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VIA E-MAIL and CERTIFIED MAIL RETURN RECEIPT REQUESTED

Delta Stewardship Council
Attn: Terry Macaulay
980 Ninth Street, Suite 1500
Sacramento, CA 95814
E-mail: eircomments@deltacouncil.ca.gov

Re: *Comments of the California Sportfishing Protection Alliance (CSPA), California Water Impact Network (C-WIN), and AquAlliance to the Revised Draft Delta Plan Program Environmental Impact Report*

Dear Ms. Macaulay,

C-WIN, CSPA, and AquAlliance, hereinafter the groups, appreciate the opportunity to provide comments to the Recirculated Draft PEIR (RDPEIR) for the Delta Plan project. Unfortunately, most of the deficiencies we addressed in our comments to the first draft PEIR remain unaddressed by the DRPEIR. Therefore, in addition to incorporating our original comments by reference, we provide additional comments on the revised recirculated draft, attached hereto.

s/MICHAEL B. JACKSON
Michael B. Jackson
Attorney for the California Water Impact
Network (C-WIN), the California
Sportfishing Protection Alliance (CSPA),
and AquAlliance

C-WIN, CSPA, and AquAlliance, Comments to
the Recirculated Draft PEIR (RDPEIR) for the Delta Plan project
January 14, 2013

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I. The RDPEIR for the Delta Plan Project Fails as a Programmatic EIR

Using a programmatic EIR affords a lead agency no cover for a CEQA document that “does not provide decision-makers, and the public, with the information about the project required by CEQA.” (*Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 916.) A program EIR cannot rationalize vague or evasive analysis. The CEQA guidelines’ list of “advantages” to preparing a program EIR include a “more exhaustive” examination of effects and alternatives, “full consideration” of cumulative impacts, and allowance for analysis of “broad policy alternatives and program wide mitigation measures” at a time when the lead agency has the best opportunity to address them properly. (Cal. Code Regs., tit. 14, § 15168(b).)

Programmatic EIRs are intended to provide a broad look at policies and potential cumulative impacts of a series of actions. A program EIR may be prepared on a series of actions that are related either: (1) geographically, (2) procedurally (where the actions are a logical step in contemplated actions), (3) in connection with the issuance of rules, regulations, plans, etc. that govern the conduct of a continuing program, or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways. (CEQA Guidelines, § 15168, subd. (a).) The benefits of Program EIRs include providing for an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, ensuring consideration of cumulative impacts that might be slighted in a case-by-case analysis, and avoiding duplicative reconsideration of basic policy considerations, among other things. Without an understanding of the types of projects that will follow, the PDEIR cannot possibly contain substantial evidence to support its conclusions (CEQA Guidelines, § 15384), thus failing to uphold the requirements of CEQA. (See *Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 916) (CEQA not satisfied if document fails to provide decision-makers and the public with the required information about the project.)

The Vol.1 RDPEIR states that “[f]uture environmental documents would be completed by other agencies when they propose to implement projects that are subject to consistency reviews by the Council, or projects which are encouraged or otherwise influenced by the Delta Plan. Hence, this program EIR is not intended to provide project-level clearance for any specific project.” It is not clear whether the RDPEIR appears to permit an agency to determine that

unspecified future projects are “within the scope” of the Delta Plan, thereby sidestepping further environmental review. The DEIR should be revised to specify that it is not intended to be the sole environmental review for any future projects.

A. The RDPEIR Fails to Provide an Adequate Project Description

An adequate project description is vital to understanding the environmental setting, and concerns that arise therein. Without an adequate project description, crucial decisions regarding project impacts, and viable alternatives cannot be effectively determined by the agency, or the public reviewing the environmental documents. CEQA Guidelines § 15125 subdivisions (c) and (d) state that:

Knowledge of the regional setting is critical to the assessment of environmental impacts. Special emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project. The EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context. The EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regional plans. Such regional plans include, but are not limited to . . . habitat conservation plans, natural community conservation plans and regional land use plans . . . In failing to provide an adequate description of upstream areas, the RDPEIR also violates CEQA mandates on establishing a baseline.

CEQA Guidelines 15124, requires *a statement briefly describing the intended uses of the EIR*, including the information known to the Lead Agency. The RDPRIR and DEIR fail to include a comprehensive statement of intended uses of the RDPEIR, leaving it vulnerable to misuse in the future and violating CEQA Guidelines, section 15124. The RDPEIR does not include a revised project description that delineates the geographic scope of upstream areas. CEQA Guidelines 15124 state that:

[t]he description of the project *shall* contain the following information... (a) The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic, [and] (c) A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities.

Vol. I RDPEIR (Section 1.4.2) included a map of a vast “upstream” area, but did not include actual analysis of most of these areas. The RDPEIR does casually mention that “operation of

facilities within the rivers and streams upstream of the Delta or in the Delta could result in changes in salinity in the Delta by reducing Delta freshwater inflows during some periods of the year.” (p. 3-13.) However, by failing to revise the Project Description to describe the upstream areas in the impact analysis, it is impossible to determine the impacts on the project. The Revised Project (as well as the Proposed Project) supports certain projects without any quantitative justification on costs, yield, impacts on the environment, or evaluation of the public trust values involved. (CEQA Guideline 15126.5, “Discussion of Alternatives,” Guideline 15146, “Degree of Specificity.”) Further, “[l]ead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.” CEQA Guidelines 15130. The RDPEIR claims to have expanded its scope into upstream areas, but fails to describe these areas or justify the parameters of its scope. While this RDPEIR states that the Revised Project includes upstream areas, it fails to establish the environmental setting for these areas; thus, its discussion of potential impacts to these areas is essentially speculation. It furthermore does not include a description of the relevant regulatory schemes in these areas and how such regulations would be reconciled with the policies and recommendations in the Delta Plan. This omission violates CEQA. (CEQA Guidelines, § 15125.) The current state of the Delta as well as its tributaries must be established in order to have a legitimate discussion of a project’s impacts.

B. The RDPEIR Fails to Provide an Adequate Disclosure of the Environmental Setting of the Project.

The Delta is a critically important natural resource for California and the nation. It serves Californians concurrently as both the hub of the California water system and the most valuable estuary and wetland ecosystem on the west coast of North and South America. (Water Code Section 85002). The Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis and existing Delta policies are not sustainable. Resolving the crisis requires fundamental reorganization of the state's management of Delta watershed resources. (Water Code Section 85001(a).)

1. Baseline

The Environmental Setting of the RDPEIR must be revised to reflect the state of drastic overextended entitlements of water coming from the Delta. An agency may not escape its duty

by ignoring that duty and then presenting the result as a *fait accompli* incorporated into an environmental baseline. *League to Save Lake Tahoe v. Tahoe Reg'l Planning Agency*, 739 F. Supp. 2d 1260, 1272 (E.D. Cal. 2010) *aff'd in part, vacated in part, remanded*, 469 F. App'x 621 (9th Cir. 2012). The DEIR and RDPEIR utterly fail to include a comprehensive analysis of the availability of water coming into the Delta. In order to demonstrate how such a comprehensive analysis could be done, we incorporate by reference the report prepared by Tim Stroshane for CSPA, CWIN, and AquAlliance in the State Board hearings regarding amendment of the Bay/Delta Water Quality Control Plan (Appendix 1 and 1a herein). This document, which includes 223 pages listing existing water rights, demonstrates that the Bay/Delta watershed is indeed grossly over-appropriated and that until this problem is resolved it is impossible for the DSC to approve a Delta Plan that can meet the requirements of the Delta Reform Act to recover the Bay/Delta and to improve reliability of the California water supply.

The average annual water supplies of the Sacramento and San Joaquin river watersheds between 1998 and 2005 totaled approximately 35 MAF. Tables 3-1 and 3-4, Volume 1 & 2. This includes groundwater extraction and agricultural return flows. The average combined unimpaired flow of the two watersheds has been identified as approximately 29 MAF. However, there are 153.9 MAF of legal claims to that water. Consequently, the watersheds are seriously over-appropriated. As California's water rights system is seniority based and restrained by Area of Origin and Watershed Protection statutes, any fair disclosure CEQA document addressing water supply reliability and Delta restoration would be seriously inadequate if it failed to extensively discuss and analyze the over-subscription of water and legal constraints on out-of-basin transfers of water.

The problem of over-appropriation has been known and well documented since the Central Valley Project Act was passed by the Legislature in 1933. Governor Earl Warren, testified in 1951 that those in State Government felt "for many years that there should be a complete adjudication of the water rights on the Sacramento River, and we believed it should be done before the Central Valley project was completed and in operation."¹ The formal Findings of the 1951 Engle Congressional Committee held that:

¹ Appendix 2. *As quoted in*: Gleason, Walter M. 1960. Opinion of Attorney Walter M. Gleason Regarding Various Legal Aspects of Burns-Porter Act (SB 1106) (Proposition One), California Senate Interim Committee on Water Projects. 28 October 1960. p. 16.

1. “For all practical purposes, the developed water supplies of the Sacramento River are overcommitted and oversubscribed.”²
2. Without adjudication, “The State of California and Bureau of Reclamation officials may create a ‘legal Frankenstein,’ which would destroy all hope for State control of Central Valley water rights...”³
3. State and federal projects were claiming and depending upon the same Feather River water rights.⁴

Despite the clear problem, nothing was done to remedy the over-appropriation problem. In 1960, during consideration of the Burns-Porter Act (State Water Project), Senator Stephen Teale, Chairman of the California Senate Interim Committee on Water Projects asked legendary water rights attorney Walter M. Gleason to submit a legal assessment of the proposed State Water Project.⁵ In a 72-page opinion, Mr. Gleason, incorporated herein as Appendix 2, he observed that there wasn't “any accurate or proper administrative determination by the State of the extent of the ‘surplus’ water which is or will be available in the Central Valley for export.”⁶ He described the consequences of a failure to identify and quantify vested rights, said that the project would not protect the Delta and would aggravate the existing salinity and hydrology problems,⁷ and said the export schemes were based, “wholly and entirely in assumptions.”

Over-appropriation is a huge factor in determining impacts to the environment, especially in light of the current degraded condition of the Sacramento-San Joaquin Bay Delta. In 2009, the Delta Reform Act held that “[t]he Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis.” Section 85001. For example, the Delta region has a severely depleted groundwater basin, yet the RDPEIR fails to reflect the SWRCB conclusions regarding how inadequate flows into and out of the Bay Delta are contributing to this environmental hazard. As it stands, the Delta aquifer is critically over drafted, causing a void that pulls in sea water from the Bay in an easterly direction. New diversions would reduce the natural flushing of the Delta and could eliminate the natural salt water barrier created by the freshwater inflows into the Delta, causing increased migration and intrusion of brackish water in the groundwater basin. The cumulative impacts of the diversion for the Revised Project, and other activities affecting groundwater including over drafting must be addressed in the EIR.

² Ibid. p. 22.

³ Ibid. p. 49.

⁴ Ibid. p. 50.

⁵ Ibid. pp. 1-3.

⁶ Ibid. p. 17.

⁷ Ibid. p. 39.

