNST
A015254	9645	6368	Appropriative	Licensed	<b>RON GROHL Total</b> RONALD E CARTER	3/26/53	3 51.1	Tuolumne	WOODS CREEK
A019388	12687	7837	Appropriative	Licensed	<b>RONALD E CARTER Total</b> ROYCE WHITNEY	8/4/66	51.1 160.6	Tuolumne	UNST
A020328	13410	7838	Appropriative	Licensed	ROYCE WHITNEY	7/26/61	31	Tuolumne	UNST
A012858	7618	4990	Appropriative	Licensed	<b>ROYCE WHITNEY Total</b> SCOT PATTERSON	3/24/58	191.6 5	Tuolumne	UNXX
A018738A	12118	008164A	Appropriative	Licensed	<b>SCOT PATTERSON Total</b> SIERRA PACIFIC HOLDING COMPANY	5/25/59	5 2.5	Tuolumne	UNST
					<b>SIERRA PACIFIC HOLDING COMPANY Total</b>		2.5		

## Tuolumne River Watershed - Post-1914 Appropriative Water Rights

A014947	9197	5270	Appropriative	Licensed	SONORA RIDGE LLC	8/1/52	47.7	Tuolumne	SULLIVAN CREEK
					<b>SONORA RIDGE LLC Total</b>		47.7		
A022146	15250	9454	Appropriative	Licensed	SOREN E JENSEN JR RANCH TRUST	5/10/65	5	Tuolumne	UNST
					<b>SOREN E JENSEN JR RANCH TRUST Total</b>		5		
A019188	12426	7472	Appropriative	Licensed	STEPHEN A FINN	1/21/60	0.4	Tuolumne	UNST
					<b>STEPHEN A FINN Total</b>		0.4		
A020459A	13513	008111A	Appropriative	Licensed	SUSAN A MACDONALD	7/8/85	1.5	Tuolumne	UNST
					<b>SUSAN A MACDONALD Total</b>		1.5		
A020092	13193	9201	Appropriative	Licensed	TUOLUMNE BAND ME-WUK INDIANS	4/19/61	1	Tuolumne	UNST
					<b>TUOLUMNE BAND ME-WUK INDIANS Total</b>		1		
A008758	4830	2252	Appropriative	Licensed	TUOLUMNE PARK AND RECREATION DISTRICT	8/12/36	5	Tuolumne	UNSP
					<b>TUOLUMNE PARK AND RECREATION DISTRICT Total</b>		5		
A016173	10371	10989	Appropriative	Licensed	TUOLUMNE UTILITIES DISTRICT	12/7/54	9.1	Tuolumne	UNSP
A018549	13127	7936	Appropriative	Licensed	TUOLUMNE UTILITIES DISTRICT	2/24/59	2	Tuolumne	UNST
A020565	13606	9740	Appropriative	Licensed	TUOLUMNE UTILITIES DISTRICT	1/19/62	28	Tuolumne	UNST
A023813	16949	11576	Appropriative	Licensed	TUOLUMNE UTILITIES DISTRICT	6/22/71	3.9	Tuolumne	UNSP
					<b>TUOLUMNE UTILITIES DISTRICT Total</b>		43		
A001232	1164	5420	Appropriative	Licensed	TURLOCK I D & MODESTO I D	4/8/19	325,000.00	Tuolumne	TUOLUMNE RIVER
A001233	1165	5417	Appropriative	Licensed	TURLOCK I D & MODESTO I D	4/8/19	325,000.00	Stanislaus, Tuolumne	TUOLUMNE RIVER
A001532	1166	5421	Appropriative	Licensed	TURLOCK I D & MODESTO I D	11/21/19	1,851,934.50	Tuolumne	TUOLUMNE RIVER
A003648	3026	2424	Appropriative	Licensed	TURLOCK I D & MODESTO I D	9/24/23	48,595.80	Stanislaus	TUOLUMNE RIVER
A006711	4271	2425	Appropriative	Licensed	TURLOCK I D & MODESTO I D	6/25/30	480,800.40	Stanislaus	TUOLUMNE RIVER
A009996	5909	5418	Appropriative	Licensed	TURLOCK I D & MODESTO I D	9/6/40	868,773.00	Stanislaus, Tuolumne	TUOLUMNE RIVER
A009997	5910	5419	Appropriative	Licensed	TURLOCK I D & MODESTO I D	9/6/40	721,200.60	Stanislaus, Tuolumne	TUOLUMNE RIVER
A014126	9319	11057	Appropriative	Licensed	TURLOCK I D & MODESTO I D	1/16/51	1,046,800.00	Tuolumne	TUOLUMNE RIVER
A014127	9320	11058	Appropriative	Licensed	TURLOCK I D & MODESTO I D	1/16/51	1,046,800.00	Tuolumne	TUOLUMNE RIVER
					<b>TURLOCK I D &amp; MODESTO I D Total</b>		6,714,904.30		
A003139	1699	2580	Appropriative	Licensed	TURLOCK IRRIGATION DISTRICT	4/2/43	436,558.40	Stanislaus	TUOLUMNE RIVER
					<b>TURLOCK IRRIGATION DISTRICT Total</b>		436,558.40		
A004946	2575	1086	Appropriative	Licensed	TWAIN HARTE LAKE ASSOCIATION	6/29/31	181	Tuolumne	CALDER CREEK
					<b>TWAIN HARTE LAKE ASSOCIATION Total</b>		181		
A007058	3825	2727	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/24/31	25.5	Tuolumne	NORTH FORK TUOLUMNE RIVER
A009759	5475	2728	Appropriative	Licensed	U S STANISLAUS NATL FOREST	10/31/39	25.5	Tuolumne	SHEERING CREEK
A010355	5937	2962	Appropriative	Licensed	U S STANISLAUS NATL FOREST	1/5/42	1.7	Tuolumne	UNST
A010420	5985	2955	Appropriative	Licensed	U S STANISLAUS NATL FOREST	4/1/42	22.4	Tuolumne	GRANITE SPRING
A010487	6035	3189	Appropriative	Licensed	U S STANISLAUS NATL FOREST	7/3/42	1	Tuolumne	UNSP
A010489	6037	2946	Appropriative	Licensed	U S STANISLAUS NATL FOREST	7/3/42	2.2	Tuolumne	UNCR
A010587	6163	4444	Appropriative	Licensed	U S STANISLAUS NATL FOREST	1/4/43	2.6	Tuolumne	UNSP
A015485	9781	5681	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/27/53	6.7	Tuolumne	MIDDLE FORK TUOLUMNE RIVER
A015828	10132	6319	Appropriative	Licensed	U S STANISLAUS NATL FOREST	4/9/54	3.3	Tuolumne	MIDDLE FORK TUOLUMNE RIVER
A016052	10113	5923	Appropriative	Licensed	U S STANISLAUS NATL FOREST	9/16/54	3.7	Tuolumne	UNSP (2)
A016979	10759	5510	Appropriative	Licensed	U S STANISLAUS NATL FOREST	3/30/56	13.4	Tuolumne	UNSP
A017259	10962	7582	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/28/56	46.2	Tuolumne	JORDAN CREEK
A018678	12082	7385	Appropriative	Licensed	U S STANISLAUS NATL FOREST	4/30/59	0.7	Tuolumne	UNSP
A018885	12443	7256	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/3/59	1.2	Tuolumne	CLAVEY ROAD SPRING
A018886	12444	7548	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/3/59	1.2	Tuolumne	WALTON SPRING
A018887	12445	7530	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/3/59	1.2	Tuolumne	FLEMING SPRING
A018888	12446	7257	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/3/59	1.2	Tuolumne	DODGE RIDGE SPRING
A018889	12447	7258	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/3/59	1.2	Tuolumne	MT LEWIS SPRING
A018891	12449	7865	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/3/59	1.2	Tuolumne	BROKENDOWN CABIN SPRING
A018892	12450	7259	Appropriative	Licensed	U S STANISLAUS NATL FOREST	8/3/59	1.2	Tuolumne	MARBLE SPRING
					<b>U S STANISLAUS NATL FOREST Total</b>		163.3		
A016931	10631	5990	Appropriative	Licensed	V A RODDEN INC	3/13/56	12.8	Tuolumne	UNST
A016933	10633	5992	Appropriative	Licensed	V A RODDEN INC	3/13/56	11.9	Stanislaus	UNST
A016937	10637	5996	Appropriative	Licensed	V A RODDEN INC	3/13/56	19.6	Stanislaus	JOHNSON CREEK
A016938	10638	5997	Appropriative	Licensed	V A RODDEN INC	3/13/56	6	Stanislaus	GOODWIN CREEK
					<b>V A RODDEN INC Total</b>		50.3		
A020693	13917	8364	Appropriative	Licensed	VERNAN P HATLER	4/2/62	19.2	Tuolumne	UNCR
					<b>VERNAN P HATLER Total</b>		19.2		

Tuolumne River Watershed - Post-1914 Appropriative Water Rights

A017054	10961	7338	Appropriative	Licensed	VIRGINIA S SATTLER	4/27/56	4.5	Tuolumne	BIG CREEK
					<b>VIRGINIA S SATTLER Total</b>		4.5		
A020636	13832	9176	Appropriative	Licensed	W D FAHEY TRUST	3/2/62	0.3	Tuolumne	UNSP
					<b>W D FAHEY TRUST Total</b>		0.3		
A018757A01B	006636A01B	006636A01B	Appropriative	Licensed	Wagner Family Trust	8/17/92	1.5	Tuolumne	UNST
A020885A	14018	9961	Appropriative	Licensed	Wagner Family Trust	8/2/62	15	Tuolumne	BIG HUMBUGH CREEK
A020885B	14018	9962	Appropriative	Licensed	Wagner Family Trust	8/2/62	12	Tuolumne	BIG HUMBUGH CREEK
A031545	21252		Appropriative	Permitted	Wagner Family Trust	4/14/10	47.6	Tuolumne	Big Humbugh Creek
					<b>Wagner Family Trust Total</b>		76.1		
A019663	12847	7779	Appropriative	Licensed	WILLIAM C RITTS	8/16/60	51.5	Tuolumne	UNST, WEST FORK BIG CREEK
					<b>WILLIAM C RITTS Total</b>		51.5		
A017965	11426	7771	Appropriative	Licensed	WILLIAM L GOOKIN JR	1/29/58	9	Tuolumne	UNST
					<b>WILLIAM L GOOKIN JR Total</b>		9		
					<b>Grand Total</b>		7162449.4		

## Merced River Watershed - Post-1914 Appropriative Right Holders

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A022506	15290	9699	AMANDA VANCE	6/23/66	8.40	Mariposa	UNSP
			<b>AMANDA VANCE Total</b>		8.40		
A017202	10895	8196	BRIAN T SCHUTT	7/27/56	22.40	Mariposa	DUTCH CREEK
A017822	12142	8197	BRIAN T SCHUTT	9/13/57	12.00	Mariposa	DUTCH CREEK
			<b>BRIAN T SCHUTT Total</b>		34.40		
A015747	9795	5714	CALIF DEPT OF FORESTRY & FIRE PROTECTION	5/1/59	33.30	Mariposa	UNSP
			<b>CALIF DEPT OF FORESTRY &amp; FIRE PROTECTION Total</b>		33.30		
A016484	10389	6889	Carol M Menzel	7/25/55	520.00	Mariposa	MAXWELL CREEK
			<b>Carol M Menzel Total</b>		520.00		
A020033	13202	10081	CEDAR LODGE LLC	3/14/61	4.50	Mariposa	UNSP
			<b>CEDAR LODGE LLC Total</b>		4.50		
A018358	11785	7994	CHRISTINA CRAIG	10/3/58	5.40	Mariposa	UNST
			<b>CHRISTINA CRAIG Total</b>		5.40		
A017147	10855	6585	COASTAL DEVELOPMENT COMPANY LLC, INDIAN FLAT	6/22/56	3.60	Mariposa	MERCED RIVER UNDERFLOW
A028726	19939	13089	COASTAL DEVELOPMENT COMPANY LLC, INDIAN FLAT	1/14/86	0.50	Mariposa	UNSP
			<b>COASTAL DEVELOPMENT COMPANY LLC, INDIAN FLAT Total</b>		4.10		
A020935	14124	10181	CRANBERRY GULCH WATER SUPPLY LTD	9/11/62	3.00	Mariposa	CRANBERRY SPRING
			<b>CRANBERRY GULCH WATER SUPPLY LTD Total</b>		3.00		
A017008	10768	6549	DALE HURLEY	4/16/56	10.50	Mariposa	UNST
A018267	11688	9205	DALE HURLEY	8/14/58	14.50	Mariposa	UNST
			<b>DALE HURLEY Total</b>		25.00		
A028991	20429	13735	DAVID RICHARD WILKEY	8/23/07	1.80	Mariposa	UNST
			<b>DAVID RICHARD WILKEY Total</b>		1.80		
A026054	18134	12034	DREAM RANCH WEST LLC	7/25/79	23.00	Mariposa	UNST
A028861	20148	13046	DREAM RANCH WEST LLC	6/19/86	10.00	Mariposa	UNST
			<b>DREAM RANCH WEST LLC Total</b>		33.00		
A010696	6196	6528	Estate of Herbert F. Frey	4/16/62	4.30	Mariposa	BEAN CREEK
			<b>Estate of Herbert F. Frey Total</b>		4.30		
A006762	3650	1847	FISKE TRUST	8/8/30	4.80	Mariposa	UNSP
			<b>FISKE TRUST Total</b>		4.80		
A018695	12514	8655	FRANK R DOMINGUES III	5/7/59	1.50	Mariposa	CRANBERRY SPRING
			<b>FRANK R DOMINGUES III Total</b>		1.50		
A027985	19338		GERALD P HARRISON	3/2/84	21.00	Mariposa	SMITH CREEK
			<b>GERALD P HARRISON Total</b>		21.00		
A014982	9338	6134	GLEN PICKREN	8/20/52	35.00	Mariposa	PLUMBAR CREEK
			<b>GLEN PICKREN Total</b>		35.00		
A017647	11272	6825	HORACE MEYER ESTATE	6/11/57	1.00	Mariposa	UNXX
A017648	11457	6826	HORACE MEYER ESTATE	6/11/57	16.00	Mariposa	UNXX
			<b>HORACE MEYER ESTATE Total</b>		17.00		
A021014	14083	8491	JAMES DICKEY	11/13/62	16.00	Mariposa	DUTCH CREEK
			<b>JAMES DICKEY Total</b>		16.00		
A016639	10434	5721	JAMES D LAW	9/29/55	4.50	Mariposa	UNSP
			<b>JAMES D LAW Total</b>		4.50		
A022268	15006	10524	JAMES E EWERT	8/20/65	18.00	Mariposa	UNST
			<b>JAMES E EWERT Total</b>		18.00		
A027761	19391	12814	JERRY INMAN	5/26/83	1.20	Mariposa	UNST
			<b>JERRY INMAN Total</b>		1.20		
A019463	12765	8917	JOHN REYNOLDS	5/31/60	2.70	Mariposa	CRANBERRY SPRING
			<b>JOHN REYNOLDS Total</b>		2.70		

## Merced River Watershed - Post-1914 Appropriative Right Holders

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A023205	15972	10272	John C. Fox Revocable Trust	1/7/69	4.30	Mariposa	UNST
			<b>John C. Fox Revocable Trust Total</b>		4.30		
A017496	11036	7522	JOHN H WELCH	3/5/57	25.70	Mariposa	UNSP, UNST
			<b>JOHN H WELCH Total</b>		25.70		
A022076	14930	9082	JOSEPH C LODGE	3/18/65	19.00	Mariposa	LONG CANYON CREEK
			<b>JOSEPH C LODGE Total</b>		19.00		
A017011	10888	7626	KAO CHAO	4/17/56	1.60	Mariposa	UNST
			<b>KAO CHAO Total</b>		1.60		
A011814	7943	3955	Kelsey Ranch LP	4/4/47	1,002.80	Mariposa, Merced	SOUTH FORK DRY CREEK, UNST
			<b>Kelsey Ranch LP Total</b>		1,002.80		
A016348	10503	7813	KENNETH J PULVINO	4/27/55	50.00	Mariposa	BEAN CREEK
			<b>KENNETH J PULVINO Total</b>		50.00		
A016969	10678	5509	LAUREL L ANDERSON	3/26/56	2.70	Mariposa	CRANBERRY SPRING
			<b>LAUREL L ANDERSON Total</b>		2.70		
A013954	8963	4323	LAUREL MUNSON BOYERS	9/20/50	0.20	Mariposa	CRANE CREEK
			<b>LAUREL MUNSON BOYERS Total</b>		0.20		
A018444	12134	7529	LEONARD SYNKOWICZ	12/24/58	1.20	Mariposa	UNST
			<b>LEONARD SYNKOWICZ Total</b>		1.20		
A021760	14875	9687	LLOYD MYERS	5/1/64	16.00	Mariposa	SAXON CREEK
			<b>LLOYD MYERS Total</b>		16.00		
A016736	11046	9275	LYLE TURPIN	11/16/55	55.60	Mariposa	UNST, WILLOW CREEK
			<b>LYLE TURPIN Total</b>		55.60		
A023731	16551	10498	MARGERY M DE LA MARE	3/22/71	1.00	Mariposa	UNSP
			<b>MARGERY M DE LA MARE Total</b>		1.00		
A020422	13988	8553	MARK HAYNES	3/18/68	16.70	Mariposa	EAST FORK PINEY CREEK
			<b>MARK HAYNES Total</b>		16.70		
A024212	16807	11733	MELBA WRIGHT	10/18/72	22.00	Mariposa	UNST
A027198	19304	12739	MELBA WRIGHT	2/2/82	8.20	Mariposa	UNST
			<b>MELBA WRIGHT Total</b>		30.20		
A020524	13735	8385	MERCED COMMUNITY COLLEGE DISTRICT	12/13/61	3.40	Mariposa	UNSP
			<b>MERCED COMMUNITY COLLEGE DISTRICT Total</b>		3.40		
A001221	912	990	MERCED IRRIGATION DISTRICT	3/26/19	868,773.00	Mariposa	MERCED RIVER
A001222	913	2684	MERCED IRRIGATION DISTRICT	3/26/19	491,080.20	Mariposa	MERCED RIVER
A001224	914	2685	MERCED IRRIGATION DISTRICT	6/20/03	345,440.00	Mariposa, Merced	MERCED RIVER
A016186	12825	11395	MERCED IRRIGATION DISTRICT	6/20/03	605,000.00	Mariposa	MERCED RIVER
A016187	12826	11396	MERCED IRRIGATION DISTRICT	12/23/54	1,861,824.90	Mariposa	MERCED RIVER
			<b>MERCED IRRIGATION DISTRICT Total</b>		4,172,118.10		
A019859	13044	8192	MIGUEL FLORES JR	11/28/60	2.50	Mariposa	UNXX
			<b>MIGUEL FLORES JR Total</b>		2.50		
A017204	10846	5919	MJ OAKS LLC	7/31/56	0.80	Mariposa	UNST
			<b>MJ OAKS LLC Total</b>		0.80		
A016463	10443	7282	OLIVER HAYCRAFT	7/13/55	18.00	Mariposa	UNST
			<b>OLIVER HAYCRAFT Total</b>		18.00		
A025842	17639	11876	P ORD HATTON	10/5/78	34.00	Mariposa	UNST
			<b>P ORD HATTON Total</b>		34.00		
A009056	5056	2555	PacificUS Real Estate Group	7/29/37	47.10	Mariposa	UNSP
A016646	10487	10522	PacificUS Real Estate Group	10/4/55	21.00	Mariposa	UNSP
			<b>PacificUS Real Estate Group Total</b>		68.10		