Resolving this crisis “requires fundamental reorganization of the state's management of Delta watershed resources.” Section 85001. This revised management of Delta resources requires pursuing the coequal goals of “providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem.” Section 85054. The coequal goals “shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource and agricultural values of the Delta as an evolving place.” *Id.* For the purposes of informing planning decisions for the Delta Plan and the Bay Delta Conservation Plan, the Legislature required the State Water Resources Control Board to develop new flow criteria for the Delta ecosystem necessary to protect public trust resources. Section 85086(c)(1). The Delta Plan and its accompanying environmental documents fail miserably to implement the coequal goals required under the Delta Reform Act. From the beginning, the Stewardship Council has failed to define what it believes to be the “coequal goals” of this plan, nor has it established quantifiable goals, or measurements for achieving the goals of the plan. Instead, the Delta Plan only recommends, and the RDPEIR only evaluates, proposals that continue to violate existing environmental laws. The RDPEIR utterly fails to adequately analyze, discuss, disclose or compare defensible and quantifiable goals, yardsticks and mileposts for achieving the coequal goals and their effects on various alternatives. The RDPEIR merely proposes and analyzes a plan that perpetuates an unsustainable status quo. Further, the Stewardship Council declined to conduct a water quality analysis to evaluate the impacts to pollutant concentration and residence time from diverting additional dilution flows around an already degraded estuary. Central Valley waterways are polluted despite more than forty years of laws prohibiting pollution. Yet the Delta Plan assumes that agencies that have failed to prevent pollution will, somehow, in the future prevent pollution by implementing programs that failed to prevent pollution. The Delta Plan cannot assume, given the historical record, that continuation of programs that have failed to prevent pollution will, in fact, improve water quality. The RDPEIR is inadequate because it failed to adequately analyze, discuss and disclose how a continuation of existing and largely failed programs will produce different outcomes in the future and how continued pollution will affect various analyzed alternatives. The over appropriation of Central Valley waters has been long known and amply documented, and there can be no justification for not providing decision makers with this crucial information. Such information is fundamental for making intelligent

choices regarding water supply reliability or Delta restoration, and projects and plans cannot be evaluated properly without this information.

a) *An Overprescribed and Unhealthy Delta*

The Delta Reform Act specifically mandates a comprehensive review and analysis of the impacts of “possible changes in total precipitation and runoff patterns” due to climate change on the Proposed Project before incorporation into the Delta Plan. The Delta Plan must specifically address the requirements of the Delta Reform Act, and must describe a review process that will ensure that the Bay Delta Conservation Plan takes a sufficiently comprehensive look at how shifts in precipitation and runoff from climate change could affect the planned project and operations, as well as the environment. The Proposed Project, however, does not require specific water reliability projects. Rather, the project contains broad requirements and recommendations that make it unclear what types of projects will actually be implemented as a result of the Proposed Project policies and recommendations. The Delta Plan must clearly and specifically address how the Delta Stewardship Council will ensure adequate review of the BDCP climate change analysis prior to incorporation of BDCP into the Delta Plan. This is an essential duty of the Delta Stewardship Council as an independent agency and should not be delegated to the Department of Water Resources or any other agency.

In water resources planning, it is often assumed that future hydrologic variability will be similar to historical variability, which is an assumption of a statistically stationary hydrology. This assumption no longer holds true under climate change where the hydrological variability is non-stationary. Recent scientific research indicates that future hydrologic patterns are likely to be significantly different from historical patterns, which is also described as an assumption of a statistically non-stationary hydrology. In an article in *Science*, Milly et al. (2008) stated that “Stationarity is dead” and that “finding a suitable successor is crucial for human adaptation to changing climate.” A growing number of climate change studies have projected an increase in the frequency and severity of droughts in the Sierras and the Central Valley, and particularly under the higher greenhouse gas emissions scenarios. Major shifts in precipitation and runoff could have huge impacts on yields of proposed storage and conveyance projects, as well as huge environmental impacts. It is essential that information on potential flows and diversions under

drier climate change scenarios be made available so that the risk can be evaluated by the public trust agencies, and the public.

The lengthy analysis of water supply, for instance, barely addresses the State Board's Delta flow recommendations. These recommendations underscore the imperative to reduce water exports to sustain the Delta's ecosystem, as well as beneficial uses and public trust values. The State Board recommended flow criteria to protect these values in August 2010: "Recent Delta flows are insufficient to support native Delta fishes for today's habitats...." In order to preserve the attributes of a natural variable system to which native fish species are adapted, many of the criteria developed by the State Board are crafted as percentages of natural or unimpaired flows. These criteria include:

- 75% of unimpaired Delta outflow from January through June;
- 75% of unimpaired Sacramento River inflow from November through June; and
- 60% of unimpaired San Joaquin River inflow from February through June.⁸

It is inconceivable that in thousands of pages of Delta Plan and EIR that is no serious effort to disclose, analyze or discuss water availability and the over appropriation of water in the Central Valley. It is the failure to undertake these assessments that has led to the present crisis. Failure to undertake them now will simply perpetuate an unsustainable status quo that will only exacerbate an already dire situation. The Delta Stewardship Council must ensure that these deficiencies are remedied, prior to incorporation of the Bay Delta Conservation Plan into the Delta Plan, and should ensure that adequate analysis of potential drought impacts of climate change is done for all projects incorporated into the Delta Plan.

b) Necessary Economic Considerations

The Legislature has required that the Delta Protection Commission to prepare and submit to the Council an economic sustainability plan for the Delta. Section 29759. However, the Stewardship Council rejected conducting a comprehensive socioeconomic cost/benefit analysis indispensable for maximizing the use of limited resources for the greatest good for all Californians. The last time a significant water body underwent a public trust balancing in California was by the court in *Mono Lake*, which held economic analysis to be of critical

⁸ Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, State Water Resources Control Board, Aug. 3, 2010, p. 5, *available at* http://www.swrcb.ca.gov/waterrights/water_issues/programs/bay_delta/deltaflow.

importance in performing a public trust analysis. Although the evaluation of economic effects is optional under CEQA Guidelines (15131), the economic balancing of public trust values is so important that they should be evaluated in this RDPEIR. The economic impact of not paying for a \$12 to \$15 billion tunnel project is so significant that should be considered. Further, the DRPEIR does not include estimates for jobs lost, when CEQA requires such a description. (CEQA Guidelines, § 15131, *Citizens Association for Sensible Development of Bishop Area v. County of Inyo* (4th Dist. 1985) 172 Cal.App.3d 151, 170, (even if economic effects are not to be considered significant impacts in isolation, the EIR must determine the relationship between economic impacts and potentially significant environmental impacts.) These deficiencies must be remedied.

Therefore, at a minimum, the DPEIR must set forth basic costs and clearly defined baseline conditions so that the Proposed Program can be measured against the various Alternatives, which it does not do. To this end, C-WIN/CSPA has attached “Bay/Delta Water-Economics of Choice,” a report from ECONorthwest, that showcases the critical necessity of economic analysis to the informed balancing of the public trust. This report is incorporated herein as Appendix 3. The RDPEIR is inadequate because it failed to adequately analyze, discuss, disclose or compare the economics of California’s current water distribution scheme, and failed to evaluate the socioeconomic benefits and costs of various alternatives.

C. The RDPEIR Fails to Provide an Adequate Impact Analysis

Under CEQA, a “project” includes the whole of an action that may result in either a direct or *reasonably foreseeable indirect* physical change in the environment. (CEQA Guidelines, § 15278, subd. (a) (emphasis added.) The discussion following Section 15152 states that there will be some effects for which mitigation will not be feasible at an early step of approving a particular development project, and the section would allow a Lead Agency to defer mitigation of that kind of effect to a later step. While a Program EIR need not analyze impacts that would be better addressed in a site-specific analysis, the RDPEIR fails to identify significant effects of the projects it proposes with any specificity. Moreover, the RDPEIR makes significance determinations on these impacts that for which it admittedly has little to no information.

For example, the RDPEIR notes that the projects the Delta Plan encourages will result in long-term environmental impacts, many of which will likely be significant. The DRPEIR fails, however, to describe these types of impacts, much less offer any proposed mitigation. This approach violates CEQA. Even if the RDPEIR need not analyze each potential project in detail, it can evaluate reasonably foreseeable impacts given the general type of project and given the type of terrain and habitat in the Sierra Nevada region. For example, the DSC failed to take into account the water needs of water rights holders within the Delta watershed, and failed to consider the water needs sufficient to sustain beneficial uses, including environmental needs, in the watersheds that are protected by the “area of origin.” CEQA Guidelines require “direct and indirect significant effects of the project on the environment” to be “clearly identified and described, giving due consideration to both the short-term and long-term effects. . . [including the] [s]ignificant irreversible environmental changes which would be caused by the proposed project should it be implemented.” Section 15126.2, subd (a), (c). Additionally, “[i]rretrievable commitments of resources should be evaluated to assure that such current consumption is justified.” *Id.* The RDPEIR utterly fails to analyze reasonably foreseeable significant effects of the project, even for projects that have already been formulated and or analyzed. (See for example the Shasta Dam raise, the Temperance Flat Reservoir, and the Sites Reservoir.) The Delta Plan incorporates and encourages the completion of the BDCP, and yet fails to provide a meaningful discussion on how this historically mammoth and expensive infrastructure would affect Californians into the future. The irretrievable commitment of upstream resources without any real analysis, and the lack of analysis of the large scale infrastructure (the BDCP) violate Section 15126.2 of CEQA.

The Legislature noted that the 2009 Delta Reform Act did not, “...diminish, impair, or otherwise affect in any manner whatsoever any area of origin, watershed or origin, county of origin, or any other water rights protections, including, but not limited to, rights to water appropriated prior to December 19, 1914, provided under the law.” Section 85031. Yet, the RDPEIR lists many reservoir projects that would be affected by the Delta Plan without conducting even a superficial analysis of these projects, other than to say that certain impacts may be “significant and unavoidable.” A “Significant and Unavoidable” conclusion can only properly be reached after an agency has made a determination with respect to the feasibility of mitigation measures and alternatives. Public agencies may *not* approve projects with significant

environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. (Pub. Resources Code, § 21002, *Mountain Lion Foundation v. Fish and Game Commission* (1997) 16 Cal.4th 105, 134.) Therefore, absent an analysis of the feasibility of the mitigation measures disclosed, the conclusion that certain impacts are “significant and unavoidable” is erroneous and should be eliminated from the document.

The RDPEIR fails to include substantial evidence to support its conclusion. CEQA Guidelines section 15384 defines substantial evidence as:

enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency. *Argument, speculation, unsubstantiated opinion or narrative*, evidence which is clearly erroneous or inaccurate, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment does not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. (Subds. (a) and (b), emphasis added.)

The RDPEIR has admitted that no details are known about most of its encouraged projects, and yet claims that it has substantial evidence to supports its conclusions. This constitutes mere speculation in violation of the statute. With no quantification, there is no substantial evidence to justify this conclusion.

Water users upstream from the Delta are understandably concerned that their long-standing water rights will be seized to subsidize increased inflow in the Delta in order to maintain maximum water exports to junior water rights users that are served by the state and federal project pumps in the Delta. Such a result would directly conflict with the Delta Reform Act, which admonishes against interference with area of origin laws and the system of water rights seniority. The looming BDCP process, and the umbrella authority for BDCP built into the Delta plan, needs to be disclosed and analyzed within the DPEIR, with alternatives compared and watershed needs mitigated. The omission of these important discussions in the present draft of the DPEIR will result in a skewed and incomplete understating of potential environmental effects on the Delta, which at a minimum will serve to exacerbate water rights litigation throughout the state.

D. The RDPEIR Fails to Properly Consider the Public Trust

In pursuing the coequal goals set out in the 2009 Delta Reform Act, the Legislature held that “[t]he longstanding constitutional principle of reasonable use and the public trust doctrine shall be the foundation of state water management and are particularly important and applicable to the Delta.” Section 85023. “The longstanding constitutional principle of reasonable use and the *public trust doctrine* shall be the foundation of state water management policy and are particularly important and applicable to the Delta.” Water Code Section 85023. In the seminal California Supreme Court case of *National Audubon Society v. Superior Court of Alpine County*, (1983) 33 Cal.3d 419 in which the court held that the state has “an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust whenever feasible.” The Supreme Court further quoted, with favor, that “the requirements of the California Environmental Quality Act (Public Resources Code 21000 et. seq.) impose a similar obligation.”

The planning and allocation of limited and oversubscribed resources implies that there has been an analysis and balancing of the competing demands on these resources. Inexplicably, the Fifth Draft of the Delta Plan makes no effort to balance the public trust and resolve these competing demands for limited resources. The Stewardship Council refused to undertake a water availability analysis that is essential to separating real water from paper water, addressing the legal rights to it and providing the information necessary for informed decision-making. The state has over-promised and over-distributed scarce water resources to a historic degree. Water rights granted to divert water from the Central Valley are now more than five (5) times the average unimpaired water runoff per year, and exceed the total amount of water produced in the wettest year in California history by more than double that number. The Final Draft of the Plan contains no water availability analysis that would show, at a minimum, what water will be available to meet the Reform Act’s goals. The Stewardship Council rejected multiple comments from various groups to develop a public trust analysis to ensure that the common property rights of all Californian’s are protected and balanced against those of special interests. Yet, despite the California Supreme Court’s holding that the state must balance the public trust in water supply planning decisions, the RDPEIR fails to do so. The RDPEIR is therefore inadequate because it fails to adequately analyze, discuss, disclose or compare how a public trust balancing would

affect various alternatives. A public trust balancing of the present unbalanced system will inevitably affect both of the coequal goals and must be analyzed and disclosed. Further, the RDPEIR is inadequate because it fails to adequately analyze, discuss, or disclose the realities of the oversubscribed California water system, thereby failing to compare projects and alternatives within the framework of a water system already in heavy deficit. The Plan and its DEIR do none of these things. Our groups dispute the DSC's position that an analysis of the public trust doctrine is unwarranted, and request an analysis of whether it is feasible to protect the trust under each of the proposed alternatives.

E. The RDPEIR Fails to Properly Consider Climate Change

The DPEIR fails to use the latest information on changing hydrology in the Delta watershed, thereby invalidating its “no project” assessment. The “harms associated with climate change are serious and well recognized.” (*Massachusetts v. Environmental Protection Agency* (2007) 127 S. Ct. 1438, 1455). In 2006, the California Legislature passed Assembly Bill 32, which states that “[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California,” including a “reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.” (Health & Saf. Code, § 38501(a).) The Legislature went on to list multiple uses of water it expects to be reduced or threatened by global warming, including the quality and supply of water from Sierra snowpack, hydropower generation, the protection of recreational uses, fisheries, marine life, and public health. Health & Saf. Code, § 38501(b).

In addition to the Legislature's recognition of the perils of climate change, several studies sponsored by the California Climate Change Center have been published that directly address the effects of climate change on California hydrology in the future. And while an agency is not expected to foresee the unforeseeable, it is expected to use its “best efforts to find out and disclose all that it reasonably can.” (CEQA Guidelines § 15144; see also *City of Richmond*, 184 Cal.App.4th at p. 96; *Vineyard*, 40 Cal.4th at p. 428.) Yet, despite the seeming recognition of climate change by the Legislature, the courts, and other organizations, climate change goes

virtually unmentioned in the PDEIR's discussion of the program, its potential facilities, and the existing environmental setting. The RDPEIR fails to perform cumulative impact analysis in the RDPEIR of how revised and related projects would affect water availability, environmental conditions, and fisheries throughout the Sacramento River and San Joaquin River watersheds upstream from the Delta now and in the future. These climate change projections need to be an essential part of cumulative impact evaluation of the Revised Project, together with other diversions and with actions to maintain sufficient flows to protect the Delta as well as upstream waters under the public trust doctrine.

The DSC DPEIR should therefore include climate data available to its sister agencies, such as DWR's *California Water Plan Update, 2005*. This report finds that "evaluating impacts of global climate change on the management of the SWP can be done with existing resources" and that "state government must help predict and prepare for the effects of global climate change on our water resources and water management systems." (Maurice Roos, *Accounting for Climate Change*, in DWR, *Water Plan 2005*, appendix 4.) This DWR report surveys the "large number of potential effects on California water resources infrastructure due to global warming." (*Id.* at p. 4-616.) While the EIR notes its reference to some uncertainty, that uncertainty is "primarily on the degree of change to be expected," and that the report found that "[r]esponsible planning requires that the California planning community work with climate scientists and others to reduce these uncertainties and to begin to prepare for those impacts that are well understood, already appearing as trends, or likely to appear." (Roos, *op cit.*, at 4-612.) The failure of the DPEIR to disclose and analyze potential climate change effects on the hydrology upon which the Delta Plan relies is stunningly incompetent. This omission makes it impossible for the public and the decision-makers to evaluate the alternatives, the mitigations, and the true nature of the environmental impacts of the proposed DSC program, all of which are violations of CEQA's fair disclosure requirements.

Finally, having recognized that global climate change is likely to have an enormous impact on future water supply (including a 4.5 to 6 million acre-foot reduction in snowpack), the EIR inconsistently applies that insight. Incredibly, the EIR cites climate change in its discussion of the disadvantages of Alternative 2 (due to its additional "facilities") but fails to apply climate change concerns to the Delta Plan's core issue: whether sufficient water supply will exist to serve the "reliability" component without severely compromising the Plan's ability to protect the

“paramount concern” of enabling “permanent protection” of the Delta’s resources. (Wat. Code § 85022(c)(2).) This failure also makes it impossible for the DPEIR to evaluate alternatives, potential mitigations, or to provide the disclosure necessary to allow the public and the DSC decision-makers to evaluate the effectiveness of the proposed Delta Plan.

F. The RDPEIR Fails to Properly Consider Available Science

The RDPEIR fails to incorporate or consider readily available science to analyze the significance of environmental impacts of the project. The Stewardship Council largely ignored the Delta Protection Commission’s Economic Sustainability Analysis, the Department of Fish and Game’s flow criteria and biological objectives report and the State Water Resource Control Board’s flow criteria for the Delta. These reports were mandated by the Legislature to inform the Delta planning process and their results must be discussed and incorporated into the Delta Plan.

The California Legislature, in the Delta Reform Act, (as specified above) tasked the SWRCB to gather the best available science and develop flow criteria for the Delta ecosystem necessary to protect public trust resources, including the volume, quality, and timing of water needed under different conditions. The SWRCB conducted a proceeding in the matter. An astonishing assemblage of biologists and scientists from resource and water agencies, academia and the NGO community testified and presented evidence in the hearing. A final report was issued on August 3, 2010. The report observes that “[t]he combined effects of water exports and upstream diversions reduced average annual net outflow from the Delta from unimpaired conditions by 33% and 48% during the 1948 – 1968 and 1986 – 2005 periods, respectively and that Sacramento River inflows over the last 18 to 22 years have been about 50% on average between April through June compared to unimpaired conditions.”⁹ The report determined that “[r]ecent Delta flows are insufficient to support native Delta fishes for today’s habitats.” The report’s criteria for flows include, among many other measures, “75% of unimpaired Delta outflow from January through June and 75% of unimpaired Sacramento River inflow from November through June.”¹⁰ Existing water criteria fails to address many issues that must be considered in considering impacts on aquatic life. For example, during the SWRCB’s Delta flow hearing, Dr. G. Fred Lee pointed out that:

⁹ SWRCB. 2010. Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. 3 August 2010. 3.3.2, page 28.

¹⁰ Ibid. 1.2 Summary Determinations, Flow Criteria and Conclusions, page 5.

The current US EPA criteria development approach only considers some and in some cases a small part of the impacts of chemical contaminants on aquatic life. For example, the approach currently used to develop water quality criteria does not include additive/synergistic properties of regulated chemicals that occur in concentration below the water quality criteria allowing unanticipated adverse impacts to aquatic life. Adverse impacts of chemicals to aquatic life that occur for especially sensitive species, such as zooplankton which serve as fish food organism were not included in the development of the water quality criteria. These criteria are only applicable to protecting about 90% of the species. Therefore there could readily be fish species in the Delta and its tributaries that are more sensitive to a chemical than those used to establish the water quality criterion value. There is also very limited information on chronic exposure to sub-lethal impacts of a chemical and mixtures of chemicals to fish populations. Another issue is that other stressor such as low DO, ammonia etc. that can impact the lethal and especially sub-lethal impacts of chemicals. It has been well known for over 40 years through biomarker studies that fish and other organisms show organism biochemical responses to chemical exposures at concentrations well below the water quality criterion. The significance of these biomarker responses to an organism or group of organisms is largely unknown. Chemicals can adversely impact the health of the fish and other aquatic life that weaken their ability to resist adverse impact of stressors such as low DO, elevated temperature and predation as well to disease. It's been known for over 40 years that very low levels of copper affect the "breathing" rate of some fish.¹¹

Dr. Lee went on to point out, "many thousands of unregulated chemicals, including pharmaceuticals and personal care products, industrial chemicals, and other potentially hazardous chemicals, are discharged to waterways, including the Delta and its tributaries, in domestic wastewaters, agricultural runoff and waste waters."¹²

This data, and other volumes of relevant evidence are largely ignored or downplayed by the Delta Plan and the DPEIR. Relevant evidence necessary to determine whether or not the proposed Delta Plan and the alternative examined would arrest this dire situation, and whether mitigations could bring these impacts below a state of significance are not included. This is a CEQA failure of huge magnitude. In several instances, the RDPEIR notes that an impact may be "Less Than Significant" or "Significant" without any substantial evidence or science to support such a conclusion. For example, the discussion of Impact 3-3b states:

[b]ecause of the availability of alternative water supplies and continued availability of Delta water supplies, there is substantial evidence that this impact would not be significant. This conclusion is based on the inability to

¹¹ Ibid. Page 4.

¹² Ibid. Page 4.

identify a reasonably plausible scenario in which a potential significant impact would occur. It is therefore concluded that this impact would likely be less than significant. Future project specific analyses may develop adequate information to arrive at a different conclusion; however, for purposes of this program-level analysis, there is no available information to indicate that another finding is warranted or supported by substantial evidence.

Simply because there is not substantial evidence to support a significance determination does not imply that there is substantial evidence to support a *less than* significant determination. This example is particularly egregious considering the host of information provided by countless environmental groups demonstrating plausible scenarios in which this impact would be significant. The RDPEIR is therefore inadequate because it fails to adequately analyze, discuss and disclose the findings and information contained in the above entitled scientific reports, and how the information from these reports affects the various alternatives.