## Merced River Watershed - Post-1914 Appropriative Right Holders

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A016994	10556	6534	PHILIP M HOULIHAN	4/9/56	48.00	Mariposa	DUTCH CREEK
A017786	11217	6535	PHILIP M HOULIHAN	8/19/57	27.00	Mariposa	DUTCH CREEK
			<b>PHILIP M HOULIHAN Total</b>		75.00		
A016559	10845	7366	RICHARD FERRY	8/30/55	72.40	Mariposa	PORATH GULCH
			<b>RICHARD FERRY Total</b>		72.40		
A020476	13787	8658	ROBERT W KINGMAN	11/6/61	16.00	Mariposa	DUTCH CREEK
			<b>ROBERT W KINGMAN Total</b>		16.00		
A016431	10264	6363	ROBERTA G FLANAGAN	6/21/55	2.50	Mariposa	UNXX
			<b>ROBERTA G FLANAGAN Total</b>		2.50		
A012986	7809	3778	ROD KENNEC	3/17/49	17.90	Mariposa	LITTLE BEAR CREEK
			<b>ROD KENNEC Total</b>		17.90		
A016653	10486	6321	RODNEY A BAKER	10/10/55	17.10	Mariposa	SMITH CREEK
			<b>RODNEY A BAKER Total</b>		17.10		
A028536	19785	13775	RONALD B LUFFY	9/5/08	4.30	Mariposa	UNST
			<b>RONALD B LUFFY Total</b>		4.30		
A020969	14119	8707	ROSEMARY M GAMBLIN	10/5/62	31.50	Mariposa	DUTCH CREEK, UNST
			<b>ROSEMARY M GAMBLIN Total</b>		31.50		
A017012	10889	7627	RUSSELL BOCKHOP	4/17/56	8.00	Mariposa	UNST
			<b>RUSSELL BOCKHOP Total</b>		8.00		
A017523	11236	7138	THE BARRIER	3/22/57	9.30	Mariposa	UNST
			<b>THE BARRIER Total</b>		9.30		
A020765	13763	8358	The Estate of William Rottenkolber	5/3/62	10.00	Mariposa	UNST
			<b>The Estate of William Rottenkolber Total</b>		10.00		
A019306	12551	6891	THERAN L BALMAIN	3/14/60	0.60	Mariposa	UNXX
			<b>THERAN L BALMAIN Total</b>		0.60		
A018430	11877	9147	Tidall Virginia	12/9/58	46.00	Mariposa	BEAN CREEK
			<b>Tidall Virginia Total</b>		46.00		
A014979	9336	6392	TRAIAN MICU	8/19/52	180.00	Mariposa	SMITH CREEK
A031125	21122		TRAIAN MICU	1/10/01	60.00	Mariposa	SMITH CREEK
			<b>TRAIAN MICU Total</b>		240.00		
A018097	11726	7117	Transition Mountain Properties	4/21/58	4.20	Mariposa	MILLER GULCH
			<b>Transition Mountain Properties Total</b>		4.20		
A029559	20689	13768	U S BUREAU OF LAND MANAGEMENT	6/19/08	2.40	Mariposa	UNSP
			<b>U S BUREAU OF LAND MANAGEMENT Total</b>		2.40		
A006729	3549	6112	U S NATIONAL PARK SERVICE	7/11/30	170.60	Madera	UNSP (2)
A010488	6036	2973	U S NATIONAL PARK SERVICE	7/3/42	7.30	Mariposa	CRANE CREEK
A019116	12387	11233	U S NATIONAL PARK SERVICE	12/2/59	76.50	Mariposa	MOSS CREEK
			<b>U S NATIONAL PARK SERVICE Total</b>		254.40		
A019671	12991	8390	U S SIERRA NATL FOREST	8/18/60	0.30	Madera	UNSP
A027715	19740	13206	U S SIERRA NATL FOREST	4/12/83	0.10	Mariposa	UNST
A027717	19741	13207	U S SIERRA NATL FOREST	4/12/83	0.10	Mariposa	UNST
A027718	19742	13155	U S SIERRA NATL FOREST	4/12/83	0.10	Mariposa	UNST
			<b>U S SIERRA NATL FOREST Total</b>		0.60		
A011772	6842	3408	U S STANISLAUS NATL FOREST	3/12/47	0.90	Mariposa	UNSP
A017904	11347	6441	U S STANISLAUS NATL FOREST	12/4/57	1.00	Mariposa	PROUTY SPRING
A022229	15102	10349	U S STANISLAUS NATL FOREST	7/19/65	3.30	Mariposa	JORDAN CREEK
			<b>U S STANISLAUS NATL FOREST Total</b>		5.20		
A028321	19652	13486	US BUREAU OF LAND MANAGEMENT	11/9/84	0.40	Mariposa	UNST
A028322	19653		US BUREAU OF LAND MANAGEMENT	11/9/84	0.10	Mariposa	UNSP
			<b>US BUREAU OF LAND MANAGEMENT Total</b>		0.50		

Merced River Watershed - Post-1914 Appropriative Right Holders

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A023074	15746	10295	VERE GEARY	6/26/68	22.00	Mariposa	UNST
			<b>VERE GEARY Total</b>		22.00		
A014721	9768	6166	W B STURTEVANT	3/20/52	80.00	Mariposa	EAST FORK PINEY CREEK
			<b>W B STURTEVANT Total</b>		80.00		
A029615	20574		WALTER K BUNT & DOROTHY L BUNT TRUST ETAL	11/15/89	8.00	Mariposa	UNST
			<b>WALTER K BUNT &amp; DOROTHY L BUNT TRUST ETAL Total</b>		8.00		
A029012	20543	13561	Wendy L Garrish	9/10/03	0.70	Mariposa	PINEY CREEK
			<b>Wendy L Garrish Total</b>		0.70		
A018244	11854	7131	YOSEMITE-MARIPOSA KOA	7/30/58	4.50	Mariposa	UNST
			<b>YOSEMITE-MARIPOSA KOA Total</b>		4.50		
			<b>Grand Total</b>		4,175,203.90		

## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A015789	9819	5684	ALLISON S FAHEY	3/22/54	597	Stanislaus	DRY CREEK
			<b>ALLISON S FAHEY Total</b>		597		
A028622	20118	13057	ANITA SERRANO	11/19/85	200	Merced	DUTCHMAN CREEK
			<b>ANITA SERRANO Total</b>		200		
A017775	11410	7344	ANTHONY VALLELUNGA	8/16/57	44	Merced	DEADMAN CREEK
			<b>ANTHONY VALLELUNGA Total</b>		44		
A013018	7777	6132	ANTHONY J DUTRA	4/5/49	361.1	Stanislaus	STANISLAUS RIVER
			<b>ANTHONY J DUTRA Total</b>		361.1		
A028539	19943	13034	ARMELIM DE SOUSA	8/19/85	293	Stanislaus	UNST (AKA VIVIAN SLOUGH)
			<b>ARMELIM DE SOUSA Total</b>		293		
A013679	8224	4313	ARTHUR BRIGHT	4/7/50	1,592.80	Merced	DEADMAN CREEK
			<b>ARTHUR BRIGHT Total</b>		1,592.80		
A023257	16003	10359	AUGUST KNITTEL	4/10/69	4.00	Fresno	UNST
A023258	16002	10358	AUGUST KNITTEL	4/10/69	18.10	Fresno	UNST
A023313	16004	10360	AUGUST KNITTEL	7/15/69	1.70	Fresno	UNST
			<b>AUGUST KNITTEL Total</b>		23.80		
A024900	17060	13099	BASS LAKE SCHOOL DISTRICT	10/14/75	2.70	Madera	UNSP
			<b>BASS LAKE SCHOOL DISTRICT Total</b>		2.70		
A003736	1887	3927	BASS LAKE WATER COMPANY	5/20/54	217.20	Madera	North Fork Willow Creek
A011270	6514	3928	BASS LAKE WATER COMPANY	1/30/46	36.20	Madera	North Fork Willow Creek
A015566	11072	9993	BASS LAKE WATER COMPANY	10/5/53	355.00	Madera	North Fork Willow Creek
			<b>BASS LAKE WATER COMPANY Total</b>		608.40		
A020649	13814	8403	BIG CREEK COMMUNITY SERVICE DISTRICT	3/9/62	57.90	Fresno	BIG CREEK
			<b>BIG CREEK COMMUNITY SERVICE DISTRICT Total</b>		57.90		
A009573	5463	2847	BILL J LYONS JR	5/1/39	4,781.80	Stanislaus	TUOLUMNE RIVER
			<b>BILL J LYONS JR Total</b>		4,781.80		
A012634	8701	5875	BILLY D GRISSOM	8/6/48	1,467.80	Merced	DUCK SLOUGH
			<b>BILLY D GRISSOM Total</b>		1,467.80		
A001730	863	1661	BORBA FAMILY HOME & STEVINSON RANCH LP	3/22/20	955.1	Merced	MERCED RIVER
			<b>BORBA FAMILY HOME &amp; STEVINSON RANCH LP Total</b>		955.1		
A015835	9925	7298	BRENDA KNUTSON	4/14/54	11.8	Stanislaus	DRY CREEK
			<b>BRENDA KNUTSON Total</b>		11.8		
A013697	8179	4470	BRICHETTO TRUST	4/19/50	1,463.80	Stanislaus	UNCR
			<b>BRICHETTO TRUST Total</b>		1,463.80		
A021823	14922	9360	BRIGHT'S NURSERY INCORPORATED	5/8/70	685	Merced	DEADMAN CREEK
			<b>BRIGHT'S NURSERY INCORPORATED Total</b>		685		
A006963	3885	5495	BROCCHINI FARMS INC	5/19/31	4,096.90	Stanislaus	STANISLAUS RIVER
			<b>BROCCHINI FARMS INC Total</b>		4,096.90		
A018526	14677	8400	BRUCE AVERY	2/10/59	333.8	San Joaquin	STANISLAUS RIVER
			<b>BRUCE AVERY Total</b>		333.8		
A011741	6924	4420	CALIF DEPARTMENT OF TRANSPORTATION	2/21/47	204.7	Stanislaus	STANISLAUS RIVER
			<b>CALIF DEPARTMENT OF TRANSPORTATION Total</b>		204.7		
A001935	848	349	Camp Sierra Improvement Association	3/31/24	29.40	Fresno	ALDER CREEK
			<b>Camp Sierra Improvement Association Total</b>		29.40		
A011047	7583	8706	CHOWCHILLA WATER DISTRICT	5/9/45	6,195.70	Madera	ASH CREEK, BERENDA SLOUGH
A013175	9136	8577	CHOWCHILLA WATER DISTRICT	6/27/49	77,312.80	Madera	CHOWCHILLA RIVER
			<b>CHOWCHILLA WATER DISTRICT Total</b>		83,508.50		
A018718	12939	8257	CHRISTOPHER H GALFO	11/30/67	47.00	Fresno	LITTLE SANDY CREEK
A019193	12940	7818	CHRISTOPHER H GALFO	1/26/60	28.00	Fresno	UNST
			<b>CHRISTOPHER H GALFO Total</b>		75.00		

## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A004102	1816	2883	City of Modesto WQC Primary	10/22/47	1,219.90	Stanislaus	SAN JOAQUIN RIVER
			<b>City of Modesto WQC Primary Total</b>		1,219.90		
A013541	9076	4689	COSTA VIEW FARMS #2, A CA GEN PARTNERSHIP	9/20/57	21,689.60	Madera	FRESNO RIVER
A013541	9076	4689	COSTA VIEW FARMS #2, A CA GEN PARTNERSHIP	9/20/57	21,689.60	Madera	FRESNO RIVER
			<b>COSTA VIEW FARMS #2, A CA GEN PARTNERSHIP Total</b>		43,379.20		
A023231	16200	10592	COTTONWOOD CREEK VINEYARDS PARTNERSHIP	2/6/69	920	Madera	COTTONWOOD CREEK
			<b>COTTONWOOD CREEK VINEYARDS PARTNERSHIP Total</b>		920		
A012674	7675	7556	Couchman Brothers	9/2/48	1,622.70	Stanislaus	TUOLUMNE RIVER
			<b>Couchman Brothers Total</b>		1,622.70		
A024298	16638	11097	COUNTY OF MERCED	2/2/73	5	Merced	UNST
			<b>COUNTY OF MERCED Total</b>		5		
A027544	18910	12372	Cynthia A. Downing	9/30/82	0.30	Fresno	UNSP
			<b>Cynthia A. Downing Total</b>		0.30		
A028192	19732	12955	D & D LAND & WATER INC	7/16/84	907	Merced	SAN JOAQUIN RIVER
			<b>D &amp; D LAND &amp; WATER INC Total</b>		907		
A029966	20860		D.M. BRYANT FARMS INC	6/17/91	21.50	Madera	UNST
			<b>D.M. BRYANT FARMS INC Total</b>		21.50		
A023214	15869	10375	DAMAN PITTS	1/28/69	33.00	Fresno	UNST
			<b>DAMAN PITTS Total</b>		33.00		
A014104	8683	4081	DEER CREEK WATER ASSOCIATION	12/14/50	2.80	Fresno	DEER CREEK
			<b>DEER CREEK WATER ASSOCIATION Total</b>		2.80		
A026121	19395		DIRK J VLOT	10/22/79	2,534.00	Madera	EASTSIDE BYPASS
			<b>DIRK J VLOT Total</b>		2,534.00		
A027241	19140	12867	DM BRYANT FARMS INC	3/9/82	30.00	Madera	UNST
A027242	19141	12868	DM BRYANT FARMS INC	3/9/82	30.00	Madera	UNST
A027243	19142	12869	DM BRYANT FARMS INC	3/9/82	6.00	Madera	UNST
A027244	19143	12870	DM BRYANT FARMS INC	3/9/82	13.00	Madera	UNST
A027245	19144	12871	DM BRYANT FARMS INC	3/9/82	4.00	Madera	LITTLE FINE GOLD CREEK
			<b>DM BRYANT FARMS INC Total</b>		83.00		
A016465	10407	5578	DONALD HARCKSEN	7/14/55	19.6	Merced	MERCED RIVER
			<b>DONALD HARCKSEN Total</b>		19.6		
A014455	9568	4428	DONALD L SMITH	8/30/51	171.10	Madera	UNST
			<b>DONALD L SMITH Total</b>		171.10		
A013071	8703	4456	Donald L. Smith, Trustee	5/3/49	301.5	Merced	DUCK SLOUGH
			<b>Donald L. Smith, Trustee Total</b>		301.5		
A006467	3448	1295	DONALD M HEINY	10/26/29	190.2	Stanislaus	SAN JOAQUIN RIVER
			<b>DONALD M HEINY Total</b>		190.2		
A024520	19878	12836	DOROTHY R AYERS FAMILY TRUST	1/7/74	19.50	Madera	ARNOLD CREEK
			<b>DOROTHY R AYERS FAMILY TRUST Total</b>		19.50		
A025872	17656	11870	Double A Ranches	11/16/78	20	Stanislaus	UNST
			<b>Double A Ranches Total</b>		20		
A012396	7348	4949	EAST STANISLAUS RESOURCES CONSERVATION DISTRICT	3/11/48	487.9	Stanislaus	TUOLUMNE RIVER
			<b>EAST STANISLAUS RESOURCES CONSERVATION DISTRICT Total</b>		487.9		
A019738	12923	7494	EDWIN DANIELS	9/14/60	1.30	Madera	UNSP
			<b>EDWIN DANIELS Total</b>		1.30		
A017633	11484	6138	EL CAJON RETIREMENT RESIDENCE LP	5/31/57	77.4	Merced	UNST
A017812	11485	6139	EL CAJON RETIREMENT RESIDENCE LP	9/4/57	8.7	Merced	CANAL CREEK, UNST
A017813	11486	6140	EL CAJON RETIREMENT RESIDENCE LP	9/4/57	33.1	Merced	UNST

## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A018329	11781	6141	EL CAJON RETIREMENT RESIDENCE LP	9/23/58	1.3	Merced	UNST
A018330	11782	6142	EL CAJON RETIREMENT RESIDENCE LP	9/23/58	2.2	Merced	UNST
A024071	16613	10681	EL CAJON RETIREMENT RESIDENCE LP	5/22/72	7	Merced	UNST
			<b>EL CAJON RETIREMENT RESIDENCE LP Total</b>		129.7		
A018993	12472	9790	ELSIE KING	9/18/59	590	Stanislaus	VIVIAN SLOUGH
			<b>ELSIE KING Total</b>		590		
A020244	13495	7998	EST OF D E JACKSON & DIXIE R JACKSON	6/2/61	4.50	Madera	UNSP
			<b>EST OF D E JACKSON &amp; DIXIE R JACKSON Total</b>		4.50		
A016317	10209	7574	FORD RANCH INC	4/19/55	50.00	Fresno	UNST
A019577	12771	7631	FORD RANCH INC	7/26/60	26.00	Fresno	UNST
A019578	12772	7632	FORD RANCH INC	7/26/60	19.50	Fresno	UNST
A019581	12773	7635	FORD RANCH INC	7/26/60	13.10	Fresno	UNST
			<b>FORD RANCH INC Total</b>		108.60		
A011555	6742	3459	FRANK J GOMES DAIRY	9/17/46	941.2	Merced	MERCED RIVER
			<b>FRANK J GOMES DAIRY Total</b>		941.2		
A016329	11460	10393	GALLO CATTLE COMPANY, A PARTNERSHIP	4/21/55	9,020.00	Merced	LIVINGSTON DRAIN
A016604	11121	7220	GALLO CATTLE COMPANY, A PARTNERSHIP	9/15/55	7,239.80	Merced	UNSL
			<b>GALLO CATTLE COMPANY, A PARTNERSHIP Total</b>		16,259.80		
A012715	8354	4948	GALLO VINEYARDS, INC. (LIVINGSTON RANCH)	9/27/48	493.7	Merced	MERCED RIVER
			<b>GALLO VINEYARDS, INC. (LIVINGSTON RANCH) Total</b>		493.7		
A012987	7734	10045	GARY M BARTON	3/18/49	1,506.00	San Joaquin	STANISLAUS RIVER, UNSL
A013099	7768	9123	GARY M BARTON	5/17/49	83	San Joaquin, Stanislaus	STANISLAUS RIVER
A013100	7769	6130	GARY M BARTON	5/17/49	170.6	Stanislaus	STANISLAUS RIVER
A018715	12116	9960	GARY M BARTON	5/18/59	66	Stanislaus	STANISLAUS RIVER
			<b>GARY M BARTON Total</b>		1825.6		
A010255	5965	6445	GEORGE C JONES III	8/21/41	1,423.40	Merced	DRY CREEK
			<b>GEORGE C JONES III Total</b>		1,423.40		
A015680	9749	5653	GERTRUDE PELUCCA	1/11/54	273.7	Stanislaus	STANISLAUS RIVER
			<b>GERTRUDE PELUCCA Total</b>		273.7		
A020975	14129	9545	GIN FLATS LLC	10/9/62	2.20	Fresno	UNSP
			<b>GIN FLATS LLC Total</b>		2.20		
A010466	6064	3429	GIRARDI FARMS	5/25/42	1,279.40	San Joaquin	STANISLAUS RIVER
A014716	9011	4539	GIRARDI FARMS	3/17/52	474.5	San Joaquin	STANISLAUS RIVER
			<b>GIRARDI FARMS Total</b>		1753.9		
A023031	16060		GRAVELLY FORD WATER DISTRICT	4/18/68	5,000.00	Madera	COTTONWOOD CREEK
			<b>GRAVELLY FORD WATER DISTRICT Total</b>		5,000.00		
A003664	2360	1307	GRAVELSTONE RANCH LP	10/5/23	365	Merced	MERCED RIVER
A006603	3581	2429	GRAVELSTONE RANCH LP	3/17/30	660.6	Merced	MERCED RIVER
			<b>GRAVELSTONE RANCH LP Total</b>		1025.6		
A012262	7309	6985	Gregory B. Reed	1/26/48	2,171.90	Stanislaus	TUOLUMNE RIVER
			<b>Gregory B. Reed Total</b>		2,171.90		
A017208	12313	10673	HARRY H BAKER JR	8/3/56	580	Madera	FRESNO RIVER
			<b>HARRY H BAKER JR Total</b>		580		
A016662	10345	9816	HARRY H BAKER JR TRUST	10/10/55	230	Stanislaus	SAN JOAQUIN RIVER
			<b>HARRY H BAKER JR TRUST Total</b>		230		
A005702	3001	1880	HOOGENDAM FAMILY LIMITED PARTNERSHIP	9/29/27	426.5	Merced	NORTH SLOUGH MARIPOSA CREEK

## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A005703	3002	1881	HOOGENDAM FAMILY LIMITED PARTNERSHIP	9/29/27	1,279.40	Merced	NORTH SLOUGH MARIPOSA CREEK
			<b>HOOGENDAM FAMILY LIMITED PARTNERSHIP Total</b>		1,705.90		
A016934	10634	5993	JACK J GARDELLA JR	3/13/56	15	Tuolumne	UNST
A019042	12593	6945	JACK J GARDELLA JR	10/21/59	55	Tuolumne	UNST
A020976	14123	8248	JACK J GARDELLA JR	10/9/62	19	Tuolumne	UNST
			<b>JACK J GARDELLA JR Total</b>		89		
A020271	13380	8124	JAMES CURTONI	6/20/61	9	Stanislaus	UNST
			<b>JAMES CURTONI Total</b>		9		
A020364B	13428	008351B	JAMES R CHANCE	3/18/88	8	Merced	UNST
A022977B	15637	009776A	JAMES R CHANCE	3/18/88	50.5	Merced	UNST
			<b>JAMES R CHANCE Total</b>		58.5		
A009301	5192	4576	JAMES R DEMARTINI	5/20/38	1,066.10	Stanislaus	TUOLUMNE RIVER
			<b>JAMES R DEMARTINI Total</b>		1,066.10		
A001195	588	4934	JAMES S CODDINGTON	2/26/19	15,897.80	Stanislaus	SAN JOAQUIN RIVER
			<b>JAMES S CODDINGTON Total</b>		15,897.80		
A027546	19615		JEFF A LION	8/5/96	15,700.00	Madera	EASTSIDE BYPASS (AKA CHOWCHILLA CANAL)
			<b>JEFF A LION Total</b>		15,700.00		
A026829	18359	12028	Jerry Hollingshead	5/21/81	0.20	Fresno	UNSP
			<b>Jerry Hollingshead Total</b>		0.20		
A028679	20259	13270	JIMMY W LIPE	12/23/85	2.40	Fresno	UNST
A028908	20258	13271	JIMMY W LIPE	9/25/86	3.60	Fresno	UNST
			<b>JIMMY W LIPE Total</b>		6.00		
A020364C	13428	008351C	JOHN SMALLEY	3/18/88	1	Merced	UNST
A022977C	15637	009776A	JOHN SMALLEY	3/18/88	11.3	Merced	UNST
			<b>JOHN SMALLEY Total</b>		12.3		
A006748	3880	2549	JOHN VANDERSCHAAF JR	7/24/30	729.9	San Joaquin	LONE TREE CREEK
			<b>JOHN VANDERSCHAAF JR Total</b>		729.9		
A011003A	007582A	9073	JOHN HANCOCK LIFE INS. CO.	3/9/45	5,727.40	Madera	FRESNO RIVER
			<b>JOHN HANCOCK LIFE INS. CO. Total</b>		5,727.40		
A001442F	940	000388F	JOHN J SHAW	9/10/19	40.6	Merced	MERCED RIVER
			<b>JOHN J SHAW Total</b>		40.6		
A025373	17078	11286	JOHN M LASGOITY	5/31/77	24	Madera	UNST
			<b>JOHN M LASGOITY Total</b>		24		
A006539	3403	2044	JOSE DA SILVA	1/20/30	27.1	San Joaquin	UNDR
			<b>JOSE DA SILVA Total</b>		27.1		
A001322	890	311	JOSEPH E GALLO	6/11/19	182.5	Merced	MERCED RIVER
			<b>JOSEPH E GALLO Total</b>		182.5		
A016895	10696	6421	JOSEPH J CARDOZA	2/15/56	45.8	Merced	MERCED RIVER
			<b>JOSEPH J CARDOZA Total</b>		45.8		
A013414	7929	5274	Karlene H Bert	10/24/49	799.3	Stanislaus	STANISLAUS RIVER
			<b>Karlene H Bert Total</b>		799.3		
A011814	7943	3955	Kelsey Ranch LP	4/4/47	1,002.80	Mariposa, Merced	SOUTH FORK DRY CREEK, UNST
A018344	11787	6738	Kelsey Ranch LP	9/29/58	8.8	Merced	UNCR
A018345	11788	6480	Kelsey Ranch LP	9/29/58	5.6	Merced	UNCR
A018346	11789	6481	Kelsey Ranch LP	9/29/58	4.2	Merced	UNCR
A018347	11790	6482	Kelsey Ranch LP	9/29/58	8.1	Merced	UNCR
A018348	11791	6739	Kelsey Ranch LP	9/29/58	9	Merced	UNCR
			<b>Kelsey Ranch LP Total</b>		1038.5		
A022294	15550	10429	L EUGENE MONDO	9/24/65	26	Stanislaus	STANISLAUS RIVER

## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>L EUGENE MONDO Total</b>		26		
A026088	18077	12047	LEWIS MATHIS	9/13/79	188	Merced	UNST
			<b>LEWIS MATHIS Total</b>		188		
A027759	19031	12557	LINDA OUIMETTE	5/26/83	0.10	Madera	UNSP
			<b>LINDA OUIMETTE Total</b>		0.10		
A019746	12982	8031	LIVE OAK TRUST	9/20/60	17.00	Fresno	UNST
			<b>LIVE OAK TRUST Total</b>		17.00		
A018540	12215	8522	LURINE S TOPHAM	2/19/59	37.50	Fresno	UNST
A019005	12999	8523	LURINE S TOPHAM	9/28/59	45.00	Fresno	UNST
A020869	13897	8524	LURINE S TOPHAM	7/25/62	20.00	Fresno	UNST
A021951	15093	8525	LURINE S TOPHAM	11/4/64	10.00	Fresno	UNST
A022269	15094	9153	LURINE S TOPHAM	8/20/65	20.00	Fresno	UNST
A027159	19743	13028	LURINE S TOPHAM	12/23/81	3.10	Fresno	UNST
A027160	19744	13029	LURINE S TOPHAM	12/23/81	3.20	Fresno	UNST
			<b>LURINE S TOPHAM Total</b>		138.80		
A010710	6241	5077	M & R ZOLEZZI A PARTNERSHIP	9/11/43	273.7	San Joaquin	STANISLAUS RIVER
			<b>M &amp; R ZOLEZZI A PARTNERSHIP Total</b>		273.7		
A017311	11172	9229	MADERA IRRIGATION DISTRICT	10/4/56	4,700.00	Madera	FRESNO RIVER
			<b>MADERA IRRIGATION DISTRICT Total</b>		4,700.00		
A013344	8355	6418	MAGNESON REVOCABLE TRUST	9/8/49	1,122.30	Merced	MERCED RIVER
			<b>MAGNESON REVOCABLE TRUST Total</b>		1,122.30		
A005316	2937	4912	MCMULLIN RECL DISTRICT #2075	12/24/26	35,293.90	San Joaquin	STANISLAUS RIVER
A017966	14674	10403	MCMULLIN RECL DISTRICT #2075	1/29/58	490	San Joaquin	STANISLAUS RIVER
			<b>MCMULLIN RECL DISTRICT #2075 Total</b>		35783.9		
A016136	10115	7561	MENEFEE RIVER RANCH COMPANY	11/15/54	856.9	Merced	FRESNO RIVER
A026875	19669	13106	MENEFEE RIVER RANCH COMPANY	6/16/81	4,470.00	Merced	SAN JOAQUIN RIVER
			<b>MENEFEE RIVER RANCH COMPANY Total</b>		5,326.90		
A028626	20066	13378	MERCED COUNTY FIRE DEPARTMENT	11/25/85	0.4	Merced	MERCED RIVER
			<b>MERCED COUNTY FIRE DEPARTMENT Total</b>		0.4		
A001224	914	2685	MERCED IRRIGATION DISTRICT	6/20/03	345,440.00	Mariposa, Merced	MERCED RIVER
A006807	5732	5227	MERCED IRRIGATION DISTRICT	9/27/30	1,251.20	Merced	DEADMAN CREEK
A008238	4893	6032	MERCED IRRIGATION DISTRICT	2/11/35	5,066.00	Merced	DUCK SLOUGH
A010572	6808	6047	MERCED IRRIGATION DISTRICT	6/20/03	63,719.90	Merced	MERCED RIVER
A018774	13088	9429	MERCED IRRIGATION DISTRICT	6/8/59	5,000.00	Merced	DUCK SLOUGH
			<b>MERCED IRRIGATION DISTRICT Total</b>		420,477.10		
A005269	2727	1173	MICHAEL PASSALAQUA	11/15/26	635.4	Stanislaus	TUOLUMNE RIVER
			<b>MICHAEL PASSALAQUA Total</b>		635.4		
A004233	2261	1616	MICHAEL J KNAPP	2/28/36	255.5	Madera	CHOWCHILLA RIVER
A004233	2261	1616	MICHAEL J KNAPP	2/28/36	255.5		
			<b>MICHAEL J KNAPP Total</b>		511		
A025113	17303	11417	MICHELLE MIDBOE	7/27/76	0.30	Fresno	UNSP
			<b>MICHELLE MIDBOE Total</b>		0.30		
A006393	3386	3044	MOONSHINE DAIRY	8/3/29	868.8	Stanislaus	SAN JOAQUIN RIVER
			<b>MOONSHINE DAIRY Total</b>		868.8		
A017729	11214	6782	MUIR TRAIL RANCH, INC	7/19/57	271.70	Fresno	SENGER CREEK
			<b>MUIR TRAIL RANCH, INC Total</b>		271.70		
A013218	8130	5170	Myers Ranch, LLC	7/8/49	1,630.40	Merced	SNAKE SLOUGH
			<b>Myers Ranch, LLC Total</b>		1,630.40		
A011048	7584	5753	N & W Land Co. LLC	6/30/59	3,979.70	Madera	FRESNO RIVER
			<b>N &amp; W Land Co. LLC Total</b>		3,979.70		

## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A020148	13372	7960	NANCY GASSETT <b>NANCY GASSETT Total</b>	5/25/61	5.90	Fresno	UNST
A010957	6373	3036	NORTH FORK COMMUNITY DEVELOPMENT COUNCIL <b>NORTH FORK COMMUNITY DEVELOPMENT COUNCIL Total</b>	1/15/45	44.20	Madera	SOUTH FORK WILLOW CREEK
A008892	4924	2634	OAKDALE IRRIGATION DISTRICT	2/3/37	1,665.90	Stanislaus	STANISLAUS RIVER
A009666	5421	2706	OAKDALE IRRIGATION DISTRICT <b>OAKDALE IRRIGATION DISTRICT Total</b>	7/17/39	616.5	Stanislaus	STANISLAUS RIVER
A025688	17834	11824	PATRICIA J MANNING <b>PATRICIA J MANNING Total</b>	3/3/78	2282.4	Madera	SAN JOAQUIN RIVER
A011324	6615	3051	PATRICK DAVID MARTIN <b>PATRICK DAVID MARTIN Total</b>	3/25/46	1,471.00	Fresno	UNSP
A027777	19139		PHIL MUELLER	6/23/83	4.50	Merced	DUTCHMAN CREEK
A027880	19591		PHIL MUELLER <b>PHIL MUELLER Total</b>	9/16/83	85	Merced	DUTCHMAN CREEK
A001633	784	2072	PHILIP DICKERSON	1/20/20	170	Stanislaus	TUOLUMNE RIVER
A004607	2357	2071	PHILIP DICKERSON <b>PHILIP DICKERSON Total</b>	5/26/25	1,518.30	Stanislaus	TUOLUMNE RIVER
A023561	16184	10646	PREMIERE AGRICULTURAL PROPERTIES LLC <b>PREMIERE AGRICULTURAL PROPERTIES LLC Total</b>	7/20/70	356.6	Madera	COTTONWOOD CREEK
A014484	9229	5249	RANCHERIA WATER & IMPROVEMENT ASSN <b>RANCHERIA WATER &amp; IMPROVEMENT ASSN Total</b>	9/14/51	1874.9	Fresno	POTTER CREEK
A015919	10316	8498	RAY GENE VELDHIJS <b>RAY GENE VELDHIJS Total</b>	6/18/54	3.90	Merced	JONES DRAIN
A004945	2593	1336	RECLAMATION DISTRICT #2039 <b>RECLAMATION DISTRICT #2039 Total</b>	3/5/26	815.2	San Joaquin	MIDDLE RIVER, TRAPPER SLOUGH
A010365	5942	3035	REDEVELOPMENT AGENCY OF THE COUNTY OF MADERA <b>REDEVELOPMENT AGENCY OF THE COUNTY OF MADERA Total</b>	1/19/42	56,904.60	Fresno	SOUTH FORK WILLOW CREEK
A001442C	940	000388C	RICCI THORESON <b>RICCI THORESON Total</b>	9/10/19	36.20	Merced	MERCED RIVER
A026674	18416	12251	RICHARD LIAL	12/23/80	123.7	Stanislaus	UNST
A029133	20326	13324	RICHARD LIAL <b>RICHARD LIAL Total</b>	11/9/87	16.3	Stanislaus	UNST
A011390	6631	7451	RICHARD MARCHY <b>RICHARD MARCHY Total</b>	5/4/46	818.2	Stanislaus	TUOLUMNE RIVER
A004460	2277	8697	RIVER JUNCTION RECL DIST NO 2064 <b>RIVER JUNCTION RECL DIST NO 2064 Total</b>	2/14/25	818.2	San Joaquin	SAN JOAQUIN RIVER, STANISLAUS RIVER
A009834	5533	2827	Robert Albert Brocchini Trust	2/21/40	30,828.30	San Joaquin	STANISLAUS RIVER
A013628	8140	4918	Robert Albert Brocchini Trust <b>Robert Albert Brocchini Trust Total</b>	3/10/50	2,129.60	Stanislaus	STANISLAUS RIVER
A025168	17424	11416	ROBERT B FITZGERALD <b>ROBERT B FITZGERALD Total</b>	10/5/76	366	Fresno	UNSP
A020364A	13428	008351A	ROBINSON CATTLE COMPANY	3/18/88	0.40	Merced	UNST
A022976	15636	9777	ROBINSON CATTLE COMPANY	1/31/68	0.40	Merced	UNST
A022977A	15637	009776A	ROBINSON CATTLE COMPANY <b>ROBINSON CATTLE COMPANY Total</b>	3/18/88	1.9	Merced	UNST
A001628	692	289	Roger K Beeman	1/15/20	54.9	Stanislaus	STANISLAUS RIVER
A003516	1620	2009	Roger K Beeman <b>Roger K Beeman Total</b>	4/1/40	251.8	Stanislaus	STANISLAUS RIVER
A020135	13652	8479	ROY H RICHARDS	5/17/61	1153.3	Merced	UNST



## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
			<b>ROY H RICHARDS Total</b>		48.9		
A017362	10979	6834	ROY N TALLMAN	11/19/56	10.00	Fresno	UNXX
A017363	10980	6835	ROY N TALLMAN	11/19/56	48.00	Fresno	UNXX
A017364	10981	6836	ROY N TALLMAN	11/19/56	8.00	Fresno	UNXX
			<b>ROY N TALLMAN Total</b>		66.00		
A004061	1901	937	Sharon D. Naraghi	3/9/42	182	Stanislaus	DRY CREEK
A009225	5127	2374	Sharon D. Naraghi	1/12/38	477.6	Stanislaus	DRY CREEK
			<b>Sharon D. Naraghi Total</b>		659.6		
A004709	2381	2131	SHEILA KLIEWER	7/21/25	0.70	Madera	UNSP
			<b>SHEILA KLIEWER Total</b>		0.70		
A015924	10002	5636	SHIRLEY M WELDON	6/21/54	48.00	Fresno	LITTLE DRY CREEK, UNST
A015925	10003	5637	SHIRLEY M WELDON	6/21/54	48.00	Fresno	LITTLE DRY CREEK, UNST
			<b>SHIRLEY M WELDON Total</b>		96.00		
A020138	13359	9235	SIERRA LINDA MUTUAL WATER COMPANY INC	5/19/61	16.80	Madera	UNSP
			<b>SIERRA LINDA MUTUAL WATER COMPANY INC Total</b>		16.80		
A005271	2761	741	SIERRA PINES YOUTH CAMP, INC	11/16/26	14.50	Madera	UNSP (2)
			<b>SIERRA PINES YOUTH CAMP, INC Total</b>		14.50		
A017751	11504	6280	SPRING CREEK IMPROVEMENT ASSN	8/1/57	2.80	Fresno	SPRING CREEK
			<b>SPRING CREEK IMPROVEMENT ASSN Total</b>		2.80		
A018950			STATE WATER RESOURCES CONTROL BOARD	8/28/59	0	Madera	FRESNO RIVER
			<b>STATE WATER RESOURCES CONTROL BOARD Total</b>		0		
A028166	19456	12734	STEVE FIELDS	6/21/84	10	Stanislaus	UNST
			<b>STEVE FIELDS Total</b>		10		
A001885	893	5397	STEVINSON WATER DISTRICT	1/14/59	16,716.90	Merced	MERCED RIVER
A005724	5726	5940	STEVINSON WATER DISTRICT	10/17/27	79,534.40	Merced	BEAR CREEK, OWENS CREEK
A006111	5729	5941	STEVINSON WATER DISTRICT	11/5/28	58,552.90	Merced	ARENA SPILLWAY, BEAR CREEK, MCCOY SPILLWAY, OWENS CREEK
A007012	5733	6222	STEVINSON WATER DISTRICT	7/20/31	35,619.70	Merced	ARENA SPILLWAY, BEAR CREEK
			<b>STEVINSON WATER DISTRICT Total</b>		190,423.90		
A027326B		12759	SUSIE MOODY	4/26/91	0.70	Fresno	UNST
A027469	19303	12763	SUSIE MOODY	8/10/82	29.00	Fresno	UNST
			<b>SUSIE MOODY Total</b>		29.70		
A020049	13203	8939	TAMAR V ARMSTRONG	3/24/61	10.60	Madera	UNSP
			<b>TAMAR V ARMSTRONG Total</b>		10.60		
A001925	838	366	The Irrevocable Flying M Ranch Trust	7/15/24	424.5	Merced	BURNS CREEK
			<b>The Irrevocable Flying M Ranch Trust Total</b>		424.5		
A029279	20627		THE PROTESTANT EPISCOPAL BISHOP OF S J	6/24/88	11	Madera	LEWIS FORK FRESNO RIVER, UNST
			<b>THE PROTESTANT EPISCOPAL BISHOP OF S J Total</b>		11		
A010797	6505	5402	THE VANDER WOUDE FAMILY REVOCABLE TRUST OF NOV 25 2003	4/11/44	223.1	Merced	NORTH SLOUGH MARIPOSA CREEK
A024973	17419	11605	THE VANDER WOUDE FAMILY REVOCABLE TRUST OF NOV 25 2003	1/13/76	394	Merced	NORTH SLOUGH MARIPOSA CREEK
			<b>THE VANDER WOUDE FAMILY REVOCABLE TRUST OF NOV 25 2003 Total</b>		617.1		
A015628	11092	12268	U S FISH & WILDLIFE SERVICE	12/2/53	6,868.00	Merced	BRAVEL SLOUGH, DEEP SLOUGH
A020246	14323	10139	U S FISH & WILDLIFE SERVICE	8/5/61	360	Merced	DUCK SLOUGH
A027586	19473		U S FISH & WILDLIFE SERVICE	11/17/82	3,000.00	Merced	DEADMAN CREEK
			<b>U S FISH &amp; WILDLIFE SERVICE Total</b>		10,228.00		
A012416	7363	5342	U S SIERRA NATL FOREST	3/18/48	2.40	Fresno	BEAR CREEK, MONO CREEK
A013904	8656	4608	U S SIERRA NATL FOREST	8/18/50	96.00	Madera	MCCLURE LAKE CREEK
A013907	8659	4609	U S SIERRA NATL FOREST	8/18/50	155.00	Madera	LILLIAN LAKE CREEK
A014150	8681	4064	U S SIERRA NATL FOREST	2/6/51	0.30	Fresno	RANCHERIA CREEK