G. The RDPEIR Fails to Properly Mitigate Impacts

CEQA Guidelines 15126.4 states, “[w]here several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time.” However, measures may “specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.” *Id.* The problem is that the mitigation measures discussed in the RDPEIR are general, rather than specific, making it impossible to determine if they will be able to effectively mitigate the impacts of the project. For example, the Revised Project allegedly adds performance measures to assist in implementation of the policies and recommendations in the Plan (RDPEIR p. ES-1) but it is not clear whether (1) some or all of the proposed mitigation must be adopted in order to be considered a “Covered Action” or “Recommended Action,” (2) whether the stated mitigation measures would reduce impacts to a less than significant level, or (3) when or how the mitigation measures are to be implemented. For example, in several instances, the RDPEIR offers potential land purchases or water transfer purchases as mitigation measures without conducting any analysis on the availability of such mitigation. This approach violates CEQA, as there can be no assurance that such mitigation measures are either available or adequate. (See *Kings County Farm Bureau v. City of Hanford* (5th Dist. 1990) 221 Cal.App. 3d 692.)

Further undermining the effectiveness of the mitigation measures is the lack of measurable performance standards. The Legislature decreed that the 2009 Delta Plan “shall include performance measurements that will enable the Council to track progress in meeting the objectives of the Delta Plan.” Section 85211. The performance measurements include “quantitative or otherwise measurable assessments of the status and trends of the following: (a) The health of the Delta’s estuary and wetland ecosystem for supporting viable populations of aquatic and terrestrial species, habitats, and processes, (b) The reliability of California water supply imported from the Sacramento River or the San Joaquin River watershed.” Section 85211. “The use of performance standards is particularly appropriate in connection with ‘first tier’ approvals or other planning decisions that will necessarily be followed by additional, project-level environmental review.” (Remy, et al., Guide to the California Environmental Quality Act (11th Ed. 2007), p. 552, internal citation omitted.) CEQA further requires that lead agencies describe the impacts that will result from the mitigation measures themselves. (15126.4, subd. (a)(1)(D).)

The RDPEIR fails to identify the impacts that would arise from mitigation measures, such as purchases of additional water for transfer and land purchases. With respect to water transfers being ameliorated due to releases from upstream reservoirs, the RDPPEIR fails to include a description of the multitude of impacts that will result from this drawdown. Lead agencies must analyze not only the impacts of their proposed projects, but also of their proposed mitigation measures if such measures may have a significant effect on the environment. (CEQA Guidelines, § 15126.4; *Save Our Peninsula Committee v. Monterey County Bd. Of Supervisors* (6th Dist. 2001) 87 Cal.App.4th 99.) Mitigation measures must be directly connected to an impact. Assigning mitigation measures to a group of impacts defeats the intention of demonstrating whether the measures will actually mitigate the impacts. The use of group mitigation measures should be revised and tied to specific impacts. These flaws must be remedied so the decision-makers and the public can adequately analyze whether any of the mitigation measures are reasonable.

H. The RDPEIR Fails to Provide Adequate Alternatives

CEQA Guidelines 15124 (b) requires a statement of objectives sought by the proposed project, because “[a] clearly written statement of objectives will help the lead agency develop a *reasonable range of alternatives* to evaluate in the EIR and will aid the decision makers in

preparing findings or a statement of overriding considerations, if necessary.” (emphasis added) The projective objectives set out in the RDPEIR are invalid because they overlook the statutory mandate to achieve coequal goals, does not reduce reliance on the Delta, and are otherwise so vague and ambiguous that project alternatives cannot be reasonably assessed. When project objectives are incorrectly described, there is a substantial risk that potentially feasible alternatives and mitigations that would reduce or eliminate significant environmental impacts will not be considered. (See *Habitat and Watershed Caretakers v. City of Santa Cruz* (2012)_Cal.app.6th_Case No. H037545). For example, the objectives of the RDPEIR overlook the statutory mandate that “coequal goals be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.” (Water Code Sec. 85054) This impacts the consideration of projects under the BDCP, as well as project alternatives that could more properly protect and enhance the value of the Delta.

One of the coequal goals of the Delta Plan is providing a more reliable water supply. Achieving a more reliable water supply is one of the five categories of the Delta Plan’s policies and recommendations. The Delta Reform Act prohibits inclusion of the BDCP into the Delta Plan unless BDCP includes a comprehensive review and analysis of “[t]he resilience and recovery of Delta conveyance alternatives in the event of catastrophic loss caused by earthquake or flood or other natural disaster.” Section 85320(b)(2)(F). Throughout the Delta Plan, there are numerous references to the seismic vulnerability of Delta levees and the hypothetical potential that earthquakes could cause a major disruption in California’s water supply system in the Delta and San Francisco Bay area. A theoretical earthquake is one of the major justifications for isolated conveyance facilities.

Unfortunately, the Delta Plan only considers seismic disruption in the Bay and Delta. It fails to examine the potential for seismic disruption along the several hundred miles of aqueduct that runs parallel to and crosses documented major active earthquake faults. Nor does it evaluate the potential for seismic disruption of San Luis Reservoir. For example, the San Luis Dam (now called the B.F. Sisk Dam) was completed in 1967 and almost failed in 1981.¹³ The documents referenced in this section can be found in Appendix 4, 5, and 6. The U.S. Bureau of Reclamation found that the dam is in a seismically active area (actually there are two faults that cross the

¹³ Appendix 4. Park, D., 2008. Dam Safety in California.

reservoir) and could fail during an earthquake and inundate hundreds of square miles including Santa Nella and parts of Stockton.¹⁴

Seismic failure of the California Aqueduct or San Luis Reservoir could cause the same or similar disruptions to the reliability of the state's export water delivery system as a hypothetical failure in the Delta. Yet, the Delta Plan, DPEIR and DRPEIR focuses almost solely on potential seismic disruptions in the Bay and Delta and ignores the threats to the aqueduct, San Luis Reservoir or terminal facilities in Southern California that could pose equal, if not greater threats, to water supply reliability. The Delta Plan fails to comply with the Delta Reform Act and the DPEIR and DRPEIR fail to comport with CEQA requirements by failing to adequately analyze, discuss and disclose these other potential seismic threats to water supply reliability. What could be the justification of spending billions of dollars constructing an isolated conveyance facility that would change the hydrology of the Delta with unknown consequences while ignoring equal or similar threats south of the Delta?

Engineers who routinely work on Delta levees have suggested that the doomsday predictions of seismic failure of Delta levees are vastly overstated.¹⁵ They believe that improvements can be made to upgrade levees to PL 84-99 or above criteria that would significantly reduce any threat of seismic failure at a fraction of the cost of an isolated conveyance facility. These upgrades would also protect against rising sea levels and would provide protection to people, Delta communities, farmlands and infrastructure; something not accomplished by an isolated conveyance. However, these alternatives were essentially ignored in the Delta Plan and not adequately evaluated in the DPEIR or DRPEIR. Consequently, the Delta Plan is inconsistent with requirements in the Delta Reform Act to "reduce risks to people, property and state interests in the Delta," which the Legislature said was inherent in the coequal goals for management of the Delta. The DPEIR and DRPEIR are inadequate by failing to disclose, analyze, compare and discuss these viable cost-effective alternatives.

Under the current RDPEIR, the revised project would encourage new or expanded reservoirs, groundwater production facilities, groundwater production facilities, ocean

¹⁴ Appendix 5. Bureau of Reclamation. 2007. Letter to Central Valley Project Water Contractors titled Actions to Address Dam Safety Issues at B.F. Sisk Dam, Central Valley Project (CVP, California).

¹⁵ Appendix 6. Pyke, R. 2012. Letter to Governor Brown titled The Truth About Delta Levees or The Shaky Justification for the BDCP.

desalination facilities, recycled water facilities, and the BDCP, among other things. The BDCP will have many significant environmental effects and must be considered as a cumulative project. It is improper for the DSC to encourage projects without even a minimal look at the impacts associated with these types of projects. Rather, the RDPEIR should provide at least a general description of these projects and the types of impacts that are anticipated, propose suggested mitigation measures, and indicate how these encouraged projects and their associated projects can be reconciled with the goals of the Delta Reform Act. For example, the RDPEIR could include a goal of achieving the numerical anadromous fish doubling requirements mandated by the Central Valley Project Improvement Act or define specific numerical water quality improvements required by the Clean Water Act. Instead, the Delta Plan's quantifiable performance measures consist largely of recommendations for actions and programs by other agencies. Many of these actions and programs are already underway and have been unsuccessful in preventing fisheries decline and water quality impairment.

The Delta Plan fails to comply with requirements of the Delta Reform Act by not including specific quantifiable performance measures. Instead, the RDPEIR states that “[t]his EIR assumes that the Delta Plan will be successful and will lead to other agencies taking the encouraged actions.” ES-2. As we show below, this unwarranted assumption ignores reality and undermines the legal adequacy of the document. For example, the Delta Plan recommendation ERP1 says that the State Water Resources Control Board should update the Bay-Delta Water Quality Control Plan and by June 2, 2014, adopt and implement updated flow objectives for the Delta that are necessary to achieve the coequal goals. However, deferring updated flow objectives does not historically achieve quantifiable performance measures.¹⁶ In the analysis of

¹⁶ In 1978 the State Water Board adopted D-1485 and a water quality control plan. The Board stated that “protection all fishery species in the Delta would require the virtual shutting down of the project export pumps.” In 1986, Judge Racanelli ruled that D-1485 was inadequate and, in the next year, USEPA notified the Board that the water quality control plan was inadequate under the federal Clean Water Act. In October 1988, following hundreds of days of hearings, the State Water Board released a draft Water Quality Control Plan for Salinity. It called for significant reductions in Delta exports. In response to protests from exporters, Governor Deukmejian ordered the Board to withdraw the proposed order. In December 1992, the State Board released draft Water Right Decision 1630. It called for numerous measures including a significant reduction in exports. Internal documents from the State Water Contractors revealed that they believed that D-1630 would have required, at least, a 25-50% reduction in exports. In response to pleas from exporters, Governor Wilson ordered the Board to withdraw D-1630 in 1993. In 1995 the State Board released a Water Quality Control Plan for the Bay-Delta and essentially readopted it with minor changes in 2006 (8 years late). The 1995 plan was implemented though Water Rights Decision D-1641 in late 2000. The requirements in both the 1995 plan and D-1641 are seriously deficient, as evidenced by increasing exports and plummeting fisheries. Further, all of the protective standards in D-1641, including the Vernalis flow objective, interior Delta salinity standards, outflow objectives and the inflow/export ratio have been routinely

various evaluated alternatives, the Stewardship Council refused to address the historic failure to implement and enforce existing environmental laws and regulations by agencies responsible for the prevention of fishery and water quality declines. This is significant because, without disclosure of the failings of these agencies to implement and enforce existing environmental laws, the public cannot understand how likely it is that the laws will be ignored in the future. The RDPEIR fails to fully inform the public when it fails to adequately analyze, discuss, and disclose the chronic failure to implement and comply with legal requirements of the responsible agencies, and the consequences of those failures as they pertain to the various evaluated alternatives.

The DPEIR and RDPEIR are therefore inadequate because they fail to adequately identify, analyze, discuss, disclose or compare defensible and quantifiable goals, yardsticks and mileposts for achieving the coequal goals and their effects on the various alternatives.

I. The RDPEIR Fails to Provide an Adequate Cumulative Impact Assessment

CEQA defines “cumulative impacts” as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Guideline § 15355. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project “when added to other closely related past, present, and reasonably foreseeable probable future projects.” Guideline § 15355(b). The discussion of cumulative impacts in an EIR is required to reflect “the severity of the impacts and their likelihood of occurrence.” Guideline § 15130(b). Required contents include either a list of past, present, and probable future projects producing related or cumulative impacts, or a summary of projections that describe and evaluate the conditions contributing to the cumulative effect. Guideline § 15130(b)(A), (B). It is clear that all projects within the watershed must be assessed, given that the Guideline section uses as an example: “Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect.” Guideline § 15130(b)(2).

In *Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th 859, an EIR was held to violate CEQA for failing to consider possible curtailment in obtaining water

violated without consequence. Last year was no exception. Vernalis flow was violated in the spring, salinity standards were violated most of the summer and I/O standard was being violated as recently as late October, when 68% of inflow was being diverted. Exports have increased, water quality has worsened and fisheries have continued their precipitous decline following every State Water Board Delta water quality or water right decision over the last 30-plus years.

from a river and the cumulative impacts of that effect. 108 Cal.App.4th at 871. Pursuant to Guideline § 15130(b)(1)(A), CEQA requires an agency to assess the changing environment resulting from the incremental impacts of the project “when added to other closely related past, present, and reasonably foreseeable probable future projects.” “The Agency must interpret this requirement in such a way as to ‘afford the fullest possible protection of the environment.’” *Friends of the Eel River*, 108 Cal.App.4th 859, 868. In clear violation of the requirements of Guideline § 15130(b)(1), there is neither a list nor summary of projections of past, present, and reasonably foreseeable probable future diversions in the RPDEIR or Draft EIR.

Here, there has been complete failure to identify and evaluate the impacts of the BDCP Delta Tunnels which would have the capacity to divert 15,000 cfs of water from the Sacramento River upstream from the Delta. The BDCP is mentioned in a sentence including 11 other items under the Water Resources portion of the Cumulative Impact Assessment. (RDPEIR 22-2). The only cumulative impact information about the BDCP project is provided in the Cumulative Impact Assessment in the Draft EIR. There, a brief description in a table states that the BDCP permits and related EIR/EIS were scheduled to be completed by December 2012. That, of course, has not happened. The only additional information provided in the table is “modify SWP and CVP Delta water conveyance facilities and operations in the Delta.” (RDPEIR 22-24).

The RPDEIR has failed to take into account the impact of diverting 15,000 cfs upstream from the Delta on whether existing and future water supplies and minimum stream flow requirements can be satisfied, and has failed to evaluate the environmental impacts of diverting 15,000 cfs. Having claimed that the BDCP project is a cumulative project, the Council must evaluate cumulative impacts including those caused by the cumulative project. Moreover, this is *not* a defect that can be cured by responses to comments in a Final EIR. Consequently, neither the public nor the decision-makers have before them basic, foundational information on which to enable one to even start in evaluating the cumulative impacts of this project together with other related projects. In order to comply with CEQA, a new Draft EIR must be prepared that includes the necessary information and analysis to allow the public and decision-makers to conduct informed review of the cumulative impacts of this project and other related projects. This RDEIR fails to do so with respect to the reasonably foreseeable effects of the BDCP as currently proposed (including 23.6.5: Agriculture and Forestry Resources, 23.6.13: Noise, 23.6.16:

Recreation.) Further, the RDEIR does not address the potential of the major new diversions on the Sacramento River to interfere with recreation, both during and after construction.

II. Conclusion

The absence of these analyses has sabotaged the entire Delta planning process. As previously discussed, the Delta Reform Act states, [t]he Sacramento-San Joaquin Delta watershed and California's water infrastructure are in crisis and existing Delta policies are not sustainable. Resolving the crisis requires fundamental reorganization of the state's management of Delta watershed resources.” The Delta Plan was envisioned to be that “fundamental reorganization.” Instead, it simply kicks the status quo can down the road.

The Delta has declined because water projects have deprived the estuary of half its flow; turned the natural hydrograph on its head; reduced temporal and spatial variability; eliminated crucial habitat, complexity and diversity and deprived the estuary of dilution necessary to assimilate increased pollutant loading. No estuarine ecosystem in the world has survived this level of abuse. California’s water supply system is in crisis because the state has over promised, over-allocated, wasted and inequitably distributed scarce water resources. The Delta Plan and RDPEIR are fundamentally inadequate because they have avoid addressing tough questions, such as:

1. What does water supply reliability mean in an arid state where we have granted rights to far more water than actually exists?
2. What is the definition of co-equal goals and what are the yardsticks by which they are measured?
3. Does water supply reliability apply to both public trust resource needs and consumptive uses?
4. Are statutory requirements to protect water quality and listed species equivalent to water supply reliability for lawns or surplus, subsidized and non-food crops?
5. Is the standard by which we measure water supply reliability the same for junior and senior appropriators?
6. Does efficient and multiple use of water have higher priority over waste, inefficient and unreasonable use?
7. Should we prioritize consumptive use on the basis of economic benefit?
8. Does health and safety take precedence over certain agricultural uses of water?
9. Are food crops more important than non-food commodities?
10. Is it reasonable that the Westside of the San Joaquin Valley, comprising 0.3 % of the state’s economy and population, should receive two-thirds of Delta exports while urban areas representing half the state’s population and economy get one-third?

11. Is protection of a “national treasure” and one of the world’s great estuaries more valuable to society than irrigating impaired soils, that by the nature of being irrigated, discharge prodigious quantities of toxic wastes back to our waterways?
12. If someone uses water that generates pollutants that eliminate assimilative capacity and beneficial use of water for others, should the degraded water be deducted from the water supply provided the polluter?
13. Should water supply reliability be conditioned upon specific and quantitative requirements to maximize reclamation, reuse, conservation and development of alternative local sources of water?
14. Do uses of water that require vast public subsidies have the same priority as uses that don’t require subsidy of public funds and are uses that internalize adverse impacts equal to uses that externalize them?

Because the Delta Plan and RDPEIR have failed to address the root causes of the Delta’s decline and our water supply crisis, they are inadequate as fair disclosure documents and fail to comport with CEQA, the Delta Reform Act and are inconsistent with numerous statutes. The RPDEIR and Draft EIR are so fundamentally and basically inadequate and conclusory in nature with respect to disclosure and analysis of cumulative impacts that meaningful public review and comment have been precluded. We urge you to prepare and circulate a new Draft EIR so that the public and decision-makers are afforded the information and analysis with respect to cumulative impacts that they must have pursuant to CEQA.

Dated: February 14, 2013

s/MICHAEL B. JACKSON
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and AquAlliance



**california
water impact
network**



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.¹

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:

¹ 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.

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- 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

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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

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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.

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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.

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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

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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

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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

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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."² (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.

² 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).

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Table 1					
Consumptive (Irrigation) Water Rights Summary for San Joaquin River Basin					
Flows and Consumptive Water Rights	Thousands of Acre-Feet				
	Stanislaus River	Tuolumne River	Merced River	San Joaquin	Basin Total
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.					

Table 2					
Consumptive (Irrigation) Water Rights Summary for Trinity and Sacramento River Basins					
Flows and Consumptive Water Rights	Thousands of Acre-Feet				
	Trinity River	Feather River	Yuba River	American River	Sacramento Valley Total
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.					

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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 10th through 90th percentiles of the 82-year unimpaired flow hydrology available from the California Department of Water Resources (2007). 25th, 50th (median), and 75th 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

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Table 3A			
Summary of Water Availability Analysis Results Incorporating Water Rights Claims for Major Tributaries of the San Joaquin River Basin			
River/ Instream Flow Objective	Annual Total		
	Riparians and Senior Pre-1914 Right Holders	Major Water Right Claimants	Other Junior Major Claimants
Stanislaus 40% Diversion Cap	Various, including Tuolumne Utilities District 29 TAF in all percentile flows.	Oakdale & South San Joaquin Irrigation Districts 198 to 758 TAF in all percentile flows.	US Bureau of Reclamation 81 to 250 TAF in the 50 th to 90 th percentile flows.
Tuolumne 40% Diversion Cap	Various, including Tuolumne Utilities District 23 TAF across all percentile flows.	Turlock Irrigation District, Modesto Irrigation District 408 to 1,662 TAF across all percentile flows.	City & County of San Francisco 95 TAF in only the 90th percentile flows.
Merced 40% Diversion Cap	Various, including Gallo interests 218 to 283 TAF across all percentile flows.	Merced Irrigation District 5 to 594 TAF from 40th to 90th percentile flows, about 14% of all claims.	Not applicable Not applicable
San Joaquin 40% Diversion Cap	Below Friant Dam, and along Fresno Slough 172 TAF in all percentile flows.	San Joaquin River Exchange Contractors 248 to 817 TAF in all percentile flows.	US Bureau of Reclamation 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.

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

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Stanislaus River Water Availability
Assuming 60% of Unimpaired Flow Objective

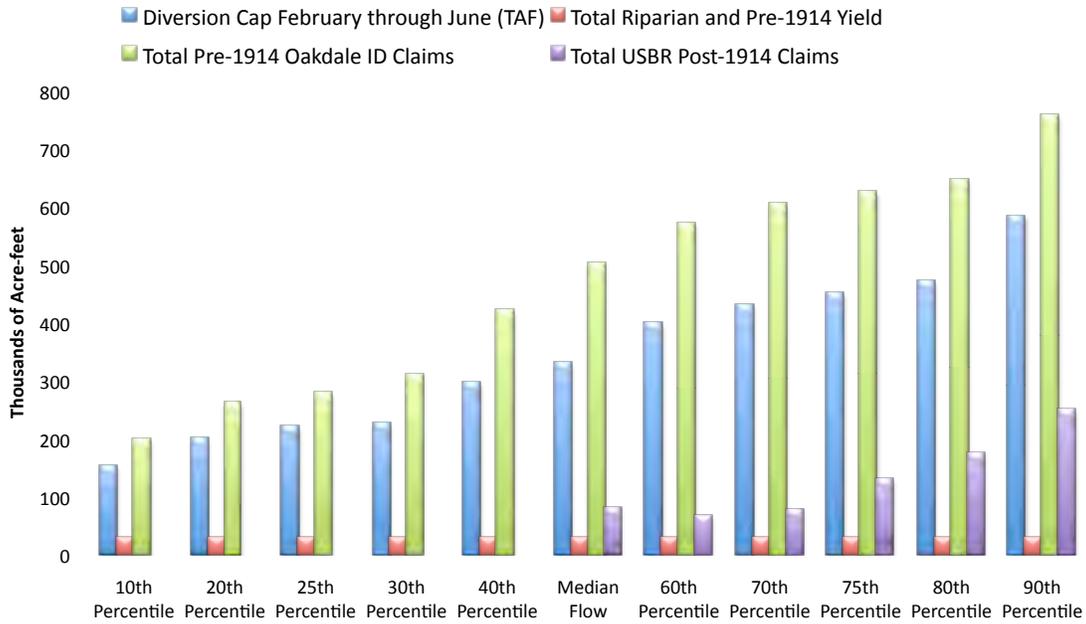
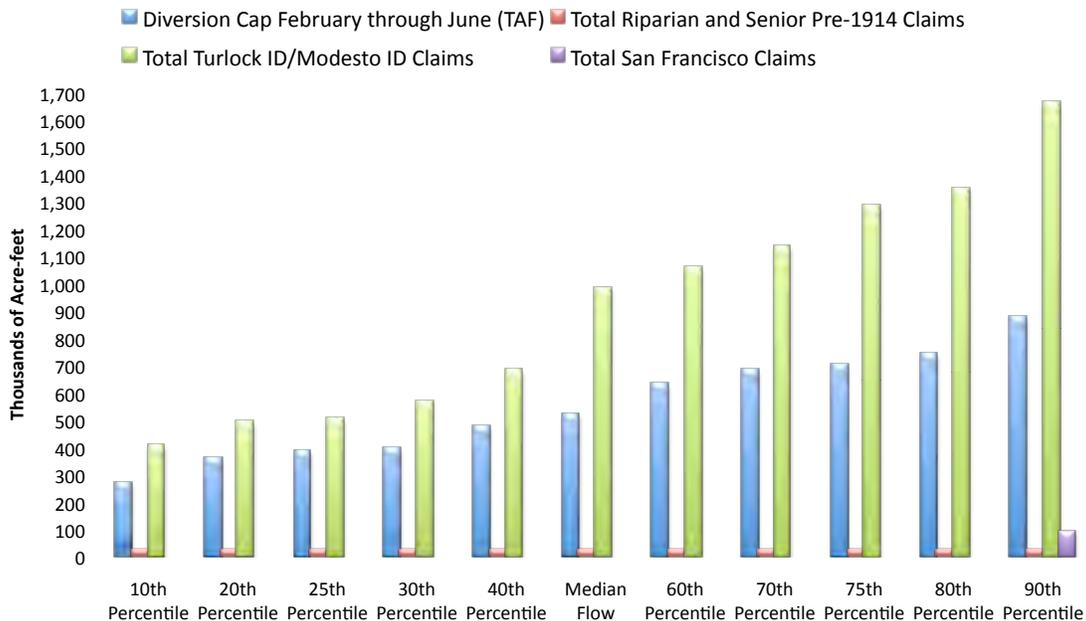