## San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A016424	10496	8203	U S SIERRA NATL FOREST	6/20/55	9.20	Madera	UNSP
A016426	10270	6263	U S SIERRA NATL FOREST	6/20/55	5.20	Fresno	COON CREEK
A017209	10992	6266	U S SIERRA NATL FOREST	8/3/56	100.00	Madera	RUTHERFORD LAKE CREEK
A017439	11009	7270	U S SIERRA NATL FOREST	1/28/57	29.00	Madera	UNST
A017594	11166	7587	U S SIERRA NATL FOREST	5/10/57	0.50	Madera	UNSP
A017595	11167	7588	U S SIERRA NATL FOREST	5/10/57	0.20	Madera	UNSP
A018245	12266	7274	U S SIERRA NATL FOREST	7/30/58	8.00	Fresno	BEAR CREEK
A018318	12267	8388	U S SIERRA NATL FOREST	9/15/58	16.10	Fresno	BIG CREEK
A019420	12420	7325	U S SIERRA NATL FOREST	5/6/60	103.00	Madera	MCCLURE LAKE
A019634	12729	7589	U S SIERRA NATL FOREST	8/1/60	0.10	Fresno	UNSP
A019635	12730	7590	U S SIERRA NATL FOREST	8/1/60	0.10	Fresno	UNSP
A019636	12731	6696	U S SIERRA NATL FOREST	8/1/60	0.40	Fresno	UNSP
A019637	12732	6697	U S SIERRA NATL FOREST	8/1/60	0.40	Fresno	UNSP
A019638	12733	6698	U S SIERRA NATL FOREST	8/1/60	0.10	Fresno	UNSP
A019639	12734	6699	U S SIERRA NATL FOREST	8/1/60	0.10	Fresno	UNSP
A019640	12735	6700	U S SIERRA NATL FOREST	8/1/60	0.40	Fresno	UNSP
A019641	12736	6914	U S SIERRA NATL FOREST	8/1/60	0.10	Fresno	UNSP
A019676	12738	7781	U S SIERRA NATL FOREST	8/18/60	0.40	Madera	UNSP
A019839	13175	8145	U S SIERRA NATL FOREST	11/3/60	8.80	Fresno	LINE CREEK
A019930	13146	9121	U S SIERRA NATL FOREST	1/24/61	11.20	Madera	UNSP
A021107	14247	9089	U S SIERRA NATL FOREST	1/2/63	0.70	Madera	MOUSE TRAP SPRING
A023979	16611	10878	U S SIERRA NATL FOREST	2/10/72	0.20	Fresno	UNSP
A027719	19882	13043	U S SIERRA NATL FOREST	4/12/83	0.20	Fresno	UNST
<b>U S SIERRA NATL FOREST Total</b>					548.10		
A000023	273	1986	U.S. BUREAU OF RECLAMATION	3/27/15	44,340.00	Madera	SAN JOAQUIN RIVER
A000234	11885		U.S. BUREAU OF RECLAMATION	6/29/59	2,124,486.50	Madera	SAN JOAQUIN RIVER
A001465	11886		U.S. BUREAU OF RECLAMATION	6/29/59	2,124,486.50	Madera	SAN JOAQUIN RIVER
A005638	11887		U.S. BUREAU OF RECLAMATION	6/29/59	3,917,477.50	Madera	SAN JOAQUIN RIVER
A014858B	20245		U.S. BUREAU OF RECLAMATION	7/18/88	1,000,000.00	Calaveras, San Joaquin	STANISLAUS RIVER
A018714	16301		U.S. BUREAU OF RECLAMATION	5/15/59	143,000.00	Madera	CHOWCHILLA RIVER
A018733	16584	13836	U.S. BUREAU OF RECLAMATION	8/25/11	71,600.00	Madera	FRESNO RIVER
<b>U.S. BUREAU OF RECLAMATION Total</b>					9,425,390.50		
A013345	8356	6419	UHRHAMMER PROPERTIES	9/8/49	405	Merced	MERCED RIVER
<b>UHRHAMMER PROPERTIES Total</b>					405		
A011438	6672	3314	V A RODDEN INC	6/17/46	1,273.40	Stanislaus	UNION SLOUGH
A030613	21156		V A RODDEN INC	7/10/03	3,769.50	Stanislaus	UNION SLOUGH
<b>V A RODDEN INC Total</b>					5,042.90		
A006160	5731	4638	VANDER WOUDE FARMS	1/14/29	138.7	Merced	NORTH SLOUGH MARIPOSA CREEK
<b>VANDER WOUDE FARMS Total</b>					138.7		
A005386	2847	1518	VANDER-WOUDE DAIRY	3/21/27	14,479.60	Merced	DUCK SLOUGH
<b>VANDER-WOUDE DAIRY Total</b>					14,479.60		
A013496	8037	4747	VERNA M MURRAY	12/2/49	83.9	Stanislaus	TUOLUMNE RIVER
<b>VERNA M MURRAY Total</b>					83.9		
A006479	3582	1443	VISTA LIVESTOCK COMPANY	11/6/29	36.6	Merced	DRY CREEK
<b>VISTA LIVESTOCK COMPANY Total</b>					36.6		
A006114	5730	2911	W P RODUNER CATTLE & FARMING COMPANY	11/9/28	2,945.50	Merced	DUCK CREEK
A011653	7585	4910	W P RODUNER CATTLE & FARMING COMPANY	12/10/46	14,519.20	Madera	ASH CREEK
A012635	8702	4909	W P RODUNER CATTLE & FARMING COMPANY	8/6/48	12,810.20	Merced	OWENS CREEK
<b>W P RODUNER CATTLE &amp; FARMING COMPANY Total</b>					30,274.90		

San Joaquin River Watershed - Post-1914 Appropriative Rights

Application ID	Permit ID	License ID	Holder Name	Date	Face Amt	County	Source
A020268	13377	7963	WALTER D HARRIS TRUSTEE OF THE WALTER D HARRIS TRUST DATED SEPTEMBER 29 2005	6/20/61	23.80	Fresno	UNST
A020269	13378	7964	WALTER D HARRIS TRUSTEE OF THE WALTER D HARRIS TRUST DATED SEPTEMBER 29 2005	6/20/61	28.00	Fresno	UNST
A020270	13379	7965	WALTER D HARRIS TRUSTEE OF THE WALTER D HARRIS TRUST DATED SEPTEMBER 29 2005	6/20/61	45.00	Fresno	UNST
			<b>WALTER D HARRIS TRUSTEE OF THE WALTER D HARRIS TRUST DATED SEPTEMBER 29 2005 Total</b>		96.80		
A016936	10636	5995	WILLIAM J FOGARTY	3/13/56	22.7	Stanislaus	UNST
A019044	12595	6947	WILLIAM J FOGARTY	10/21/59	30	Stanislaus	UNST
A020928	14122	8247	WILLIAM J FOGARTY	9/5/62	20	Stanislaus	UNST
			<b>WILLIAM J FOGARTY Total</b>		72.7		
A015371	9578	5478	WILLIAM J HALL	6/8/53	91.2	Stanislaus	TUOLUMNE RIVER
			<b>WILLIAM J HALL Total</b>		91.2		
A023861	16610	10928	WILLIAM J JAWIEN	9/3/71	0.70	Fresno	UNSP
			<b>WILLIAM J JAWIEN Total</b>		0.70		
A019227	12707	7805	William O Jamison	2/9/60	61.50	Madera	UNST
A022724	15563	9796	William O Jamison	5/26/71	20.3	Madera	UNST
A022727	15566	9848	William O Jamison	3/13/67	11.60	Madera	UNST
			<b>William O Jamison Total</b>		93.40		
A001442B	940	000388B	WILMA R THOMPSON	9/10/19	119.1	Merced	MERCED RIVER
			<b>WILMA R THOMPSON Total</b>		119.1		
A026152	18151	12012	WILSHIRE ALEC	12/26/79	0.40	Fresno	UNSP
			<b>WILSHIRE ALEC Total</b>		0.40		
			<b>Grand Total</b>		10,484,617.10		

## **Appendix D**

### **Section D.7 Priority Rankings for Sacramento River Water Rights Claimants**

## Sacramento + Trinity + East and West Creeks Above Feather River Confluence by Priority - Post-1914 Appropriative Water Rights

<b>Post-1914 Water Right Holder Name</b>	<b>Priority Date</b>	<b>Face Amount</b>
Reclamation District 1004	4/2/1915	56.0
Reclamation District 108	1/25/1917	97.5
River Garden Farms Company	1/25/1917	29.3
Sutter Mutual Water Company	2/1/1917	21.9
Tisdale Irrigation & Drainage Co	7/26/1917	12.5
Reclamation District 108	8/27/1917	270.7
Oji Brothers	1/3/1918	1.9
Sutter Mutual Water Company	1/3/1918	265.7
Provident Irrigation District	1/18/1918	40.1
Stanford Vina Ranch Irrigation Co	8/5/1918	4.6
Natomas Central Mutual Water Co	8/22/1918	16.2
Lomo Cold Storage	9/10/1918	2.0
Meridian Farms Water Company	9/10/1918	67.3
Sutter Mutual Water Company	1/24/1919	19.7
Conaway Preservation Group LLC	3/1/1919	43.6
Natomas Central Mutual Water Co	3/5/1919	58.4
Natomas Central Mutual Water Co	8/27/1919	36.7
Provident Irrigation District	9/2/1919	3.4
Glenn-Colusa Irrigation District	12/3/1919	28.1
Glenn-Colusa Irrigation District	1/14/1920	10.8
Rancho Esquon, Inc	2/5/1920	3.7
Sycamore Mutual Water Company	2/9/1920	42.5
Reclamation District 999	2/11/1920	58.4
Sutter Mutual Water Company	4/9/1920	1.5
US Bureau of Reclamation	2/17/1921	50.2
Butte Valley Irrigation District	2/28/1921	17.2
Rancho Esquon, Inc	10/9/1921	1.8
Rancho Esquon, Inc	3/4/1922	3.8
Gorrill Land Company	3/6/1922	4.6
Rancho Esquon, Inc	6/27/1922	3.0
Hot Springs Valley Irrigation District	4/12/1923	48.4
Sacramento River Ranch II	5/17/1923	2.6
Reclamation District 999	7/18/1924	3.9
Gorrill Land Company	6/30/1925	4.5
Rancho Esquon, Inc	6/30/1925	4.6
Sutter Mutual Water Company	6/22/1926	3.3
M & T Incorporated	7/17/1926	5.1
Parrott Investment Company	7/17/1926	5.1
Sacramento River Ranch II	2/17/1927	1.8
<b>Subtotal Before Initial State Filings in 1927</b>		<b>1,352.4</b>
US Bureau of Reclamation	7/30/1927	11,153.8
US Bureau of Reclamation	7/30/1927	3,349.9
Sutter Mutual Water Company	1/31/1928	0.1
Lomo Cold Storage	11/14/1929	20.3
Conaway Preservation Group LLC	4/18/1930	5.4
Natomas Central Mutual Water Co	5/28/1931	15.4
County of Sacramento	6/6/1931	2.7
Lomo Cold Storage	3/21/1932	0.7
South Fork Irrigation District	3/5/1934	17.0
Reclamation District 883	5/1/1934	2.2
M & T Incorporated	12/1/1934	5.1
Parrott Investment Company	12/1/1934	5.1
M & T Incorporated	2/27/1936	3.1
Parrott Investment Company	2/27/1936	3.1
Maxwell Irrigation District	4/8/1936	29.0
Glenn-Colusa Irrigation District	5/28/1936	0.7
<b>Subtotal Before Second State Filings in 1938</b>		<b>14,613.5</b>
US Bureau of Reclamation	8/2/1938	7,818.8

## Sacramento + Trinity + East and West Creeks Above Feather River Confluence by Priority - Post-1914 Appropriative Water Rights

<b>Post-1914 Water Right Holder Name</b>	<b>Priority Date</b>	<b>Face Amount</b>
Calif Dept of Fish & Game	6/19/1939	5.5
M & T Incorporated	9/22/1939	13.6
Parrott Investment Company	9/22/1939	13.6
Sutter Mutual Water Company	11/3/1939	0.6
Gorrill Land Company	3/13/1942	3.9
Sutter Mutual Water Company	6/16/1943	3.7
Oji Brothers	1/11/1945	2.9
Oji Brothers	3/6/1946	0.6
Reclamation District 108	5/26/1947	27.4
River Garden Farms Company	5/29/1947	6.3
Sutter Mutual Water Company	6/23/1947	2.7
Conaway Preservation Group LLC	9/8/1947	70.1
Glenn-Colusa Irrigation District	10/8/1947	3.4
Sycamore Mutual Water Company	3/17/1948	2.2
Pelger Mutual Water Company	4/13/1948	22.8
Sutter Mutual Water Company	4/13/1948	15.3
Sycamore Mutual Water Company	3/25/1949	2.3
US Fish & Wildlife Service	1/12/1950	44.2
Oji Brothers	2/20/1950	1.0
Reclamation District 108	2/24/1950	78.0
Maxwell Irrigation District	8/25/1950	4.9
Maxwell Irrigation District	6/28/1951	1.6
<b>Subtotal Before Feather River Project Rights Filed in 1951</b>		<b>8,145.4</b>
CA DWR	8/25/1951	1,575.2
Natomas Central Mutual Water Co	10/8/1953	11.8
M & T Incorporated	5/10/1954	0.5
Parrott Investment Company	5/10/1954	0.5
Lomo Cold Storage	11/28/1955	0.2
Tisdale Irrigation & Drainage Co	4/3/1956	1.4
Princeton-Codora-Glenn Irrig Dist	5/2/1956	15.1
US Bureau of Reclamation	11/28/1956	1,335.4
US Bureau of Reclamation	11/28/1956	1,230.8
CA DWR	3/15/1957	1,100.0
Maxwell Irrigation District	6/24/1957	34.6
Calif Dept of Fish & Game	10/24/1957	5.3
US Fish & Wildlife Service	10/25/1957	8.0
US Bureau of Reclamation	4/30/1958	160.0
US Bureau of Reclamation	9/16/1959	3,030.8
South Fork Irrigation District	3/14/1960	2.2
US Bureau of Reclamation	7/28/1960	1,335.4
US Bureau of Reclamation	4/12/1961	9,032.0
US Fish & Wildlife Service	7/3/1961	21.7
<b>Subtotal of Most Feather River and CVP Filings 1951-1961</b>		<b>18,901.0</b>
Rancho Esquon, Inc	2/5/1965	5.5
US Fish & Wildlife Service	7/19/1965	14.5
Gorrill Land Company	10/25/1965	2.5
Hot Springs Valley Irrigation District	3/17/1966	20.0
Reclamation District 999	4/1/1966	35.6
Sutter Mutual Water Company	9/7/1967	2.0
Butte Valley Irrigation District	4/10/1968	10.0
Calif Dept of Fish & Game	7/24/1968	5.2
Reclamation District 1004	12/26/1968	21.0
Pelger Mutual Water Company	3/13/1972	1.7
Calif Dept of Fish & Game	12/21/1972	5.5
Sycamore Mutual Water Company	12/22/1972	1.0
Sacramento River Ranch II	3/1/1973	12.7
Calif Dept of Fish & Game	4/10/1974	7.4
Gorrill Land Company	4/12/1978	4.4

## Sacramento + Trinity + East and West Creeks Above Feather River Confluence by Priority - Post-1914 Appropriative Water Rights

<b>Post-1914 Water Right Holder Name</b>	<b>Priority Date</b>	<b>Face Amount</b>
Reclamation District 1004	12/1/1978	36.0
County of Sacramento	8/19/1982	0.5
Pelger Mutual Water Company	9/16/1994	5.0
Maxwell Irrigation District	2/17/1995	13.6
Princeton-Codora-Glenn Irrig Dist	11/19/1998	24.4
Provident Irrigation District	11/19/1998	26.7
Glenn-Colusa Irrigation District	2/18/1999	182.9
City of Sacramento	10/30/2000	81.8
Provident Irrigation District	2/27/2001	124.5
Princeton-Codora-Glenn Irrig Dist	12/17/2001	71.8
US Bureau of Reclamation	7/29/2002	2,203.1
Glenn-Colusa Irrigation District	5/3/2006	53.7
Sacramento County Water Agency	2/15/2008	71.0
Reclamation District 108	10/18/2010	36.0
Woodland-Davis Clean Water Agency	4/14/2011	45.0
<b>Subtotal Since 1963</b>		<b>3,125.0</b>
<b>Total</b>		<b>46,137.3</b>

Source: State Water Resources Control Board; California Water Impact Network.

## Appendix E

### Appendix E Water Availability Analysis Model Assumptions and Methodology

Analysis of water supply availability must account for water rights claims in addition to the variability contained within watershed hydrology. C-WIN's method of water supply availability has three components: watershed hydrology, known water rights claims, and yield estimation from the interaction of hydrology and water claims. All analytic methods contain assumptions.

#### Hydrology and Instream Flow Assumptions:

- The State Water Resources Control Board adopts a Delta inflow criterion for the major tributaries of the San Joaquin River Basin of 60 percent of unimpaired flow. This implies a diversion cap not to exceed 40 percent of unimpaired flow in the San Joaquin River Basin.
- The State Water Resources Control Board adopts a Delta inflow criterion for the major tributaries of the Sacramento River Basin of 75 percent of unimpaired flow. This implies a diversion cap not to exceed 25 percent of unimpaired flow in the San Joaquin River Basin. As with the San Joaquin, C-WIN is well aware that this is an assumption, not a foregone conclusion.
- C-WIN's water supply availability analysis relies on the 82-year unimpaired flow hydrology prepared for water years 1922 through 2003 by the California Department of Water Resources (2007). These data are arrayed by major watershed of the Central Valley and Delta. C-WIN calculated monthly decile, quartile and median flows by month and year, and then calculated the subtotals for key regulation periods: November through June for the Sacramento River Basin, and February through June for the San Joaquin River Basin. The percent of regulated period to total flows in the unimpaired hydrology was also calculated for each year, from which deciles, quartiles, medians, averages, and minima and maxima were calculated.
- The annual total and regulated period subtotals were then employed in the water rights yield analysis component. Remaining flows in the non-regulation season (July to October in the Sacramento Basin, July to January in the San Joaquin Basin) are estimated by simply subtracting regulation season flows from annual totals.
- All non-regulated flows are assumed to be fully available for diversion by water right holders; no instream flow requirements are assumed for the unregulated flow period. This assumption inflates the amount of water that junior water right holders would be allocated during this period of the year, and may ignore temperature restrictions for fish protection.
- No monthly breakdown of flows and diversion allocations is attempted.
- Use of an 82-year unimpaired flow hydrology accounts for inter-annual flow variations in assessing the potential for paper water.

#### Water Rights Claims Assumptions:

- C-WIN sought to gather water rights information from a variety of sources. Using the Public Records Act, C-WIN requested from nearly 100 different public water districts and agencies information concerning any and all pre-1914 water rights they may have. Many had no pre-1914 water rights. Others provided copies of pre-1914 notices, copies of adjudication decrees, operation agreements, diagrams, statements of diversion and use, and other



## Appendix E

information that described their early water rights claims. C-WIN wishes to express our gratitude for their helpful responses, which are too numerous to mention here.

- C-WIN also gathered from the State Water Resources Control Board's web site copies of adjudication decrees from the Pit River watershed, the Stanislaus River, Butte Creek, and the Indian Creek and Middle Fork Feather River watersheds.
- State law requires that pre-1914 and riparian water right holders file Statements of diversion and use with the State Water Resources Control Board annually. The Board has made most, but not yet all SDUs available online. The Board's eWRIMS database search engine itemizes each SDU but does not provide usage quantities when query answers are returned in the vast majority of cases. Consequently, C-WIN staff downloaded as many as possible to study and record the highest usage claims, as well as year of first usage. C-WIN includes only SDUs with cumulative usage claims by the same claimant that exceed 1,000 acre-feet. This kept the research scope manageable, while also capturing statistically significant cumulations of water usage.
- C-WIN's reliance on SDUs assumes that each usage report they contain is accurately measured. The highest amount claimed is employed to represent the maximum claim that might be exerted by the water right holder on behalf the right under which the reported diversion was made. This is assumed to be the case regardless of whether the type or right claimed is riparian or pre-1914.
- Many SDUs do not provide adequate usage information, however, and were ignored. Therefore, it is quite possible that C-WIN's use of SDU data in this analysis understates the magnitude and location of riparian and pre-1914 water rights claims throughout the Sacramento and San Joaquin river basins.

### **Yield Analysis Assumptions:**

- The water rights priority system would operate subordinate to the application of water quality instream flow objectives.
- The obverse of the Board's instream flow objectives is referred to in our method as a "diversion cap." a 75 percent of unimpaired flow criterion thus is converted to a 25 percent of unimpaired flow diversion cap for Sacramento River Basin rivers in this analysis. In other words, if 75 percent of unimpaired flow is available for fish and aquatic beneficial uses, the 25 percent of unimpaired flow is available for diversion to consumptive uses. For the San Joaquin River Basin, a 60 percent of unimpaired flow objective is reflected in the analysis as a 40 percent of unimpaired flow diversion cap.
- Under the diversion cap, paramount riparian water rights are given first diversion rights, followed by senior pre-1914 water right holders, based on highest usage claimed, the cumulative face amount of water rights claim notices, adjudications, or other water rights claim source. For some river models, riparian and pre-1914 water rights claims are bundled together to simplify the analysis when the pre-1914 rights are senior to all other succeeding rights. Only after major pre-1914 water rights claims are any post-1914 appropriative water rights granted by the State of California provided with any remaining flows. Post-1914 water rights that are not shown in a specific river model's results are left off because no flows are left for these rights to divert given the model's operation.
- SDU highest use claims, adjudication allocations, and pre-1914 water right notice claims by the same entities are summed. While this appears to be double-counting, we believe it is important to cumulate them on the assumption that when the Board or a court undertakes

## Appendix E

to adjust water rights, the Board or court must be aware of all claims (both in notices as well as in uses) made in order to remove clouds from their titles.

- As noted above, the unimpaired flow hydrology data is analyzed to determine an average percent of regulated period to total flow for each river. This average indicates that share of the hydrograph's overall flows that occur during the regulated period. We assume that water right claimants claim their supplies under the diversion in a manner that is directly proportional to the regulated period's share of the overall total flow for that river. (This is a water diverter's way of "mimicking the natural hydrograph.") For all riparian and many pre-1914 water right holders, this seemed a reasonable assumption; for post-1914 water right holders whose rights may have limited seasons of diversion or contributions to storage, this assumption may break down. However, but this assumption might only come into play during the wettest portions of each river's overall unimpaired flow hydrology, if at all. The factors used for each river system is shown in Table E-1:

Table E-1 Factors Used to Determine Water Right Claimants' Diversions During Regulated Period in Sacramento River and San Joaquin River Basins			
Sacramento River Basin		San Joaquin River Basin	
River	Regulated Period as Percent of Total Unimpaired Flow	River	Regulated Period as Percent of Total Unimpaired Flow
Trinity	94%	Stanislaus	85%
Sacramento River at Feather River Confluence	87%	Tuolumne	76%
Feather	90%	Merced	81%
Yuba	94%	San Joaquin	77%
Bear	97%		
American	95%		

Sources: California Department of Water Resources 2007; California Water Impact Network.

- Default calculation method for pre-1914 water rights notices are often expressed in cubic feet per second (cfs) without seasonal limitation are to multiply the cfs by 3600 (seconds per hour), then by 24 (hours in a day), then by 365.25 days per year. The result is then divided by 43,560 square feet to the acre to obtain the face amount expressed in acre-feet.
- Default calculation method for pre-1914 water rights notices expressed in miners inches is to divide the miners inches by 50 to convert the claim to cubic feet per second, then follow the calculation for converting cfs claims to acre-feet of face amount. We see this as a conservative conversion assumption. Some pre-1914 water right holders may have legal documents that suggest that the conversion should be 40 miners inches to 1 cubic feet per second. This would increase the face value of such pre-1914 water rights by 20 percent.