Figure 1, above. Figure 2, below.

Tuolumne River Water Availability
Assuming 60% of Unimpaired Flow Objective



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Merced River Water Availability
Assuming 60% of Unimpaired Flow Objective

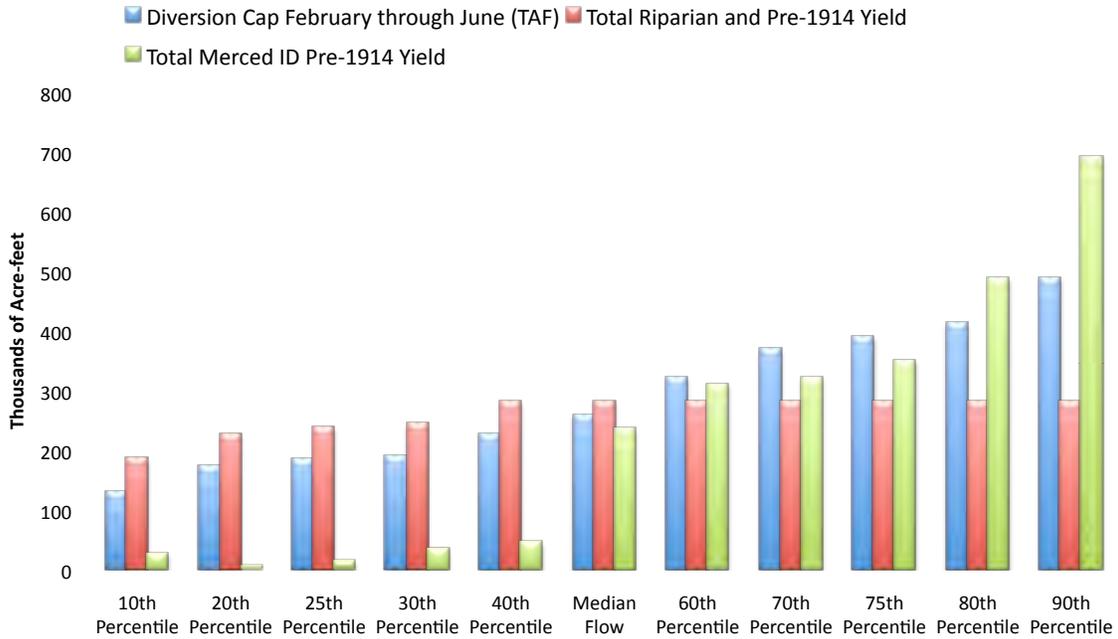
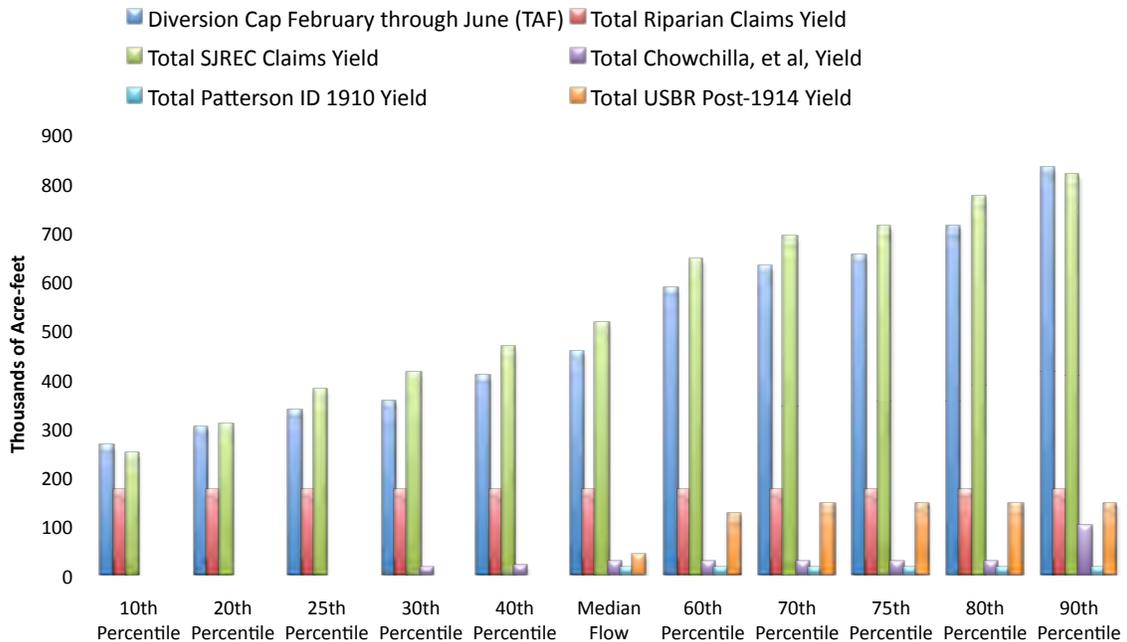


Figure 3, above. Figure 4, below.

San Joaquin River Water Availability
Assuming 60% of Unimpaired Flow Objective



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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 70th 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.³

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.

³ 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)

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Trinity River Water Availability Analysis
Assuming 75% of Unimpaired Flow Objective

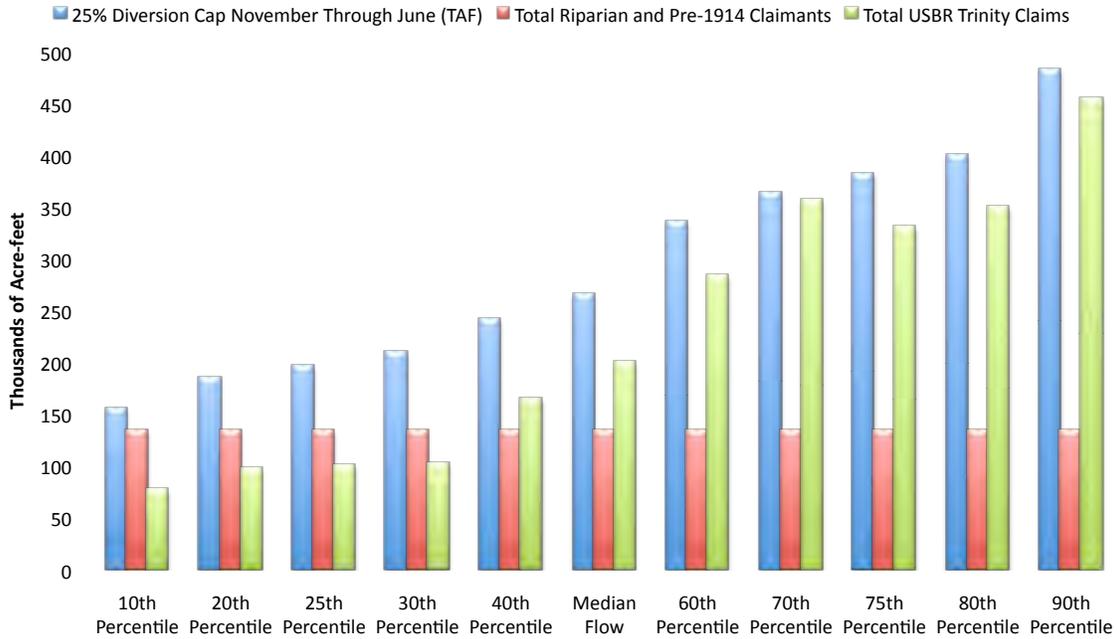
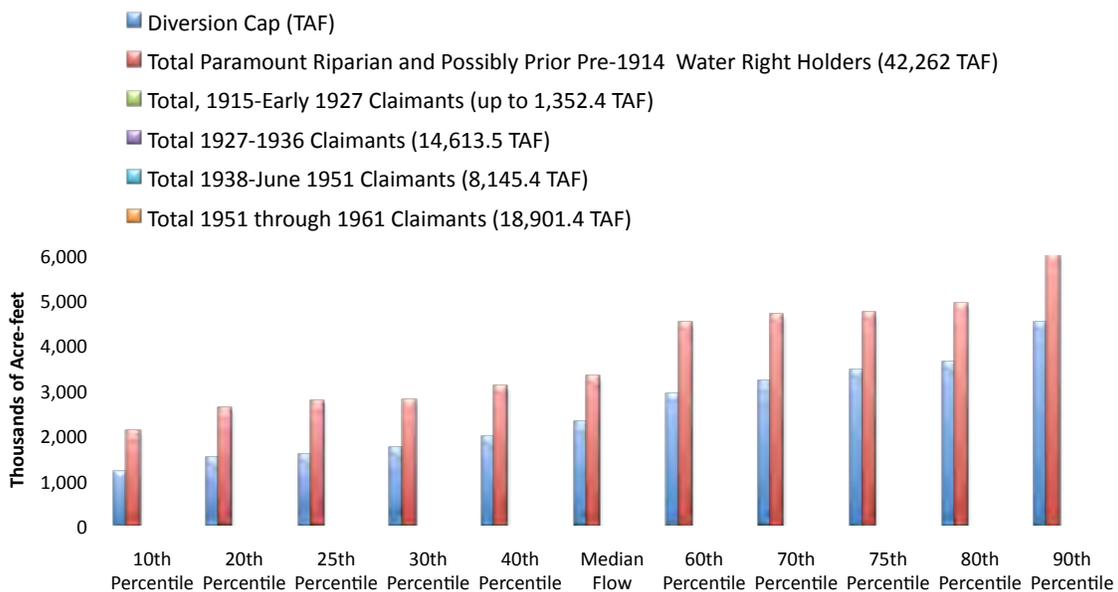


Figure 5, above. Figure 6, below.