**Appendix E**

- Default calculation method for water rights claims (particularly in SDUs) expressed in gallons per day was to divide the gallons by 325,851 gallons per acre-foot, then multiply by the number of days in the usage season disclosed in the SDU.
- These calculation methods are employed for estimating the quantity of rights administered under adjudication decrees as well. Diversion seasons mandated under the decrees were used as well.

## Appendix F

**Appendix F**  
**California Water Code Article 1.3**  
**Declaration of Fully Appropriated Streams**

**1205.** (a) Following notice and hearing, the board may adopt a declaration that a stream system is fully appropriated. As used in this article, "stream system" includes stream, lake, or other body of **water**, and tributaries and contributory sources, but does not include an underground **water** supply other than a subterranean stream following through known and definite channels.

(b) A declaration that a stream system is fully appropriated shall contain a finding that the supply of **water** in the stream system is being fully applied to beneficial uses where the board finds that previous **water** rights decisions have determined that no **water** remains available for appropriation.

(c) Upon its own motion or upon petition of any interested person, and following notice and hearing, the board may revoke or revise a declaration that a stream system is fully appropriated.

**1206.** (a) From and after the date of adoption of a declaration that a stream system is fully appropriated, and subject to subdivision (b), the board shall not accept for filing any application for a permit to appropriate **water** from the stream system described in that declaration, and the board may cancel any application pending on that date.

(b) Notwithstanding subdivision (a), the board may provide, in any declaration that a stream system is fully appropriated, for acceptance for filing of applications to appropriate **water** under specified conditions. Any provision to that effect shall specify the conditions and may contain application limitations, including, but not limited to, limitations on the purpose of use, on the instantaneous rate of diversion, on the season of diversion, and on the amount of **water** which may be diverted annually. The board may make those limitations applicable to individual applications to appropriate **water**, or to the aggregate of the applications, or to both.

(c) Subdivision (a) shall not apply to applications for temporary permits made pursuant to Chapter 6.5 (commencing with Section 1425) or to any provision of this **code** respecting change in point of diversion, place of use, or purpose of use.

**1207.** Notice of hearing pursuant to this article shall be given as follows:

(a) The notice shall be published at least once a week for four consecutive weeks in one or more newspapers of general circulation published in each county in which any part of the stream system is situated, and publication shall be complete at least 60 days prior to the date of hearing.

(b) At least 60 days prior to the date of the hearing, the notice shall be mailed to all persons known to the board who own land that appears to be riparian to the stream system, who divert **water** from the stream system, or who have made written request to the board for special notice of hearing pursuant to this article.

**Appendix G**  
**Selected Fully-Appropriated Rivers and Creeks**  
**of the Bay-Delta Estuary's Central Valley Watershed**

<b>River</b>	<b>Fully-Appropriated Season</b>	<b>Critical Reach</b>
Trinity	1/1 to 12/31	North Fork from Salmon-Trinity Primitive Area to Helena at river mouth (W&S)
	1/1 to 12/31	South Fork Trinity from State Route 36 to river mouth at Salver (W&S)
	1/1 to 12/31	Main stem from 100 yards below Lewiston Dam to river mouth at Weitchpec (W&S)
Pit River	4/1 to 11/30	North and South Forks, Franklin Creek, and Pit River in Big Valley adjudications
	3/15 to 10/31	Ash Creek from confluence with Pit River upstream (adjudication)
McCloud	1/1 to 12/31	Mainstem from Algoma to Lake McCloud, mainstem from McCloud Dam to Shasta Lake (W&S)
Squaw Creek	1/1 to 12/31	Squaw Valley Creek from Section 14, T38N, R3W to confluence with McCloud River
Feather	1/1 to 12/31	Middle Fork from confluence of its tributary streams 1 KM south of Beckwourth, CA. (W&S)
	5/15 to 9/30	Middle Fork at Beckwourth, CA upstream (D-831)
	4/1 to 11/30	Indian Creek from North Fork Feather upstream (adjudication)
	3/1 to 10/31	South Fork Feather from confluence of Oroville Dam and Middle and South Forks of Feather River upstream (D-25)
	7/1 to 9/30	From confluence of Feather with Sacramento River upstream (D-1275)
	4/15 to 9/30	Sierra Valley channels from the confluence of Middle Fork Feather River at Beckwourth upstream (D-1391)
	7/1 to 11/30	West Branch of Feather River from upper Miocene Canal Head Dam located in Section 30, T23N R4E, upstream (D-844)
Yuba	8/1 to 10/31	From Englebright Dam upstream (D-934)
	4/1 to 11/30	From Shady Creek within Section 17, T17N R7E and upstream of South Fork Yuba River (adjudication)
Bear	5/1 to 11/30	From Camp Far West Reservoir upstream (D-1091)
	4/15 to 11/30	From Wolf Creek upstream (above Bear River, D-1059, D-1091)
American	1/1 to 12/31	North Fork of American River from source to Iowa Hill Bridge (W&S)
	1/1 to 12/31	North Fork of American River from point 0.3 miles above Heath Springs to 1,000 feet upstream of Colfax-Iowa Hill Bridge, including Gold Run Addition area. (W&S)
	7/1 to 10/31	From the Sacramento River upstream (D-1108)

**Appendix G**  
**Selected Fully-Appropriated Rivers and Creeks**  
**of the Bay-Delta Estuary's Central Valley Watershed**

River	Fully-Appropriated Season	Critical Reach
	5/1 to 10/31	White Rock Creek from the confluence with South Fork American upstream (D-1522, D-1211)
	7/1 to 12/31	Silver Creek from confluence with South Fork American upstream (D-163, D-1211)
	6/15 to 10/31	Sugar Loaf Creek from confluence with South Fork American upstream (D-776)
Butte Creek	4/1 to 11/30	Butte Creek from confluence with Butte Sink in T17N R1E (adjudication)
	6/1 to 9/30	Butte Creek from confluence of Butte Slough upstream (D-1329)
Stony Creek	4/1 to 11/30	Stony Creek from confluence with Sacramento River upstream (adjudication)
Cache Creek	4/15 to 10/31	Cache Creek from confluence with Yolo Bypass upstream (D-1506)
Putah Creek	1/1 to 12/31	Putah Creek from Monticello Dam upstream (D-869, WR Order 96-002)
Stanislaus River	4/1 to 11/30	From confluence with San Joaquin River upstream (adjudication)
	7/1 to 10/31	From confluence with San Joaquin River upstream (D-1422)
Tuolumne	1/1 to 12/31	From source on Mount Lyell and Mount Dana to Don Pedro Reservoir (W&S)
	7/1 to 12/31	From Don Pedro Reservoir upstream (D-995)
Merced	1/1 to 12/31	From south side of Mount Lyell in Yosemite National Park to 300 feet upstream of confluence with Bear Creek (W&S)
	1/1 to 12/31	South Fork Merced River from Triple Divide Peak to confluence with mainstem of Merced River (W&S)
Chowchilla	1/1 to 12/31	From confluence of Chowchilla River with San Joaquin River upstream (D-1365)
Fresno River	5/1 to 11/30	From Hidden Dam and Fresno River upstream (D-1407)
San Joaquin	1/1 to 12/31	From confluence with Mendota Pool upstream (D-935)
Fresno Slough	1/1 to 12/31	From confluence with San Joaquin River upstream to Kings River and including upstream watershed of Kings River (D-1290)
Sacramento-San Joaquin Delta	6/15 to 8/31	From the Delta upstream - allowing no diversions from the Delta less than 1 cubic foot per second or less than 100 acre-feet in storage. (D-1594)

Source: State Water Resources Control Board, 1998. Key: W&S = Wild & Scenic Designation; adjudication = decree issued adjudicating water rights in that critical reach; D-"[Some number]" refers to a Board Water Rights Decision.

# RECLAMATION

*Managing Water in the West*

## **Draft Environmental Assessment**

**Option Agreement Between Glenn-Colusa  
Irrigation District, Bureau of Reclamation,  
and the San Luis & Delta-Mendota Water  
Authority for 2008 Operations**



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

February 2008

# PURPOSE AND NEED

## Introduction

The Bureau of Reclamation, Glenn-Colusa Irrigation District (GCID), and the San Luis & Delta-Mendota Water Authority (SLDMWA) have negotiated an agreement entitled *Option Agreement Between Glenn-Colusa Irrigation District, Bureau of Reclamation, and the San Luis & Delta-Mendota Water Authority for 2008 Operations* (Agreement). The Agreement provides that GCID will forbear diversion of up to 85,000 acre-feet of Sacramento River water that GCID otherwise is entitled to under the terms of its Sacramento River Settlement Contract No. 14-06-200-855A (Settlement Contract) with Reclamation and which GCID would have diverted during 2008 for use on lands within its Settlement Contract service area. The forbearance shall be undertaken in a manner that allows Reclamation to deliver the forborne water supply as Central Valley Project (CVP) water to SLDMWA. The term of the Agreement will be from the date of execution of the Agreement through and including February 28, 2009, or if the option under the Agreement is terminated by April 21, 2008, then this Agreement shall expire immediately thereafter.

The Agreement enables Reclamation to implement Section 3406d(1) of the Central Valley Project Improvement Act, which requires the Secretary of the Department of the Interior to diversify sources of supply to minimize adverse effects upon CVP contractors from delivery of Level II refuge water supplies south of the Sacramento-San Joaquin Delta (Delta).

GCID has completed California Environmental Quality Act (CEQA) compliance documents for its proposed action (to be appended to the Final Environmental Assessment) (EA) and are incorporated by reference.

## Purpose and Need Statement

The purpose of the Federal action is to diversify sources of supply to minimize adverse effects upon CVP contractors from delivery of Level II refuge water supplies south of the Delta. The need for the proposed forbearance is to provide additional water supplies for CVP purposes, including delivery of CVP water to SLDMWA for irrigation of crops within SLDMWA's contractors' existing service areas.

The annual CVP allocation for south-of-Delta contractors is described in terms of a percentage of the total contracted supply under CVP south-of-Delta water service contracts for irrigation and municipal and industrial uses (Contract Total). This transaction is needed because the CVP south-of-Delta irrigation allocation for water service contractors for 2008 is anticipated to be as low as 30 to 60 percent of the CVP Contract Total. By comparison, the projected long-term average allocation of CVP irrigation water south of the Delta is approximately 65 percent of Contract Total, and a recent historic average is 76.4 percent over the past 5 years, with a variation between 50 and 100 percent. The potential reduction in 2008 water allocation is further



exacerbated due to lower-than-average CVP carryover storage and Federal court-mandated actions for delta smelt protection. This water purchase would assist in acquiring an amount of water for the participating south-of-Delta CVP water service contractors to help make up for the reduced water allocations. None of the purchased water would be made available to supplement water under settlement or exchange contracts, as these do not share in the allocation shortages imposed on the water service contractors.

## **ALTERNATIVES**

### **Enter into an Agreement with the Glenn-Colusa Irrigation District and the San Luis & Delta-Mendota Water Authority (Reclamation's Proposed Action)**

Reclamation proposes to enter into an agreement with GCID and SLDMWA whereby GCID would forbear a portion of their base supply and CVP water, which would then be picked up by Reclamation as CVP water to be used for project purposes.

#### **No Action Alternative**

Reclamation would not enter into the agreement with GCID and SLDMWA and, therefore, would not provide any of the benefits of CVP storage.

## **DESCRIPTION OF THE PROPOSED ACTION**

### **Forbearance of Water**

GCID agrees to forbear the diversion of a portion of the Sacramento River water that it otherwise is entitled to under the terms of its Settlement Contract with Reclamation and which it would have diverted during 2008 for use on lands within its Settlement Contract service area. GCID would make this water available in accordance with a surface water forbearance program undertaken by GCID in cooperation with landowners who voluntarily decide to participate in the program. The forborne water would be deemed to be comprised of Base Supply and CVP water in the same ratio as these types of water bear to each other in Schedule A of the Settlement Contract. This forbearance would be undertaken in a manner that allows Reclamation to deliver the forborne water supply as CVP water to SLDMWA. Water made available would be delivered to Reclamation at the intake of the GCID's Hamilton City pumping plant at river mile 206 on the Sacramento River, with control of such water accruing to Reclamation at its upstream reservoirs or upon export in the Delta.

Under the proposal, Reclamation would operate the project so as to deliver water made available as a result of GCID's forbearance of diversions to SLDMWA, or its contractors, at the locations identified in their respective water service contracts. During balanced conditions in the Delta (as

defined in the Coordinated Operations Agreement), Reclamation would, to the extent possible, directly divert the water forborne as additional CVP water at Jones or Banks Pumping Plants (assuming there is unused pumping capacity and all conditions necessary for joint point of diversion are met), or would, to the extent that operational conditions upon the Sacramento River permit, back the forborne water into Reclamation's upstream storage so that it can be released and diverted in the Delta at a later time when export capacity becomes available. During excess conditions in the Delta and when the CVP reservoir release is controlled by a downstream flow objective, Reclamation would, to the extent possible, store water forborne in an upstream CVP reservoir for later release and diversion in the Delta. Such operational conditions would be identified by Reclamation's Central Valley Operations office, which would keep daily records of the volume of the forborne water as it becomes available for export and/or storage. Forborne water made available under conditions that do not permit its diversion from the Delta and/or storage in upstream reservoirs would be considered lost. Water backed into storage pursuant to this proposal would be delivered to SLDMWA as soon as possible after its storage in an upstream reservoir. SLDMWA would pay for such storage at the rate determined by Reclamation. Water stored in an upstream CVP reservoir pursuant to this forbearance proposal would be the first water to spill. Water not spilled and carried over to the following year would be available to SLDMWA as supplemental water to be pumped at the Delta facilities when there is pumping capacity.

## **Quantities of Water to be Forborne**

GCID would make up to 85,000 acre-feet of water available for sale as a result of cropland idling and crop shifting and groundwater substitution programs. The forborne water would be made up of up to 82,500 acre-feet of water made available from cropland idling or crop shifting actions by GCID's landowners and up to 2,500 acre-feet of water made available from groundwater substitution attributable to pumping from two electric wells owned by GCID. The sources of this water would be a portion of GCID's base supply and CVP water under its Settlement Contract. Base supply diverted by GCID under the terms of its Settlement Contract is pursuant to pre-1914 appropriative claims to water by GCID for diversions from the Sacramento River. CVP water available to GCID under the terms of its Settlement Contract is pursuant to post-1914 appropriative claims to water by Reclamation for diversions from the Sacramento River.

The main source of water from idled land is expected from rice fields because rice accounts for about 90 percent of the water use in GCID.

The total diversions by GCID, including the amount of water made available by forbearance as determined under this proposal and any amount of water that may be transferred under its Settlement Contract during the April through October contract period, would not exceed GCID's total Contract Amount as specified in its Settlement Contract. Table 1 below provides the expected monthly schedule that water would be made available by GCID through crop shifting/cropland idling and groundwater substitution and the source (Evapo-Transpiration Rate of Applied Water (ETAW), fallowing, or groundwater).

**Table 1**  
**Water Availability Schedule**

	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sept</b>	<b>Oct</b>	<b>Nov</b>	<b>Total</b>
ETAW (%)	15	22	24	24	15			100
Fallowing (AF)	12,375	18,150	19,800	19,800	12,375			82,500
Groundwater			500	500	500	500	500	2,500
<b>Total</b>	12,875	18,650	20,300	20,300	12,875	500	500	85,000

## **Central Valley Project Location**

The CVP area, defined by the region in which the water is generated for transfer, is within the GCID boundaries and situated within Glenn and Colusa Counties (see attached Figures 1 and 2). The precise location of the lands involved in the project would depend upon the actual landowners who voluntarily choose to participate in the forbearance program for 2008. Because participation in the forbearance program would be offered to all eligible growers, GCID anticipates a wide dispersal of acreage enrolled in the program. Adequate water levels would be maintained by GCID in laterals and drains associated with the idled lands to avoid any potential wildlife impacts associated with dewatered conveyances. The two GCID-owned wells that would be used for groundwater substitution are depicted in Figure 1. The lands to be fallowed are shown in Figure 3 (attached).

The SLDMWA region stretches from the city of Tracy in San Joaquin County at the north to Highway 41 and Kettleman City in Kings County to the south. On the east, the region is generally bound by the San Joaquin River and to the west by the Coast Range. The region also encompasses parts of Monterey, San Benito, Santa Clara, and Santa Cruz Counties. The areas participating in this project are expected to include Del Puerto, Pacheco, Panoche, San Luis, San Benito County, and Westlands Water Districts and water service contractors in Fresno, Kings, Merced, San Benito, San Joaquin, and Stanislaus Counties. A map of the SLDMWA illustrating its external and internal boundaries, including those of the participating districts, can be found in Figure 4.

The Contract Total for the participating districts would be 1,681,453 acre-feet as set forth in Table 2 below:

**Table 2  
Contract Totals by Water District**

	<b>CONTRACT TOTAL ACRE-FEET</b>
Del Puerto	140,210
Pacheco	10,000
Panoche	94,000
San Luis	125,080
San Benito County	43,800
Westlands (including assignments)	1,268,363
<b>TOTAL</b>	<b>1,681,453</b>

## **Methods of Making Water Available**

No new construction or improvements to facilities owned or operated by Settlement Contractors would be necessary for the production and forbearance of this water. The point of delivery for the Settlement Contractors would be at a variety of different locations on the Sacramento River as identified in their respective Settlement Contracts.

### **Groundwater**

The up to 2,500 acre-feet of water made available through groundwater substitution would be equal to the quantity of groundwater pumped and would be measured with totalizing flow meters installed by or under the direction of GCID. GCID would, to the greatest extent practicable, make such groundwater available during balanced conditions in the Delta. Water made available by groundwater pumping during excess conditions in the Delta would not be accrued in upstream storage or exported by Reclamation.

### **Cropland Idling and Crop Shifting**

To forbear from taking surface water deliveries from GCID, GCID's landowner participants may voluntarily choose to idle acreage or substitute different crops that use less water. GCID anticipates that rice acreage would comprise most of the crop acreage, if not all, that would be involved as part of the forbearance program. To provide for an assessment for environmental impacts and to address concerns regarding potential economic impacts, GCID would not allow more than 20 percent of the total acreage within GCID that was served with surface water deliveries from GCID during the 2007 irrigation season to be idled as part of the project. In this regard, approximately 125,000 acres were planted within GCID and served with surface water deliveries from GCID during the 2007 irrigation season. The proposed ETAW for rice culture is 3.3 acre-feet per acre, which is consistent with the recent ETAW rates used for water transfers in the Sacramento Valley based on cropland idling of rice acreage (California Water Plan Update, Bulletin 160-05, December 2005). Therefore, if up to 20 percent of GCID's 2007 acreage is idled under the forbearance program ( $125,000 \times .20 = 25,000$  acres), the water made available for transfer by idling rice would be up to 82,500 acre-feet of water ( $25,000 \text{ acres} \times 3.3 \text{ acre-feet/acre}$ ).

GCID would also allow for crop shifting under this forbearance program; however, it is expected that no more than 1,000 acres would involve landowners who voluntarily choose to cultivate different crops having lower water demand. In these cases, the difference between the ETAW of the higher and lower water demand crops would be used to calculate water made available. The ETAW values that have been assigned to various croplands that may be idled or shifted under the proposed project are identified below in Table 3.

**Table 3**  
**Estimated ETAW Values for Various Crops**  
**for Use in the 2008 Irrigation Season Forbearance Program**

<b>Crop</b>	<b>ETAW</b>
Rice	3.3
Tomato	1.8
Safflower	.7
Wheat	.5
Corn	1.82
Sunflower	1.43
Alfalfa	3.0
Melon	1.12
Bean	1.52
Onion	1.1
Vine Seed	1.12
Sudan Grass	3.0
Walnut	3.0
Almond	3.0
Oats	.5
Pumpkin	1.1
Pasture	3.3
Cotton	2.8
Milo	1.65
Silage	1.8
Carrots	1.1

The typical growing season for rice culture is April through October, although surface water is generally applied only from May through September. The potential ETAW demand across these months is shown in Table 1 with the corresponding water production expectations, assuming that there is enough participation in the program to produce 82,500 acre-feet of water made available from cropland idling/crop shifting and 2,500 acre-feet of water from groundwater substitution.

The total diversions by GCID, including the amount of water made available by forbearance as determined under this proposal and any amount of water that may be transferred under their

Settlement Contracts during the April through October contract period, would not exceed GCID's total Contract Amount as specified in its Settlement Contract.

Water would be made available by GCID to SLDMWA at the point of delivery in accordance with the preceding schedule. SLDMWA would make arrangements under existing contractual agreements with Reclamation for SLDMWA's conveyance of the transferred water through the Delta, pumping the water into the California Aqueduct or the Delta-Mendota Canal, and the ultimate delivery of the water into the SLDMWA service area. In the near term, additional restrictions are anticipated as a result of interim operational remedies to be imposed by the United States District Court, Eastern District of California in *NRDC v. Kempthorne*, which will govern CVP and State Water Project (SWP) operations for the protection of the delta smelt (*Hypomesus transpacificus*). Conclusion of the current consultation on the Long-Term Central Valley Project and State Water Project Operations Criteria and Plan (OCAP) with the U.S. Fish and Wildlife Service (Service) and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries Service), is expected to provide new biological opinions during 2008 for delta smelt, salmon, and green sturgeon that would replace the court's order regarding CVP/SWP operation. As a result, water may not be able to be transferred in certain months due to environmental restrictions on CVP/SWP pumping.

Reclamation and the California Department of Water Resources (DWR) estimate that approximately 20 percent of the water transferred through the Delta would be necessary to enable the maintenance of water quality standards, which are based largely upon the total amount of water moving through the Delta system. This percentage of water is known as *carriage water*. Additionally, DWR may assess against SLDMWA a 3 percent system loss due to evaporation and other losses for water received at the Banks pumping plant and transported through the SWP. Accordingly, the 85,000 acre-feet of water made available by GCID to Reclamation and SLDMWA at the point of delivery would actually yield to SLDMWA up to approximately 65,450 acre-feet (based on transfer of direct forgone crop water consumption only). At the end of the irrigation season, the amount of carriage water actually required would be calculated by Reclamation and DWR and assessed against SLDMWA. Depending upon the hydrologic year type and other operational constraints, the actual amount of carriage water assessed against SLDMWA for the transfer would vary somewhat from this estimate.

## **Use of Water by the San Luis & Delta-Mendota Water Authority**

Upon the effective date of the Agreement, GCID would convey to SLDMWA an option to purchase up to 85,000 acre-feet of water made available by GCID during the 2008 irrigation season. The deadline for SLDMWA to exercise its option to request GCID to make water available is April 21, 2008. If SLDMWA exercises its option, SLDMWA would take delivery of this water using existing conveyance facilities operated within parameters typical for CVP deliveries. This water would be used to irrigate lands that were under irrigation over the last 3-year period: 2005 through 2007. The acquired supplies would provide additional resource options to the participating SLDMWA irrigation water service contractors to mitigate potential

dry-year water shortage conditions and water supply reductions due to remedial Delta operations for delta smelt mitigation in 2008. Given Delta carriage losses to be charged against the 85,000 acre-feet, the actual delivered amount is expected to be approximately 68,000 acre-feet, or substantially less than 5 percent of Contract Total south-of-Delta supplies for CVP water service contractors in general, and approximately 4 percent for the participating districts. Given the overall uncertainty as to the 2008 allocation, the exact total irrigation water supply to the participating water service contractors cannot presently be determined, but it is highly unlikely it would exceed 65 percent. If it did exceed 65 percent, it would be a maximum incremental increase for the 1-year term of approximately 4 percent. Any amount of water that may be transferred under the Agreement would not exceed the respective Contract Totals specified in the CVP water service contracts of any SLDMWA members that received such water. Accordingly, any water made available under the Agreement would not represent a dependable long-term increase in supply.

## **ENVIRONMENTAL CONSEQUENCES**

### **Hydrology and Water Quality**

#### **No Action Alternative**

No changes to existing water resources would occur under the no action alternative.

#### **Reclamation's Proposed Action Alternative**

The proposed action would not involve any discharges and thus would not have an adverse impact upon water quality or result in degradation of water quality. Minor improvements in water quality may be expected, as flows below Hamilton City would be increased by roughly 2 to 3 percent. No adverse water quality impacts in the Delta are expected, as all water quality related to pumping restrictions at the export pumps would be maintained during diversion of the CVP water at either the Tracy or Banks pumping plants. As rice lands are generally underlain by impermeable clays (a necessary condition to rice culture), little percolation of water would normally occur; insignificant amounts of groundwater recharge would be affected by cropland idling. Additionally, since only the ETAW value of water applied to the crop would be forborne, the remainder of the applied water would remain in the system for other users. Moreover, GCID has agreements in place with junior water rights holders on the Colusa Drain (Drain) to maintain water quality in the Drain.

The proposed project would not alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river. Minor reductions in drainage from idled fields would result, but these would not increase erosion, siltation on- or off-site, or the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Water levels in the Drain would not be affected, as they are tightly controlled through the management of weirs to prevent flooding of fields on the western side of the Drain. The water made available would be maintained within the Sacramento River and the existing CVP and/or SWP conveyance and

storage systems. In addition, there are no ground-disturbing activities associated with the proposed project.

The proposed project would not create or contribute runoff water. Therefore, no impacts relating to storm water drainage systems would occur with CVP implementation.

All facilities which would be utilized are existing facilities designed according to standard engineering design practices to limit the potential for exposure of people or property to water-related hazards such as flooding. Therefore, no impact relating to flooding would occur with the proposed project.

Temporary storage of up to 82,500 acre-feet of water in Shasta Reservoir would not significantly affect hydrology/water quality. Compared to the capacity of the Shasta Reservoir (about 4.5 million acre-feet) and related water management activities, this is, for practical purposes, a very minor amount of water in any event, and the reservoir currently has several hundred thousand acre-feet of unused storage space late in the 2008 rainy season. Any effect of storing this water would be discountable. Under no circumstance would use of CVP facilities be allowed that would adversely affect any CVP purposes (including water supply, flood control, and environmental requirements).

## **Biological Resources/Endangered Species**

### **No Action Alternative**

No changes in existing agricultural patterns or modifications in the amount or timing of water deliveries, which could affect biological resources or endangered species, would occur under the no action alternative.

### **Proposed Action Alternative**

Biological resources potentially affected by the proposed project are in most cases different in the GCID service area and the Sacramento River conveyance corridor from the water delivery area within the SLDMWA. However, adverse affects are not expected in any of these areas.

### **Wildlife in General**

The proposed project would result in the idling of up to approximately 25,000 acres of rice fields. Rice fields in the CVP area serve as foraging habitat for many waterfowl species. However, implementation of the proposed project would not interfere substantially with the foraging of native resident or migratory waterfowl because other foraging habitat is abundant, both locally and regionally. Because the proposed project would not convert any agricultural lands to non-agricultural land uses, the only change would be a 1-year increase in the time between planting of rice in the CVP farmlands and a minor reduction in the acreage of rice lands available to waterfowl for foraging in 2008. This reduction in foraging acreage is less than significant based upon the regional abundance of flooded foraging habitat. Therefore, a less-than-significant impact would result to potential wildlife corridors for waterfowl, which include



the CVP acreage. Therefore, Reclamation's Proposed Action Alternative is unlikely to adversely affect waterfowl (enter into an agreement with GCID and SLDMWA).

The proposed project would slightly increase flows during July through September in the lower Sacramento River as a result of reduced diversions at Hamilton City. Because of the relatively large volume of summer flows in the Sacramento River, changes in flows resulting from the proposed project would be small, and effects on fish in the Sacramento River would be negligible. Therefore, the proposed action is unlikely to adversely affect the movement of any native resident or migratory fish species under Reclamation's Proposed Action Alternative (enter into an agreement with GCID and SLDMWA).

No non-drainage facility-related wetlands are located within the boundaries of the project site, and, as previously noted, the water levels and the water quality in the Drain would be maintained. Therefore, no impacts to wetlands would occur from the proposed project. Any riparian areas along service or drainage canals within the CVP boundaries would not be adversely impacted by the proposed project activities, as water levels would be maintained near levels which would otherwise occur.

### **Threatened or Endangered Species**

While multiple special-status species are present in the SLDMWA service area, the project provides for an incremental water supply to an existing agricultural area to partially make up shortages from the ordinary supply available through the CVP and subject to the terms of existing CVP contracts. The action would not involve conversion of any land fallowed and untilled for 3 or more years. It would not change the land use patterns that affect existing available habitats for bald eagle (*Haliaeetus leucocephalus*), vernal pool tadpole shrimp (*Lepiderus packardii*), vernal pool fairy shrimp (*Branchinecta lynchi*), Longhorn fairy shrimp (*Branchinecta longiantennal*), conservancy fairy shrimp (*branchinecta conservation*), Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*), Central California steelhead trout (*Oncorhynchus mykiss*), South Central California steelhead trout (*Oncorhynchus mykiss-CCC-ESU*), California tiger salamander (*Ambystoma claiiforniense*), California red-legged frog (*rana aurora draytonii*), Blunt-nosed leopard lizard (*Gabelia sila*), giant garter snake (*Thamnophis gigas*), Tipton kangaroo rat (*dipodomys nitratoides nitratoides*), riparian woodrat (*Neotoma Fuscipes riparia*), riparian brush rabbit (*sylvilagus bachmani riparius*), giant kangaroo rat (*Dipodomys ingens*), or San Joaquin kit fox (*Vulpes macrotis mutica*), all of which are possible or present within portions of the SLDMWA service area. For the same reasons, the proposed project will not affect migratory corridors of the San Joaquin kit fox, critical habitat for the vernal pool invertebrates described above, riparian habitat of the riparian woodrat or riparian brush rabbit, and will not change the pattern of cultivated or fallowed fields that do have some value to listed species of birds protected by the Migratory Bird Treaty Act. Due to the lack of natural waterways within the species' range in the SLDMWA service area and the limitations in Delta export capacity and water quality restrictions implemented through various regulatory programs affecting water management in that service area, there would be no effects on listed fish species. Therefore, no adverse affects would occur within the SLDMWA service area.

The proposed action would not adversely affect listed species in GCID's service area dependent upon the water-filled irrigation ditches and drains, as GCID would maintain water levels in the irrigation ditches and has contractual agreements to maintain water quality in the Drain. The habitat value of the lands subject to idling within GCID, which varies seasonally under normal use, would be affected some, but the percentage change would be small. The greatest use of these lands by vertebrates arguably occurs in the fall and winter when wintering waterfowl forage or rest in flooded rice fields. Wildlife use during other periods is generally quite limited, as these lands are devoted to annual crops.

Several special-status wildlife species have the potential to occur within GCID and on the lands that would be idled or the agricultural waterways serving them: the giant garter snake (listed as state and federally threatened), the northwestern pond turtle (listed as a state species of special concern and Federal species of concern), and the Valley Elderberry Longhorn Beetle (VELB) (threatened). However, the waterways and ditch borders most important to these species would not be altered, as the ditches would remain watered. Additional species, primarily plants and animals found in vernal pools or other natural wetlands, may occur near some of the lands subject to idling, but such habitats would not be affected by the proposed action, as the hydrology in the natural and artificial waterways would remain unchanged. Also, the bald eagle, which may be present as a transient, would only be expected on these lands during the winter when water fowl, one of its sources of food, are present.

The special-status species in the Sacramento River and Delta would not be adversely affected, as the water levels in those systems would be slightly augmented. There would be no adverse affect on the Sacramento River winter-run Chinook salmon (listed as state and federally endangered), Central Valley spring-run Chinook salmon (listed as federally threatened), the delta smelt (listed as state and federally threatened), the Central Valley steelhead (listed as federally threatened), and the green sturgeon (listed as federally threatened).

Detailed species specific accounts follow.

### ***Giant Garter Snake (Thamnopsis gigas)***

The giant garter snake (GGS) may be found in agricultural wetlands such as rice fields and irrigation and drainage canals. These artificial wetlands and waterways can potentially be used for purposes such as ease of movement; protection from predators; warmth to aid metabolism, gestation, and digestion; and as a food source. (*Draft Recovery Plan for the Giant Garter Snake. 1999*). While the irrigation patterns throughout the Settlement Contractors' lands would be modified as a result of the proposed project, water levels in irrigation and drainage canals would be maintained within several inches of non-CVP operations, and no complete drying out of such conveyances would occur. As such, water conveyance systems would remain watered and available to the snake and other wildlife that utilize it. In this regard, the lands within GCID that are currently enrolled to participate in the forbearance program for 2008 are depicted on the map in Figure 3. GCID's extensive network of lateral and drainage canals is also depicted on this map. This map shows that all of these enrolled lands are within one-quarter mile or closer to GCID's canal network. This further serves to minimize any

potential adverse affects to the GGS by providing transportation corridors and foraging and cover areas in immediate proximity to the fallowed lands.

Flooded rice fields in the Sacramento Valley can be used by the GGS for foraging, cover, and dispersal purposes. The non-irrigated CVP fields would have little or no vegetation, retaining the open character that is currently present in fields that are between plantings or that otherwise have relatively little vegetative cover. The maximum increase in the percentage of land idled in this project would be 20 percent of the total amount of acreage within GCID served with surface water deliveries during the 2007 irrigation season. Accordingly, at least 80 percent of GCID's irrigable acreage would remain unaffected or would be subject to changed cropping selection that preserves the vegetated condition of the land. Lands taken out of production would be dispersed throughout GCID such that the contiguous nature of idled lands would be minimized, allowing for a mosaic of lands that could be utilized by the GGS throughout GCID's jurisdiction. The changes to agricultural fields that would occur under the proposed project could have minor and temporary indirect effects on the GGS through the decrease in potential cover and foraging areas as a result of the reduction in planted rice acreage. The 1-year duration of the proposed project minimizes any potential disruption to the GGS. Moreover, GCID, in consultation with the Service, has developed certain best-management operations and maintenance practices for agricultural lands that are within GGS habitat. GCID implements these measures on a voluntary basis in order to minimize any impacts to the GGS.

Therefore, Reclamation's Proposed Action Alternative (enter into an agreement with GCID and SLDMWA) would not cause a direct adverse or cumulative adverse effect on GGS in the study areas.

***Northwestern Pond Turtle (Clemmys marmorata marmorata)***

The northwestern pond turtle inhabits waters with little or no current. The banks of inhabited waters usually have thick vegetation, but basking sites such as logs, rocks, or open banks must also be present. Pond turtles lay their eggs in nests in upland areas including grasslands, woodlands, and savannas. Pond turtles could potentially be found in and along irrigation and drainage canals, but would not be residents of rice fields. The proposed project would not eliminate water from the conveyance canals within each service area. Therefore, the proposed project would not impact the northwestern pond turtle, either directly or indirectly.

Therefore, Reclamation's Proposed Action Alternative, i.e., to enter into an agreement with GCID and SLDMWA, would cause neither a direct adverse effect nor a cumulative adverse affect on the northwestern pond turtle in the study areas.

***Chinook Salmon (Oncorhynchus tshawytscha), Delta Smelt (Hypomesus transpacificus), Steelhead (Oncorhynchus mykiss), and Green Sturgeon (Acipenser medirostris)***

The Sacramento River south of GCID and the Delta form a migration corridor and provide seasonal rearing habitat for winter-run and spring-run Chinook salmon, steelhead, and green sturgeon. The Delta and lower Sacramento River also provide spawning and nursery habitat for

delta smelt. The proposed delivery of water to SLDMWA would be delivered through the Delta with timing similar to SLDMWA's typical CVP deliveries in conformance with all existing and pending requirements under the Endangered Species Act (ESA), including court orders, which govern CVP and SWP operations for the protection of Chinook salmon, delta smelt, green sturgeon, and steelhead.

The proposed action would not compromise the environmental regulations that specify minimum flow requirements for winter-run and spring-run Chinook salmon and steelhead. Required releases from Shasta Reservoir for the protection of fisheries would continue to be made. Flows in the lower reaches of the Sacramento River and much of the Delta would increase slightly. Diversions through the pumps in the Delta would occur under the requirements of the court's interim remedies order in *NRDC v. Kempthorne*, which will govern CVP and SWP operations for the protection of the delta smelt, pending the conclusion of the current consultation on the Long-Term CVP and SWP OCAP with the Service and the NOAA Fisheries Service. This consultation is expected to provide new biological opinions during 2008 for delta smelt, salmon, and green sturgeon that would replace the court's interim remedies order. SLDMWA's diversions of water made available under this proposed project would be undertaken in compliance with the new biological opinions. As such, there would be no direct or indirect impact from the proposed project on listed fish species in the Delta.

Therefore, Reclamation's Proposed Action Alternative (enter into an agreement with the Settlement Contractors and SLDMWA) is unlikely to adversely affect listed species.

## **Geology and Soils**

### **No Action Alternative**

No change from the existing pre-CVP conditions.

### **Proposed Action Alternative**

Based upon readily-available soil map information, most of the CVP area is underlain by fine-textured, strongly-structured soils such as clay and silty clay. Such soils are susceptible to wind erosion but have a relatively low wind erodibility index. The National Resources Conservation Service's 2001 Annual National Resources Inventory found that wind erosion averaged 2.1 tons per acre on cropland.

Agricultural practices dominate over climatic variability in determining temporal variability in dust blowing off cropland in the Sacramento Valley. Farming operations that increase wind erosion and dust emissions include plowing, leveling, planting, weeding, seeding, fertilizing, mowing, cutting, baling, spreading compost or herbicides, and burning fields. These actions can be avoided when a field is left fallow for the season, resulting in a net reduction of wind erosion and dust.

The use of the soils for the proposed project is short-term and is in accordance with past farming practices. No significant impacts are expected from the proposed project.

## **Agricultural Resources/Land Use**

### **No Action Alternative**

Under the No Action Alternative (the typical benchmark), a small percentage of lands within GCID's service area would be rotated and temporarily removed from farm production for improvements such as land leveling, weed abatement, etc. When land is rotated, in almost all occasions some water is applied to check the leveling actions and also to aid in weed eradication.

### **Proposed Action Alternative**

Idled land for purposes of developing water for the proposed project would be above the typical amount of land typically not under production due to regular farming operational requirements. Within SLDMWA, the proposed activity would result in maintaining typical irrigation patterns and avoiding an increased amount of land idling during 2008 due to water shortages during that year. The amount of water supplementing the SLDMWA participating districts' CVP allocation will amount to a maximum, after deductions for Delta carriage losses, of approximately 68,000 acre-feet, representing approximately 4 percent of the Contract Total for the participating districts. This is an amount within the normal annual variability of such deliveries and less than the Contract Total that has been applied in some years. Therefore, the additional water will not be expected to significantly increase the farmed acreage.

Acreage within GCID's service area may be temporarily idled or cropping patterns shifted (or irrigated with groundwater) to generate the quantity of water identified under the proposed project. The quantity of water made available would be determined based upon the agreed-upon acreage and consumptive use schedule for the lands idled, irrigated with groundwater, or subject to crop shifting. The land idling and cropping changes are considered ongoing routine agricultural activities: the magnitude and intensity of which changes from year to year in response to various factors. No land use changes other than the intended temporary fallowing would result from this action and, because of the short-term duration of this activity (2008 only), this action would not act as an incentive for land use changes.

## **Cultural Resources**

### **No Action and Proposed Action Alternatives**

Reclamation's No Action and Proposed Action Alternatives would not affect cultural resources because the proposed project does not change land use or include construction of new facilities. Water use and land use would remain unchanged during the 1 year of the proposed project.

## Indian Trust Assets

### No Action and Proposed Action Alternatives

Reclamation's No Action and Proposed Action Alternatives would not affect any Indian Trust Assets (ITA) within the study areas. The Colusa and Cortina Rancherias' Indian lands closest to GCID's service area are approximately 3 and 7 miles, respectively, from GCID. There could be minor, temporary impacts from groundwater pumping to these ITAs. Modeling of groundwater pumping in recent environmental analyses, such as the Environmental Impact Statement for the renewal of the Sacramento River Settlement Contracts, indicated that even substantial groundwater pumping would only cause localized and temporary effects. However, Reclamation would require monitoring of the effects of groundwater pumping to verify this expected absence of impacts. Other actions identified in this EA, such as rice fallowing, will have no effect to the Cortina and Colusa Rancherias. Therefore, no permanent effects are expected.

## Environmental Justice

### No Action and Proposed Action Alternatives

The No Action or the Proposed Action Alternative would not disproportionately affect minority and low-income populations. Land idling activities and the associated remuneration would allow continued agricultural production and its workforce. Dry conditions may reduce some agricultural work, but by optimizing the use of the limited water resources, only temporary minor shifts of the location of some work would occur.

## Cumulative Impacts

### No Action Alternative

The condition of all environmental resources under the No Action Alternative would be identical to the existing pre-CVP conditions.

### Proposed Action Alternative

Forbearance of surface water supplies by contractors in the Sacramento Valley through the Delta for consumptive uses and environmental purposes has been occurring for almost 10 years. The only demonstrable adverse impacts known to have occurred were some impacts to groundwater levels and individual well owners' water supplies during drought years as part of some early forbearance activities in Butte County, using groundwater substitution to generate the forborne water. Those effects have not occurred during more recent forbearance programs because of aggressive monitoring by a number of parties to prevent such effects. The estimated 2,500 acre-feet of groundwater substitution included in the proposed action would not result in an adverse cumulative effect on groundwater levels in the CVP area. During the groundwater pumping period, GCID will actively monitor surrounding wells and private wells to insure GCID's well pumping does not impact adjacent lands. If GCID determines that impacts may occur, or is notified by an adjacent landowner that impacts are occurring, GCID will reduce or eliminate the operation of its wells. However, as a result of GCID's water deliveries to

non-fallowed lands and canal seepage, it is expected that GCID will recharge the groundwater aquifer in excess of 100,000 acre-feet within its service area, thus, the groundwater pumping will be completely offset by groundwater recharge, which should not impact groundwater levels or pumping by others.