Sacramento River
above Feather Confluence Water Availability
Assuming 75% of Unimpaired Flow Objective



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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 Districts⁴ 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.

⁴ 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.

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Feather River Water Availability
Assuming 75% of Unimpaired Flow Objective

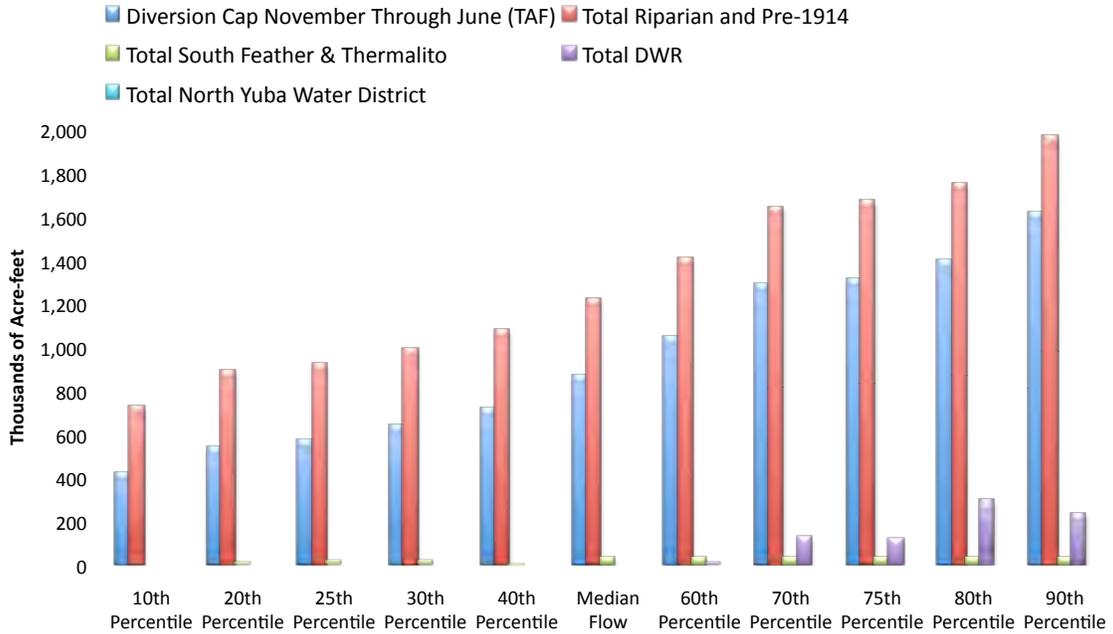
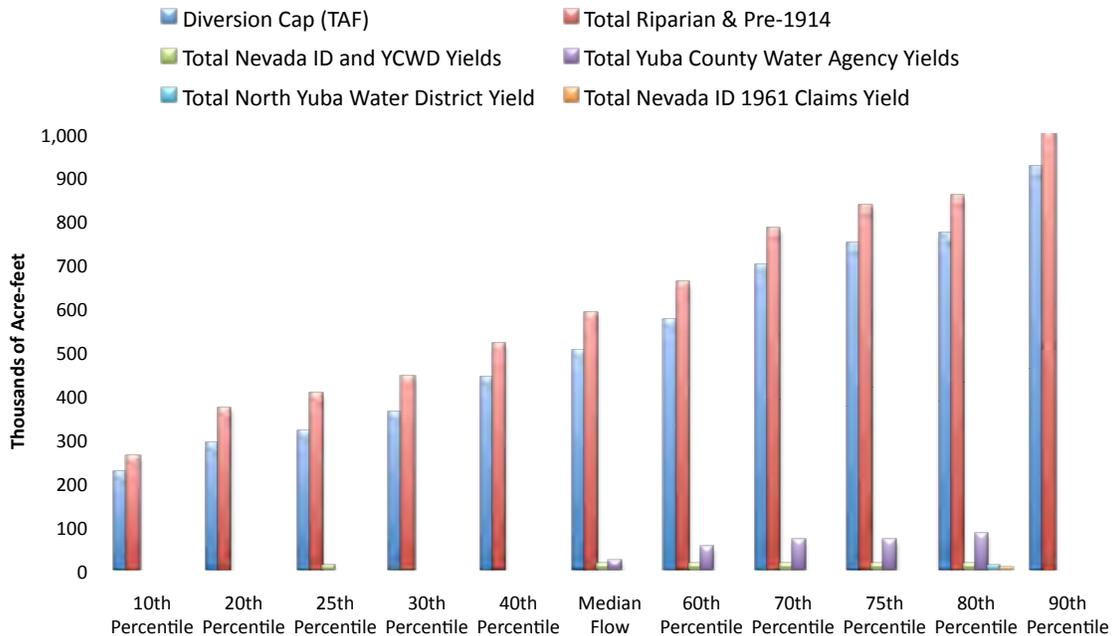


Figure 7, above. Figure 8, below.

Yuba River Water Availability
Assuming 75% of Unimpaired Flow Objective



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Bear River Water Availability
Assuming 75% of Unimpaired Flow Objective

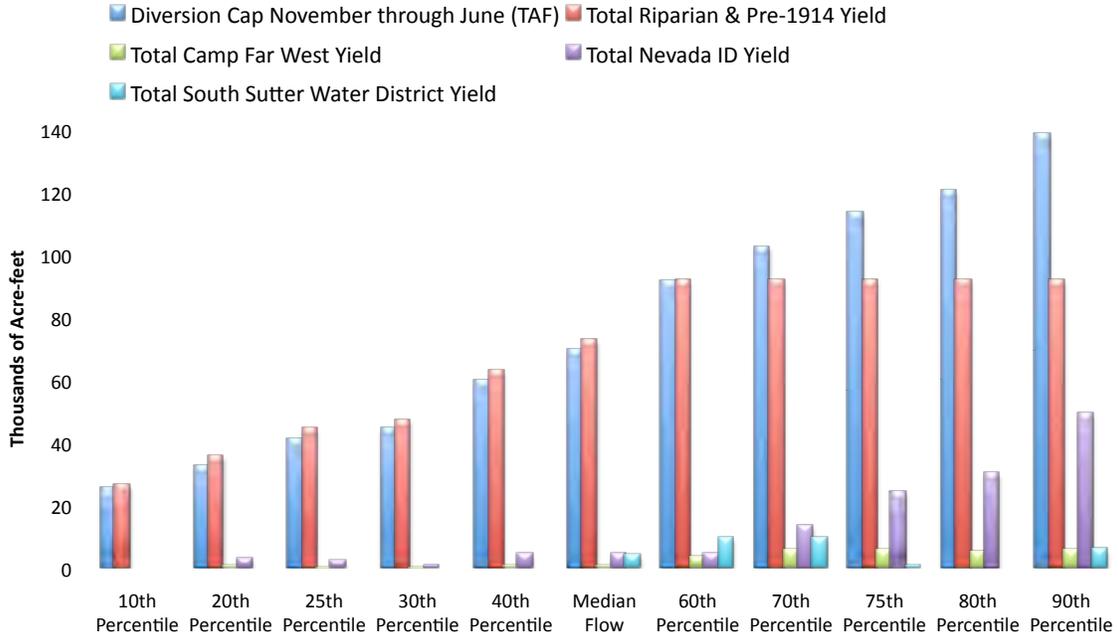
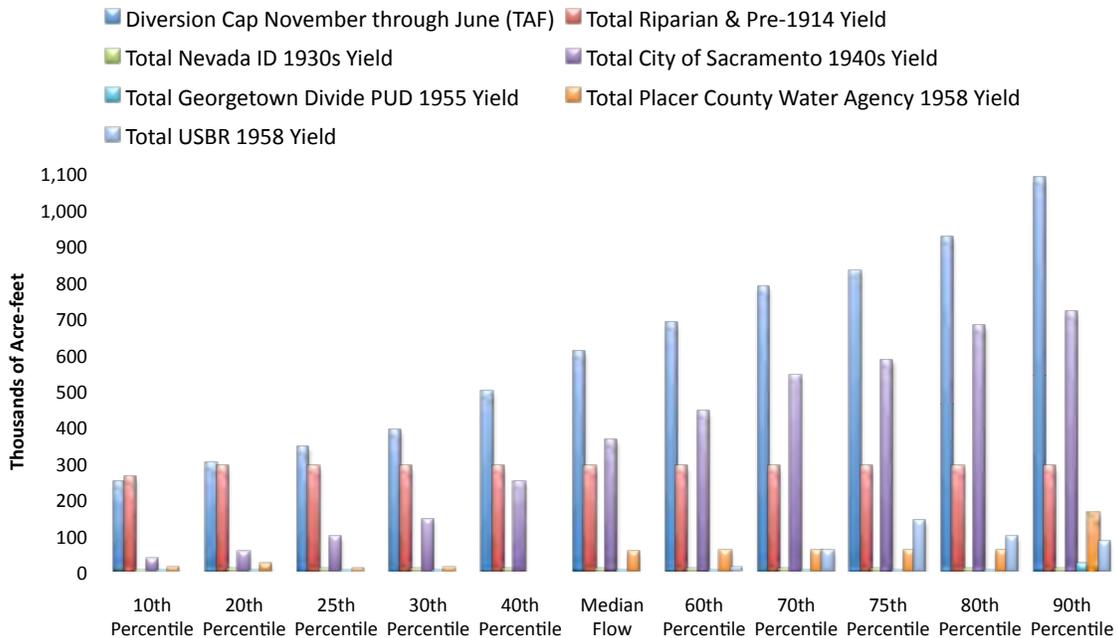


Figure 9, above. Figure 10, below.

American River Water Availability
Assuming 75% of Unimpaired Flow Objective



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Table 4 Summary of Watershed Consumptive Water Rights Claimants by Reliability (Based on Legal Priority) of Claims		
Watershed	Claimants with Highly Reliable Rights	Claimants with Potentially Clouded Titles to Water
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

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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.4th 742, 770; *City of*

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Barstow v. Mojave Water Agency (2000) 23 Cal. 4th 1224, 1243; see also *El Dorado Irrigation District v. State Water Resources Control Board* (2006) 142 Cal. App.4th 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.

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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.

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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.

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- 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, 1st 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.

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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

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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.⁵

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

⁵ California Water Code §85021, passed November 2009.

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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.

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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

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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

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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.