Because the project is of limited duration (1 year) and will represent only a minimum incremental increase in groundwater pumping from the basin during the 2008 irrigation season, no significant groundwater impacts are anticipated. Groundwater supply data collected as part of DWR Bulletin 160-05 indicates that approximately 1,200,000 acre-feet of groundwater is extracted from the Sacramento Valley portion of Butte, Colusa, Glenn, and Tehama Counties during a normal water year. The groundwater substitution component of this project is only 2,500 acre-feet, or less than one-half of 1 percent of the regional average annual groundwater extraction. In addition, GCID operated a much larger groundwater program during 1994: a dry year. In 1994, the groundwater program produced approximately 65,000 acre-feet of groundwater during the summer months, and there was significant additional pumping that occurred outside of GCID and in other nearby districts. Groundwater levels across the region declined approximately 30 feet during the pumping period; however, the water levels fully recovered during the fall of 1994 and the winter of 1995.

Within the SLDMWA service area, the slight increase in available surface supply from the project would have a potentially beneficial, but not significant, effect on groundwater table levels insofar as the supplemental supply replaces groundwater pumping. Because of water shortage and regulatory activities, users within the SLDMWA service area have implemented extensive water conservation and reuse activities. Therefore, the application of the supplemental water, representing an increment of approximately 4 percent of the Contract Total for the participating districts and of the south-of-Delta Contract Total for all CVP water service contractors, will not be expected to have any effect on groundwater.

Table 4 below summarizes the recent history of water transfers from the Sacramento Valley to other portions of California. Table 4 shows that the proposed transfers for 2008 that are reasonably foreseeable total 360,000 acre-feet. This represents less than 4.5 percent of total average agricultural water use in the Sacramento Valley and 1.9 percent of the average annual total water supply available in the Sacramento Valley from surface and groundwater resources for all uses. As such, and recognizing that no significant impacts have been noted for transfers within this order of magnitude, no significant impacts are expected within the Sacramento Valley as a result of the proposed project. Delta impacts are likewise not expected to be significant, as all of the water shown in Table 4, plus an additional 25,000 acre-feet in 2001 from a San Joaquin River transfer, was pumped in the Delta within existing biological constraints and without incident. Therefore, even if there were additional transfers beyond these levels, such transfers would probably need to be on the order of magnitude of several hundred thousand acre-feet more in order even to pose the potential for adverse effects on the environment.

**Table 4**  
**Recent Water Transfers (000s acre-feet)**

<b>Program</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008 *</b>
DWR Drought Water Banks Dry Year Programs	820	193	0	220	138	22	11	1	0	0	0	0
Environmental Water Act					80	142	70	120	5	5	125	70
Sacramento Valley Forbearance					160							85
Others						5						205
Totals	820	193	0	220	378	169	81	121	5	5	125	360

\* 2008 numbers are estimated transfers.

Given the chronic shortages in allocations of CVP irrigation water to south-of-Delta CVP water service contractors, the SLDMWA and its members have multiple programs to obtain supplemental supplies. These range from historic district-to-district transfers among CVP contractors in the area, reallocation agreements among SLDMWA members, transfers from the Exchange Contractors to CVP water service contractors, and other similar transfers to SLDMWA. Under the Proposed Action, the total of all such transfers will not exceed the total contract quantity under the participants' respective water service contracts. Reclamation retains the right to consent to any transfers utilizing CVP facilities and, therefore, can insure that any further transfers do not lead to cumulative impacts.

## **CONSULTATION AND COORDINATION**

The CEQA document on which this Environmental Assessment was based was circulated through the State Clearinghouse and otherwise made available for public comment. Accordingly, Reclamation did not adopt a separate, redundant public review for this EA. The proposed GCID Negative Declaration/Initial Study (to be appended to the Final EA) pursuant to the CEQA was completed on March \_\_, 2008.



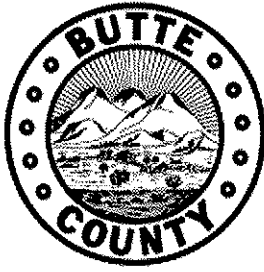
During preparation of this document, the following agencies were coordinated with and/or assisted in preparing the document:

- U.S. Fish and Wildlife Service
- NOAA Fisheries Service
- Glenn-Colusa Irrigation District
- San Luis & Delta-Mendota Water Authority

## **Consultation**

Reclamation has consulted with NOAA Fisheries Service pursuant to the ESA for this action. ESA consultation with the Service was completed for the proposed action on March \_\_, 2008 (to be appended to the Final EA) with concurrence of Reclamation's finding that the proposed action is not likely to adversely affect the threatened delta smelt and threatened GGS.

NOAA Fisheries Service concurred with Reclamation's finding on March \_\_, 2008 (to be appended to the Final EA) that the proposed action will not adversely affect the federally-listed endangered Sacramento River winter-run Chinook salmon, threatened Central Valley spring-run Chinook salmon, threatened Central Valley steelhead, or threatened green sturgeon or their critical habitat.

**WATER AND RESOURCE CONSERVATION**

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Paul Gosselin, Director

May 21, 2013

Brad Hubbard  
Bureau of Reclamation  
2800 Cottage Way, MP-410  
Sacramento, CA 95825

Dear Mr. Hubbard:

Butte County appreciates the opportunity to provide comments on Draft Environmental Assessment and Finding of No Significant Impact (FONSI) for the 2013 Central Valley Project (CVP) Water Transfer program. Butte County has a vested interest to ensure that the transfer programs, particularly out-of-basin groundwater substitution transfer programs, have the least impact upon its community, agricultural economy and environment. Much of our local water supply comes from the various groundwater basins throughout the region that are generally in hydraulic connection with local creeks and rivers.

We appreciate the oversight that the United States Bureau of Reclamation (Bureau) is attempting to bring to the 2013 CVP Water Transfer Program. However, the environmental documents, transfer guidelines, and oversight lack completeness, clarity and transparency. The Finding of No Significant Impact must be rescinded and replaced with an Environmental Impact Assessment/Environmental Impact Report (EIS/EIR). The Bureau must adopt rules governing its procedures and criteria for approving water transfer programs. As proposed, the 2013 CVP Water Transfer program will continue to pave the way towards unsustainable water resource management. In various areas throughout the valley, groundwater levels are at or near historic lows. Additional demand on the basin through groundwater substitution transfer programs needs to be evaluated on a comprehensive basis.

The 2013 Water Transfer Program should not be viewed as an isolated one-year water transfer program. The 2013 Water Transfer Program is another in a series of one-year transfer programs that the Bureau has implemented in the past four out of five years. The relationship of the 2013 CVP Water Transfer Program to its proposed 10 Year North-South Water Transfer Program must be disclosed. Although the 2013 Water Transfer Program proposes an upper boundary limit of

37,505 acre feet, the 2013 CVP Water Transfer Program is linked to the broader Long Term Transfer Program that is reported to involve up to 600,000 acre feet. The Bureau would be negligent to limit the environmental impact assessment to a one year program when the Bureau has planned for and has begun to implement larger, long term water transfer programs.

The 2013 Water Transfer Program meets the criteria for potentially causing a significant adverse effect. The 2013 Water Transfer Program incorporates by reference the 2010-11 Water Transfer Program Environmental Assessment document. The 2010-11 Water Transfer Document (Section 3.18.3) states, “multi-year groundwater acquisition under cumulative programs operating in similar areas of the Sacramento Valley could further reduce groundwater levels. Groundwater levels may not fully recover following a transfer and may experience a substantial net decline in groundwater levels over several years. This would be a substantial cumulative effect.”

Although that document assessed cumulative impacts (Section 3.18) based on transfer programs only during those years, the facts demonstrate that the 2013 Water Transfer Program is a part of a multi-year transfer program. The Bureau has implemented multi-year (four out of five years) groundwater substitution transfer programs in similar areas of the Sacramento Valley. For example, a comparison of the 2010-11 and 2013 water transfer programs show that the same “willing sellers” and “willing buyers” participated in the water transfer programs and are likely to continue in the future. The result is the utilization of a small number of wells concentrated in some portions of the basin. Those impacts must be assessed. The presumption that there would not be growth inducing impacts cannot be supported. The proposed program must address how it will avoid an expectation of a permanent reliance (e.g., “growth inducing impacts”) on water delivered through this program.

In addition to conducting an adequate environmental review, there are a number of steps the Bureau could take to assure adequate protections. One option would be for the Bureau to adopt specific limitations on the frequency that specific wells could participate in out-of-basin groundwater substitution transfer programs to avoid impacts to the basin. Such an action would not be unprecedented since limitations have been placed on following transfer programs to address economic impacts.

The document “Draft Technical Information for Preparing Water Transfer Proposals” has a number of areas that lack clarity and provide inadequate protection. In section 2.2.3, Potential Water Transfer Methods, the document states that Reclamation will approve transfers consistent with provision of state law and/or the CVPIA that protect against third party impacts as a result of water transfers. Unfortunately there are no specifics on what would constitute third party impacts or criteria that would be the basis for determining third party impacts. The process expects that the impacted party would self-identify their impact to the transferee and be responsible for carrying the burden and cost to prove their claim. The mitigation actions listed on page 38 (e.g., “lowering of pump bowls”) demonstrate that the Bureau would allow inadequate upfront assurances to protect third parties. The 2010-11 Water Transfer Program FONSI (p. 3) states that “Reclamation will not approve transfers without adequate mitigation and monitoring plans. Therefore, the Proposed Action will not have a significant adverse impact on groundwater resources.” Unfortunately, no details are provided regarding what constitutes an adequate monitoring program or what benchmarks would be established to prevent adverse

impacts. The Bureau proposes that an undefined mitigation plan would be sufficient to prevent adverse impacts. Relying on undefined plans, goals and actions cannot lead to a conclusion that there will not be any adverse impacts. The Bureau must establish specific rules that define the specifications of an adequate monitoring program and significant adverse impact thresholds.

Section 2.2.3.1 identifies that an objective of groundwater substitution transfer is to ensure that groundwater levels recover to their typical spring high levels under average hydrologic conditions and that the recovery does not come at the expense of stream flow during balanced conditions. The proposed project must approach northern Sacramento Valley with a high degree of caution especially during below average hydrologic periods. The assessment of transfer programs must include evaluating groundwater conditions and whether they are currently impacted beyond routine seasonal fluctuations as well as take into consideration projected impacts from climate change. How will the Bureau handle proposals in areas that could impact locations already experiencing groundwater elevation decline? What actions will the Bureau take if monitoring in 2014 does not demonstrate a recovery?

Section 3.5, Monitoring Programs states, "Groundwater substitution transfers have the potential to cause injury to local groundwater users due to the additional groundwater pumping needed to allow the substitution transfer to take place. Injury to other surface water users could also occur if the additional groundwater extraction results in a significant reduction in streamflow when those users need it." Again, the document recognizes that the potential exists for injury and harm from groundwater substitution programs. This acknowledgement runs counter to the Finding of No Significant Impact. The environmental assessment should provide the opportunity to describe how those potential impacts would be monitored and mitigated. In reviewing proposed monitoring programs, the Bureau must recognize that certain areas lack adequate monitoring infrastructure. The number, location and screening of monitoring wells must be determined to accurately assess the impacts from the production wells.

The Bureau proposes to base its review and approval of specific transfer programs upon the Bureau's 1993 document, "Interim Guidelines for Implementation of Water Transfers Under Title XXXIV of Public Law 102-575" and the "Draft Technical Information for Preparing Water Transfer Proposals" (2013). The Bureau's review and approval process relies upon two draft guidance documents. The reliance on draft guidance documents to base approval of transfer programs constitutes an 'underground' regulatory process. The Bureau must take necessary steps to adopt rules for approving water transfer programs. Certain aspects of the technical guidance could remain as guidance but should be finalized and referenced in the adopted rules. The Bureau's review and approval process should be open and transparent. The Bureau should establish a process to disclose proposed transfer program proposals, the details of their review and decision. Otherwise the process will be meaningless if relegated behind closed doors. The promulgation of rules would provide fairness and equity to everyone.

In conclusion, the 2013 CVP Water Transfer Program lacks adequate environmental assessment, clarity and transparency. The Finding of No Significant Impact must be rescinded and replaced with a complete EIS/EIR. The EIS/EIR must reflect the potential for significant adverse impacts and a need for mitigation. It is our expectation that the EIS/EIR will assess project impacts

including localized groundwater conditions over a long term period, assess growth inducing impacts and incorporate appropriate mitigation actions. Before any individual out of basin groundwater substitution transfer program is authorized, the Bureau must comprehensively address the environmental risks and assure adequate protections to third parties.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Gosselin". The signature is fluid and cursive, with the first name "Paul" being larger and more prominent than the last name "Gosselin".

Paul Gosselin, Director

cc: Butte County Board of Supervisors

## Summary

The Bay Area Delta Conservation Plan (BDCP) Draft EIR/EIS<sup>1</sup> is an exhaustive document, but its emphasis is on quantity instead of quality. The plan is rich with details about how Northern California's water supplies might be moved south across the Delta, but it is poor in predictive science supporting how the plan would work in practice, and it provides precious little evidence of how much the plan's implementation would actually cost the state's citizens.

The term "predictive" is of fundamental importance here, because predictiveness, reproducibility and verifiability are fundamental principles of scientific investigation. The Draft EIR/EIS fails all of these tests of science, and its computational modeling efforts lie well outside the mainstream of accepted practice for numerical simulation of natural and engineered systems. The computational models that lie at the heart of many of the predictions in the Draft EIR/EIS are based on over-simplified idealizations of natural systems such as aquifers, and all-too-often these models rely on methodologies that have long been superseded by more accurate physical models for predicting the response of geological systems like the Delta and the Central Valley.

The people of California deserve at a minimum an open and scientifically-accurate accounting of the environmental risks and financial costs of this water transfer apparatus, and the current Draft EIR/EIS provides neither. The plan's authors should return to the drawing board and start again, this time with their efforts founded on the best-available science and engineering principles.

## Professional Credentials

My professional experience has long been concentrated in the development and deployment of large-scale computational models for engineered and natural systems. I have worked in this professional field for well over thirty years, and have published refereed journal publications on subsurface mechanics and computational simulation of geological processes, as well as texts and related educational works on computational modeling in solid and fluid mechanics. I have served as a regular faculty member on the Civil Engineering faculties of two major U.S. research universities (the University of California, Davis, and the University of Oklahoma), as well as in leading-edge technical and administrative capacities at federal national laboratories. With my academic colleagues and graduate students, I have published journal articles and technical reports on aquifer mechanics, earthquake engineering, computational geomechanics, soil-structure interaction, high-performance computing, and the limits of computational modeling for systems in the presence of inherent uncertainties. I have earned M.S. and Ph.D. in Civil Engineering and a B.S. in Mathematics, all from the University of California, Davis. I have lived in Northern California for more than one-half of my adult life, and have long provided *pro bono* technical assistance on science and engineering topics of import to the quality of life for residents of California. My current work involves simulation of complex man-made and natural systems using some of the largest computers on the planet, and so I am well-equipped to describe the state-of-the-art in predictive modeling for large-scale engineering efforts in the Delta.

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<sup>1</sup> Throughout this document, the Bay Area Delta Conservation Plan Draft EIR/EIS will be referred to as "the Draft EIR/EIS", in the interest of brevity.

## Representative Technical Details of This Critique

The size of the Draft EIR/EIS numbers in the tens of thousands of pages, so it is impractical to provide a comprehensive critique of that document in only a handful of pages. Therefore, I will list here only a few key concerns where the plan's authors fall short of the mark demanded by the scope of the project and by its potential for environmental and financial harm if the plan proves inaccurate in its predictions. As always, I am happy to provide more detail on my concerns if such detail is needed. The taxpayers of the state of California helped support my doctoral education via generous financial aid when I was a graduate student in the University of California, and I have long stood ready, willing, and able to return technical dividends to those taxpayers by providing my expertise on topics of importance to the citizens of this great state.

### Uncertainty in Engineered and Natural Systems

First, some discussion is warranted on the difference between a natural and an engineered system, as the Draft EIR/EIS includes both, so such understanding is of fundamental importance here. An engineered system is designed entirely by humans, so each component of that system is reasonably well-understood *a priori*, and the uncertainties that are inherent in any system (natural or man-made) are limited to defined uncertainties such as materials chosen, geometric specifications, and conditions of construction and use. So an engineered system such as an automobile (or a tunnel through the Delta) is uncertain in many aspects, but that uncertainty can in theory be constrained by quality-control efforts or similar means of reproducibility. Constraining these uncertainties comes at a price, of course: that is a large part of what we mean when we refer to *quality* in an engineered system such as in cars or consumer electronics.

A natural system has a much higher threshold for uncertainty, as we often do not even know of all the components of the system, much less their precise characterization (e.g., in a water-bearing aquifer, the materials that entrain the water are by definition unavailable for characterization, and the mere act of digging some of them up for laboratory inspection generally changes their physical behaviors so that the tests we perform in the laboratory may not be entirely relevant to the response of the actual subsurface system). So when studying a natural system, a scientist or engineer must exercise due diligence in the examination and characterization of the system's response to stresses of operational use, and must consistently provide means to determine the presence and effect of these inherent uncertainties. To do otherwise is to risk visitation by Murphy's Law, i.e., "anything that can happen, will happen."

Thus one of the first metrics for evaluating the quality of any environmental plan is to examine the plan's use of terms such as "uncertainty", as well its technical relatives such as "validation" (testing of models via physical processes such as laboratory experiments), "verification" (testing of models via comparison with other generally-accepted models), and "calibration" (tuning a model using a given set of physical data that will be used as initial conditions for subsequent verification, validation, and uncertainty characterization). These basic operations are fundamental characteristics of any computational model, and are used in everyday life for everything from weather prediction (where uncertainty dominates and limits the best efforts at forecasting) to the simple requirement that important components of infrastructure such as highway bridges be modeled using multiple independent analyses to provide verification of design quality before construction can begin.

### Lack of Uncertainty Characterization in the BDCP Draft EIR/EIS

Unfortunately, there is no substantial discussion of model uncertainty in the Draft EIR/EIS. There are plenty of discussions of uncertainty of biological data, of uncertainty due to climate change, and of the difficulty of handling uncertain measures of water supply and quality, but beyond a rudimentary sensitivity analysis of how the results of computational models used in the Draft EIR/EIS respond to changes in key parameters, the topic of model uncertainty is barely addressed (or at least, not addressed where it is easy to find in the tens of thousands of pages in the Draft EIR/EIS). A model for a natural system needs a formal effort to quantify uncertainty, so that the various benefits and costs can be put into perspective. Such an effort is apparently lacking in the Draft EIR/EIS, and the following paragraphs present some representative examples of the problems with the approaches outlined in the Draft EIR/EIS:

- In Chapter 7 (groundwater), it is stated that the CVHM (Central Valley Hydrologic Model) that lies at the heart of many of the most important predictions found in the Draft EIR/EIS was calibrated using trial-and-error methods. First, trial-and-error techniques are technically indefensible in this setting, as they are not even reproducible (i.e. calibration performed by one person will not necessarily yield the same result if performed by another technician), hence they fail fundamental tests of science, that of reproducibility and verifiability. Formal methods exist for calibrating complex computational models, but there is no readily-apparent indication in the Draft EIR/EIS that any of these standard calibration measures were utilized.
- Second, calibration of a model is a necessary condition for its practical use, but it is certainly not a sufficient one: comprehensive sensitivity analyses for all relevant parameters and uncertainty quantification for both the computational model and its associated data should be developed before a model can be determined as sufficiently robust for practical use in society-critical venues such as the plans presented in the Draft EIR/EIS. Calibration of a model merely implies that the model has been tuned to a particular data set: it does not necessarily imply that the model is ready for broad use in society-critical settings, as that is the role of uncertainty quantification, validation, and verification. There are technically-sound methods available to demonstrate that a calibrated model can be trusted within a properly-calibrated range of expected use, but I could find no discussion of any of these methods in the EIR/EIS. This omission moves the modeling sections of the Draft EIR/EIS to a place well outside the state-of-practice mainstream for computational modeling in critical-infrastructure applications.
- This lack of uncertainty information is especially apparent in the seismic sections of the report, where the recommendation is made that uncertainty in analysis and design parameters should be minimized. Unfortunately, no feasible (i.e., cost-effective) strategies for realizing that goal are readily found in the plan, even though the cost of protecting such a large set of water-conveyance structures against all credible earthquake risks may prove to be astronomical. The plan promises that seismic risks will be addressed during the design and construction phases of the project, but also explicitly admits that no substantial efforts toward accurate identification of seismic risks yet exist within the plan's scope. Thus the costs of mitigating these risks is unknown from the outset, and any estimate of project cost must thus be considered to be a substantial underestimate of actual project lifespan costs.
- One of the worst cases of poor risk assessment in seismic sections of the report is the discussion of possible liquefaction effects. After a good introductory discussion of the natural phenomenon of liquefaction, the Draft EIR/EIS provides little in the way of realistic mitigation



plans to handle the very-real risk that liquefaction could destroy the project once it is built (or even damage components of the system during construction). Mitigation schemes that might prove virtually impossible to implement in practice (e.g., removing liquefiable soil deposits and replacing them with more stable materials) for a project of this scale are mentioned, but accurate estimates of costs required to mitigate this particular seismic hazard are not readily apparent to the technically-informed reader of the Draft EIR/EIS.

- Chapter 5 (water supply, potentially the most important aspect of the project) uses the term “uncertainty” twice in the chapter body (166 pages). The first use is fundamental, and demonstrates the all-important nature of the term: “Variability and uncertainty are the dominant characteristics of California’s water resources.” But unfortunately, no subsequent attempt is made in this chapter (and precious little in its appendices) to quantify these uncertainties and variabilities. Such a quantification of margins of uncertainty (QMU) is a difficult task, but it is not an intractable one, and this effort is well within the mainstream of computational modeling for everything from weather prediction to automotive design. So this quantification of uncertainty effort should be treated as an essential requirement for a project of this scale, and its omission is yet-one-more indication of the technical weakness of the Draft EIR/EIS.
- Validation results are primarily confined to tidal effects and to scenarios associated with climate change, which are important risk-management venues, but are hardly the primary focus of the plan. Validation is essential for modeling of subsurface structures, as the inelastic, stress-dependent, and hysteretic nature of soils often compromise the utility of traditional model verification methods. Yet there are apparently no validation measures applied to the components of the models used for subsurface effects (e.g., Chapters 7 and 9), and the term “validation” in general is used in the Draft EIR/EIS as an adjunct to calibration, instead of being treated as an essential component of establishing trust in a model.

### Subsidence as the Achilles’ Heel of the Project

One particularly troubling sign of potential problems is found throughout Chapter 7 and its appendices, where it is asserted that the CVHM can be used for modeling subsidence. Like its poromechanical cousin liquefaction, subsidence is an Achilles’ Heel for this project, because this physical phenomenon has the potential to destroy the project’s utility during construction and operation. This kind of single-point-physics existential risk to the project requires the best science and engineering analysis feasible with current technology, yet the Draft EIR/EIS provides only a minimal treatment of this vulnerability. To make matters worse, the fundamental scientific assumptions that form the foundation of the Draft EIR/EIS’s assertions are not presented within the plan document, so an independent technical expert attempting to evaluate the accuracy of those assertions must consult the open literature and other available sources to perform a technically-defensible evaluation of the Draft EIR/EIS.

The open literature on groundwater modeling has demonstrated that the one-dimensional methods used to estimate three-dimensional subsidence effects in CVHM (based on Helm’s method from 1975<sup>2</sup>) may provide acceptable results for overall land subsidence in a broad area, but yield inadequate and generally poor predictive results for local-scale hazards such those

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<sup>2</sup> Helm, D.C., “One-dimensional simulation of aquifer system compaction near Pixley, Calif. 1. Constant parameters”; *Water Resources Research*, 11, 465-478, 1975

required for analysis of subsidence effects on engineered structures<sup>3</sup>. In particular, the methods used to predict subsidence effects in the CVHM appear to be practically incapable of predicting local differential settlement, and that is exactly the physical response that can compromise or destroy the operation of the tunnels and channels that permit the water transfers that form the heart of the Draft EIR/EIS. So the use of the subsidence idealizations found in CVHM is simply an inadequate means to assess subsidence risk for the project, much less to mitigate it.

The fundamental problem here is that the basic assumptions for modeling groundwater flow in software tools such as CVHM all-too-often preclude accurate simulation of subsidence by assuming from the start that subsidence does not occur in an aquifer. The purpose of this mechanical over-idealization is to permit an especially simple mathematical formulation for porous-media flow that was arguably appropriate decades ago, when computers were expensive and slow, but that is technically unwarranted today, when computers are fast and relatively inexpensive. The extra work required to perform an accurate analysis using the relevant science commonly deployed in higher-fidelity aquifer simulations (e.g., aquifer simulations used in the fossil fuel extraction industries) is readily manageable when deployed on modern computational platforms, and most (if not all) of the model data obtained from well borings and similar data-gathering efforts could be re-used in these higher-fidelity model. So there is simply no excuse for the BDCP Draft EIR/EIS modeling efforts failing to utilize the appropriate scientific body of knowledge to assess subsidence risk.

Worse still, the authors of the Draft EIR/EIS don't even mention these well-known improvements to their model, or how these techniques could provide much more accurate estimates of the likelihood that the entire system would even work in the presence of subsidence. The scientific field that underlies the prediction of subsidence is termed "poromechanics", yet this all-important term never appears in the many thousands of pages of the Draft EIR/EIS. This neglect of the well-established governing science is inexcusable, given the existential risk to the construction and operation of the water-conveyance systems that form the heart of the plan's long-term operation.

It is important to note that these higher-fidelity poromechanics principles are not exactly new or little-known to practitioners in Civil Engineering. The relevant theory was developed by the famous geotechnical engineer Karl von Terzaghi<sup>4</sup> in the 1930's (Terzaghi is widely known as "the father of soil mechanics") and further honed by Maurice Anthony Biot<sup>5</sup> in the the 1940's. For but one example, poromechanics simulation capabilities for clay, sand, and silt soil deposits that utilized Terzaghi's and Biot's scientific principles (and that were thus capable of higher-fidelity predictions of subsidence) were developed and deployed in the public domain through the efforts of faculty and students at the University of California, Davis, three decades ago<sup>6</sup>, so there is simply no excuse for not including these best-practices scientific models in current aquifer simulation tools such as CVHM. A project that will cost at least several tens of billions of

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<sup>3</sup> Galloway, D.L., and M. Sneed, "Analysis and simulation of regional subsidence accompanying groundwater abstraction and compaction of susceptible aquifer systems in the USA"; *Bulletin of the Geological Society of Mexico, Volume 65, Number 1, 123-136, 2013*

<sup>4</sup> [http://en.wikipedia.org/wiki/Karl\\_von\\_Terzaghi](http://en.wikipedia.org/wiki/Karl_von_Terzaghi)

<sup>5</sup> [http://en.wikipedia.org/wiki/Maurice\\_Biot](http://en.wikipedia.org/wiki/Maurice_Biot)

<sup>6</sup> Mish, K.D., and Herrmann, L.R., "User's manual for SAC-3 : a three-dimensional nonlinear, time dependent soil analysis code using the bounding surface plasticity model"; *Naval Civil Engineering Laboratory Technical Report CR 8409, Port Hueneme, CA, 1983*

dollars should be based on the best science available, and not on over-simplified idealizations that were long ago superseded by more accurate scientific principles.

There does appear to be an emerging recognition in the hydrological modeling community that these higher-fidelity methods are warranted for use when natural systems (e.g., aquifers) are utilized to support engineered systems (e.g., water-conveyance infrastructure), but this recognition is not made explicit in the Draft EIR/EIS, and citizens should not have to pore through open-source documents trying to determine whether or not the Draft EIR/EIS's predictions of groundwater effects utilize the most accurate science available.

The technical risks associated with this ambitious project, and the immense budget required for its construction and operation, clearly mandate that the best-available scientific principles be deployed and documented in all project artifacts, including the Draft EIR/EIS. It is technically indefensible that these principles (including all fundamental physical assumptions) are not readily available in the tens of thousands of pages of the Draft EIR/EIS, and the omission of the particulars of the science used to estimate these environmental effects precludes both accurate prediction of the environmental effects of this project, as well as independent technical verification of the claims made in the plan. Since independent verification is a fundamental hallmark of scientific investigation, the current version of the BDCP Draft EIR/EIS fails even this most basic test of science.

### Problems with CalSim II

If insufficiently-accurate modeling of subsidence is the Achilles' Heel of the Draft EIR/EIS, then a similar anatomical analogy might be proposed for the plan's broad use of the California Department of Water Resources' CalSim II computer model. CalSim II is used to evaluate the environmental effects of the various alternatives presented in the Draft EIR/EIS, and hence this software lies at the heart of the EIR/EIS. Unfortunately, CalSim II has a substantial set of its own technical weaknesses, so the Draft EIR/EIS suffers from heart problems as well as possessing an Achilles' Heel. The next several paragraphs outline some of the most substantial weaknesses of CalSim II, but many more can be found in the various peer review documents that have been generated and disseminated as part of the CalSim II development process<sup>7,8,9</sup>. In the interest of simplicity, only a few key concerns about the suitability of the current version of CalSim will be presented here, but these should be sufficient to indicate that CalSim II does not yet warrant sufficient trust to justify its use for analysis of the alternatives that lie at the heart the water-transfer plan.

Some of the most important problems with CalSim II include the following concerns, most of which have been cited here previously as serious limitations of the Draft EIR/EIS:

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<sup>7</sup> Close, A., Haneman, W.M., Labadie, J.W., Loucks, D.P., Lund, J.R., McKinney, D.C. and Stedinger, J.R., "A Strategic Review of CALSIM II and its Use for Water Planning, Management, and Operations in Central California", California Bay Delta Authority Science Program Association of Bay Governments, December 2003.

<sup>8</sup> Arora, S. and Peterson L., "Peer Review Response: A Report by DWR/Reclamation in Reply to the Peer Review of the CalSim-II Model Sponsored by the CALFED Science Program In December 2003", California Department of Water Resources and U.S. Bureau of Reclamation, August, 2004

<sup>9</sup> Ford, D., Grober, L., Lund, J.R., and D. McKinney, "Review Panel Report: San Joaquin River Valley CalSim II Model Review", CALFED Science Program – California Water and Environment Modeling Forum, January 2006

- insufficiently-accurate assumptions underlying estimates of aquifer and groundwater response, including poor (or perhaps even nonexistent) characterizations of the risk of subsidence,
- inattention to concerns of provenance of the input data used to generate results used for analysis of alternatives, and
- lack of a sound technical basis for characterizing uncertainty in the model and in the input data.

This critique has already pointed out the need for higher-fidelity estimates of subsidence effects, because these effects have the potential to compromise the function of the proposed conveyance infrastructure. The peer-review documents cited above include only one single use of the word “subsidence”, and that use occurs in association with a proposal to incorporate another DWR model (IGSM2) into CalSimII<sup>10</sup>. Unfortunately, this model is not mentioned in the Draft EIR/EIS, so it is not clear whether its subsidence capabilities are employed in the Draft EIR/EIS’s analysis of alternatives. And this question is rendered moot by the fact that attempts to learn (e.g., by reviewing various DWR open-source publications) whether IGSM2 even utilizes an accurate method for modeling subsidence prove unsuccessful. So it is not clear whether *any* of the analyses of alternatives presented in the Draft EIR/EIS include accurate modeling of the relevant physical effects that could characterize success or failure of the conveyance structures proposed in the EIR/EIS.

The concerns of data provenance are more subtle, but they are equally important, and they lead to one of the continuing critiques of CalSim II made by the peer reviewers. The initial peer review effort identified a software quality problem<sup>11</sup> with archiving of code and input datasets in CalSim II, a problem that is currently being remedied by the CalSim II developers, but which should never have occurred in the first place. That problem is one of establishing the all-important mapping between input data and the CalSim II results that are generated by those datasets. This mapping is termed *data provenance*.

Provenance is a subtle concept, but it is fundamentally important, as anyone who has ever enjoyed watching an episode of the PBS television series “Antiques Roadshow” knows. A valuable antique, such as a painting by Monet, must be distinguished from a cheap imitation prepared by a forger by the process of examining the trail of custody of the antique. If a trusted mapping from the current owner of the antique back to the artist can be established, then the claim of value and authenticity is validated. If not, then the antique may prove to be worthless.

Provenance is equally important in computational modeling, as input datasets contain the fundamental assumptions that generate computed results, which are then used to effect policy decisions, e.g., water transfers based on the computational simulation. If the chain of custody between the policy decision and the input data that generated the results that influenced that policy cannot be established, then the results (and the policy) cannot be trusted. So as in the world of antiques, provenance is a fundamentally-important requirement for computer analysis.

Provenance is established in computer models by providing an appropriate form of configuration management for both the software source code, and for all the datasets used, both as input and as output. Normal software-quality-assurance practices would require that the mapping between input datasets and generated results be tested regularly (often daily), so that changes to the

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<sup>10</sup> Arora and Peterson, *op. cit.*, page F-2

<sup>11</sup> Close, *et al.*, *op. cit.*, page 8 and 58

software do not cause deviations in the results. Such deviations could easily call into question the legitimacy of policy decisions made on the basis of these computations.

The original 2003 review panel pointed out that CalSim II did not include such configuration management capabilities, and the CalSim II developer community agreed to remedy this substantial deviation from standard software quality practices<sup>12</sup>. CalSim II now includes some configuration management capabilities for input datasets, but it is not clear from the Draft EIR/EIS or from the various review documents how effectively these new data management capabilities are utilized. This problem alone causes serious concerns about whether the analyses of the various Draft EIR/EIS alternatives can be trusted. And this question of trust touches on another problem with CalSim II identified during the peer review process<sup>13</sup>, namely that CalSim II analyses may not be repeatable, i.e., the results may be strongly dependent on the experience and personal preferences of the particular analysts carrying out the modeling, so that the computed results may not be objective. This opens the door to concerns that model results may be biased, either accidentally or intentionally. Thus there are serious limitations in how much the results of CalSim II can be trusted.

The best way to remedy these problems is to provide open access to the computer model and to the input datasets used in the Draft EIR/EIS, so that a more diverse community of interested parties can evaluate the model and its data towards the goal of more accurate results. Another means to help remedy the problem of lack of trust in computed results is to utilize formal techniques to characterize uncertainty, so that the practical effect of potential analyst bias can be assessed to determine whether or not inter-analyst differences lead to substantial discrepancies in results. But as already mentioned in this critique, uncertainty characterization is lacking in the CalSim II effort, and while the various peer review documents consistently identify the need for better characterization of model uncertainty, it is not clear whether this improved uncertainty characterization has been implemented yet, which is yet-another factor that diminishes trust in CalSim II's key role in the evaluation of alternatives in the Draft EIR/EIS.

The peer review documents also identify the potential for a completely-inaccurate assumption embedded in the groundwater modeling components of CalSim II<sup>14</sup>, and the CalSim II response to this criticism<sup>15</sup> is insufficient in technical detail to determine whether this inaccuracy is present or not. The criticism is based on an inherent assumption of simple porous-flow models, such as those used in CalSim II, namely that these models assume an infinite supply of usable groundwater available at the outer boundaries of the geographic domain modeled.

A groundwater aquifer has physical limits, e.g., the alluvial deposits that store the water eventually reach bedrock, and hence the aquifer's capacity is limited by geologic constraints. But including these hard constraints into a porous-flow model is not trivial: in particular, the resulting modeling problem becomes nonlinear, and requires more complex solution techniques that require more computer resources. It is not clear from the Draft EIR/EIS's discussion of the modeling assumptions inherent in CalSim II, or from the various peer review documents, exactly how the CalSim II model incorporates these all-important constraints, and this type of potential

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<sup>12</sup> Arora and Peterson, *op. cit.*, page 12

<sup>13</sup> Close, *et al.*, *op. cit.*, page 24, and Arora and Peterson, *op. cit.*, page 17

<sup>14</sup> Close, *et al.*, *op. cit.*, page 8

<sup>15</sup> Arora and Peterson, *op. cit.*, page 7 and A-1 through A-3

limitation of the CalSim II model needs to be included in the Draft EIR/EIS groundwater modeling discussions, with due technical detail for how it is (or could be) overcome in practice.

It is therefore apparent that too much uncertainty is present in the current Draft EIR/EIS document regarding the scope, technical basis, and practical utility of the CalSim II model to support due trust in this model for a project as large as that proposed in the BDCP Draft EIR/EIS. The current modeling assumptions and the software-engineering practices utilized to develop the CalSim II model should be vetted before a broader variety of independent technical experts before the citizens of California can fully trust these results.

The current model is clearly “not ready for prime time”, and future review teams should be enlarged to include independent experts in uncertainty quantification, software engineering, poromechanics, and operations research. Until the CalSim II model and its associated input data is reviewed by a wider community of independent experts, this computer tool simply does not warrant the trust placed in it via the Draft EIR/EIS.

In short, the existing review processes cited are a good start, but they are still only that: a start.

### **Towards a Scientifically-Defensible Bay Delta Conversation Plan**

I began my technical critique of the BDCP Draft EIR/EIS by stating the obvious:

*The Bay Delta Conservation Plan (BDCP) Draft EIR/EIS is an exhaustive document, but its emphasis is on quantity instead of quality.*

The means to remedy the myriad technical shortcomings of the plan is simple in theory and completely feasible in practice: all that is required is to improve the plan’s quality so as to match its exhaustive quantity. In spite of its technical shortcomings, the plan includes many excellent references for assessment and mitigation of the natural and man-made risks inherent in its analysis, design, construction, and operation. All that is required to generate a technically-accurate version of the Draft EIR/EIS is for its authors to utilize those best-practices references (e.g., relevant codes for seismic design) to improve the estimates of costs and risk currently found in the plan, towards the goal of a technically-unimpeachable set of risk and cost estimates for the construction and operation of this ambitious project.

Unfortunately, carrying out this more-accurate cost and risk assessment exercise will be an ambitious task, but it is a necessary one given that some of the risks short-changed by the current Draft EIR/EIS have the potential to render the proposed project scope unusable (e.g., differential settlement effects caused by liquefaction or subsidence) or prohibitively expensive. These risks alone warrant an accurate risk-management strategy, which the Draft EIR/EIS currently lacks.

But the citizens of the state of California deserve an accurate accounting of the technical and financial risks of this project *before* the project is initiated. The authors of this Draft EIR/EIS should return to the drawing board to develop accurate estimates of what this project will actually cost, and what natural risks and technical impediments must be overcome in construction and operation. The real costs, financial and environmental, of this project must be assessed before work is begun, not after, and the current Draft EIR/EIS simply does not make this assessment possible.

**From:** [Beck, Jim](#)  
**To:** [Walthall, Brent](#)  
**Subject:** FW: Proposal for discussion now  
**Date:** Wednesday, February 26, 2014 4:17:23 PM  
**Attachments:** [summary of assurances-water funds.docx](#)

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**From:** Zippin, David [mailto:David.Zippin@icfi.com]  
**Sent:** Tuesday, February 25, 2014 3:14 PM  
**To:** Beck, Jim; jkightlinger@mwdh2o.com  
**Subject:** Proposal for discussion now

**From:** Belin, Letty [[mailto:letty\\_belin@ios.doi.gov](mailto:letty_belin@ios.doi.gov)]  
**Sent:** Tuesday, February 25, 2014 3:13 PM  
**To:** Waldo, Jim; Zippin, David; mark cowin; Bonham, Chuck@Wildlife; William Stelle; King Moon Laura  
**Subject:** Re: tentative bullets

On Tue, Feb 25, 2014 at 6:08 PM, Belin, Letty <[letty\\_belin@ios.doi.gov](mailto:letty_belin@ios.doi.gov)> wrote:

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Letty Belin  
Counselor to the Deputy Secretary  
U.S. Department of the Interior  
202-208-6291

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Letty Belin  
Counselor to the Deputy Secretary  
U.S. Department of the Interior  
202-208-6291

1. Decision Tree applies to longfin and delta smelt – not other fish; provided, however, parallel adaptive management and other-species-driven decisions may also relate to the need for additional outflow.
2. Establish and fund an effort to acquire 1.3 MAF for environmental benefit not to exceed \$3.5B
  - a. Revolving fund capitalized by \$1.5 Billion from PWAs. PWAs begin immediately to acquire long-term contracts at a discount from willing sellers.
  - b. Regulatory agencies assist as appropriate in acquisition discussions, including as to seller assurance package(s).
  - c. As state and federal funds are provided (~\$2 Billion [placeholder]) that money is used to continue to acquire such contracts for environmental water.
  - d. Upon acquisition of 1.3 MAF, additional state-federal funds used for partial reimbursement to PWAs [amount of reimbursement and terms to be determined].
3. PWAs' water risk is limited to ability to acquire enough water to get from low outflow scenario (4.7 MAF) to high outflow scenario (5.6 MAF)
4. Deal assumes assurances provided to sellers; assumes funds received by sellers invested in associated upstream fisheries benefits.
5. Must develop agreed upon approach to address scenarios such as (a) potential of not being able to acquire 1.3 MAF, (b) failure of public funding to be provided; or (c) other scenarios, and ensure incentives for acquisition program to acquire full amount.
6. Permits will be issued for a 30 year term plus two 10 year presumed renewals.