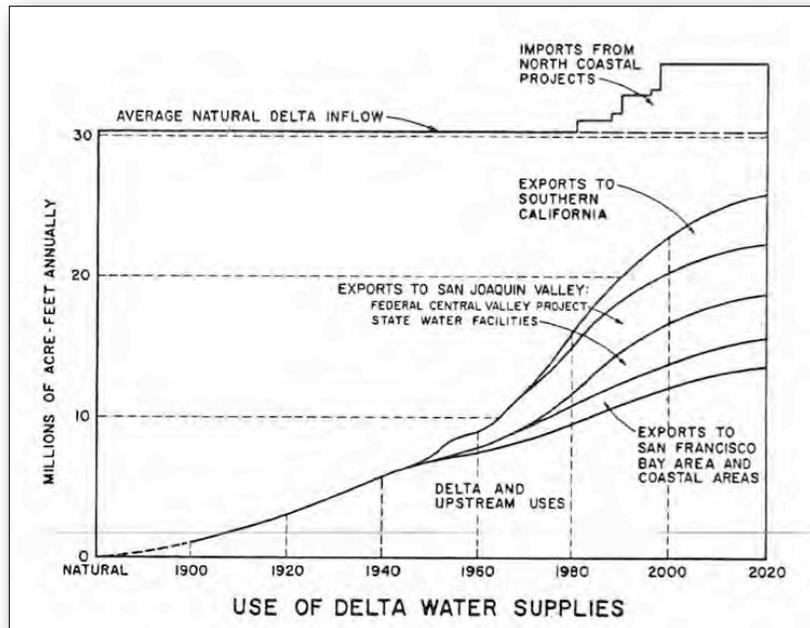


Figure 11

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

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.

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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

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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.

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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

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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	Apr 15 to May 15	7,330 or 8,620
	AN		5,730 or 7,020
	BN		4,620 or 5,480
	D		4,020 or 4,880
	C		3,110 or 3,540
	All		October
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.¹ 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).

¹ 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.

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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
Average VAMP Supplementing Flows						40,543	Acre-feet	

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.

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“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

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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.

Table 16 Comparison of D-1641 Spring Pulse Flow Criteria and Mean Actual VAMP Flows, 2000-2010 (Years with VAMP Results Only)			
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
2002	Dry	4,020 or 4,880	3,301
2003	Below Normal	4,620 or 5,480	3,235
2004	Dry	4,020 or 4,880	3,155
2007	Critically Dry	3,110 or 3,540	3,263
2008	Critically Dry	3,110 or 3,540	3,163
2010	Above Normal	5,730 or 7,020	5,140

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 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.

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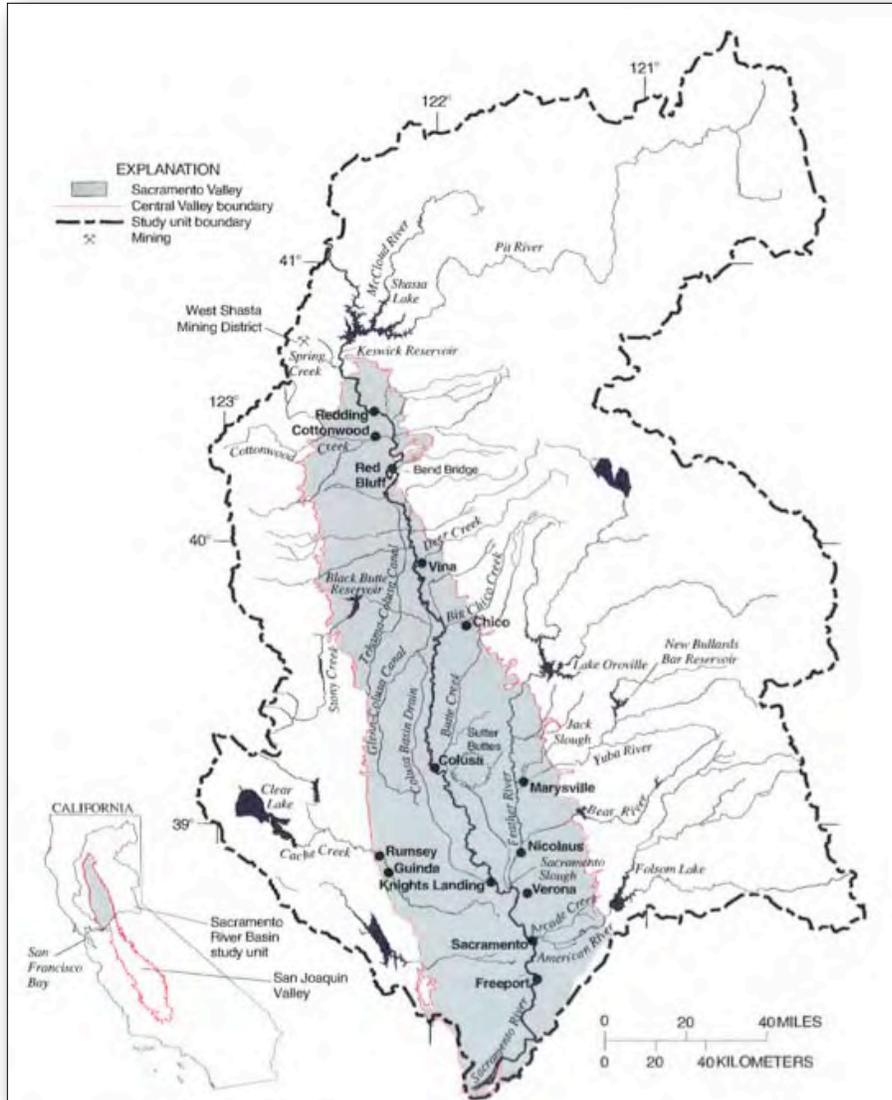


Figure C-2: Location of Sacramento Valley floor in the Sacramento River Basin.

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.

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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 20th 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)”

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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.

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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.

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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:

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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 1920s¹, 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 1927² 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."³ 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:

¹ 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.

² 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).

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

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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.⁴

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.⁵

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 1927.⁶ 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

⁴ These sections were repealed in 1953.

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

⁶ 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.

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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.⁷ 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)”

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

Appendix D

Supporting Data and Analyses

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- 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**
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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
Total Annual Unimpaired Flow (TAF)	679	789	824	866	1,025	1,133	1,424	1,582	1,611	1,683	2,035
November through June Unimpaired Flow (TAF)	624	743	785	838	968	1,064	1,341	1,455	1,529	1,599	1,930
Delta Inflow Criterion (75% of UF, TAF)	468	557	589	629	726	798	1,006	1,091	1,147	1,199	1,448
Diversion Cap (TAF)	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
Remaining Flows, July-October	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

	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
75% Inflow Criterion											
Total Annual Unimpaired Flow (TAF)	2,007	2,511	2,638	2,932	3,251	3,854	4,596	5,673	5,767	6,268	7,095
November through June Unimpaired Flow (TAF)	1,705	2,150	2,270	2,562	2,893	3,466	4,201	5,160	5,260	5,583	6,470
Delta Inflow Criterion (75% of UF, TAF)	1,278	1,613	1,703	1,921	2,170	2,600	3,151	3,870	3,945	4,187	4,852
Diversion Cap (TAF)	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
Remaining Flow July-October (TAF)	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								
	75%	60%	50%	40%	94% 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
75% Inflow Criterion											
Total Annual Unimpaired Flow (TAF)	921	1,231	1,363	1,521	1,826	2,123	2,428	2,949	3,164	3,284	3,765
November through June Unimpaired Flow (TAF)	884	1,151	1,268	1,438	1,746	2,006	2,280	2,780	2,993	3,079	3,681
Delta Inflow Criterion (75% of UF, TAF)	663	863	951	1,078	1,310	1,505	1,710	2,085	2,245	2,310	2,761
Diversion Cap (TAF)	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)	-	-	-	-	-	-	-	-	-	-	-
Remaining Flow July-October (TAF)	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	-
Total Riparian & Pre-1914	258	368	402	442	516	587	655	780	833	855	1,004
Total Nevada ID and YCWD Yields	0	0	10	0	0	12	12	12	12	12	0
Total Yuba County Water Agency Yields	0	0	0	0	0	20	51	66	66	81	0
Total North Yuba Water District Yield	0	0	0	0	0	0	0	0	0	8	0
Total Nevada ID Yield	0	0	0	0	0	0	0	0	0	6	0

Bear River Water Rights Yield Analysis

	Tributary Inflow Criteria										
	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
75% Inflow Criterion											
Total Unimpaired Flow (TAF)	102	137	171	181	247	290	384	434	462	489	567
November through June Unimpaired Flow (TAF)	102	130	165	177	239	278	365	410	453	482	553
Delta Inflow Criterion (75% of UF, TAF)	76	98	124	132	179	209	274	308	340	361	415
Diversion Cap (TAF)	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
Remaining Flow July-October (TAF)	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
75% Instream Flow Criterion											
Total Annual Unimpaired Flow (TAF)	1,041	1,252	1,416	1,613	2,023	2,521	2,844	3,300	3,554	3,886	4,525
November through June Unimpaired Flow (TAF)	984	1,188	1,363	1,556	1,983	2,422	2,731	3,140	3,311	3,687	4,340
Delta Inflow Criterion (75% of UF, TAF)	738	891	1,022	1,167	1,487	1,817	2,048	2,355	2,483	2,766	3,255
Diversion Cap (TAF)	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
Remaining Flow July-October (TAF)	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	Diversion Cap
75%	25% of unimpaired flow
60%	40% of unimpaired flow
50%	50% of unimpaired flow
40%	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
75% Inflow Criterion Scenario											
Total Annual Unimpaired Flow (TAF)	5,572	6,984	7,371	7,877	8,860	10,162	13,046	14,151	14,945	15,697	19,369
November through June Unimpaired Flow (TAF)	4,638	5,876	6,170	6,806	7,721	9,163	11,451	12,658	13,688	14,434	17,849
Delta Inflow Criterion (75% of UF, TAF)	3,479	4,407	4,627	5,104	5,791	6,872	8,588	9,494	10,266	10,826	13,386
Diversion Cap (TAF)	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
Remaining Flows, July-October (TAF)	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
60% Instream Flow Criterion											
Total Annual Unimpaired Flow (TAF)	457	592	637	680	894	1,107	1,265	1,359	1,460	1,559	1,912
Feb-June Unimpaired Flow Level (TAF)	382	500	551	566	740	822	994	1,077	1,127	1,180	1,459
Delta Inflow Criterion (60% of UF, TAF)	229	300	330	340	444	493	596	646	676	708	875
Diversion Cap (TAF)	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
Remaining Flows, July through January	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
60% Instream Flow Criterion											
Total Annual Unimpaired Flow (TAF)	836	1,053	1,107	1,183	1,416	1,786	2,030	2,181	2,363	2,483	3,093
Feb-June Unimpaired Flow Level (TAF)	675	898	961	984	1,189	1,299	1,578	1,704	1,755	1,852	2,188
Delta Inflow Criterion (60% of UF, TAF)	405	539	577	591	713	779	947	1,023	1,053	1,111	1,313
Diversion Cap (TAF)	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
Remaining Flow, July-January	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						
60% Instream Flow Criterion	10th Percentile	20th Percentile	25th Percentile	30th Percentile	40th Percentile	Median Flow	60th Percentile	70th Percentile	75th Percentile	80th Percentile	90th Percentile
Total Annual Unimpaired Flow (TAF)	409	492	527	562	669	906	1,077	1,160	1,220	1,389	1,708
Jan-June Unimpaired Flow Level (TAF)	326	432	459	471	568	648	805	924	977	1,030	1,223
Delta Inflow Criterion (60% of UF, TAF)	196	259	275	283	341	389	483	554	586	618	734
Diversion Cap (TAF)	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
Remaining Flow, July-January	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
60% Instream Flow Criterion											
Total Annual Unimpaired Flow (TAF)	813	928	1,052	1,128	1,257	1,449	1,854	2,047	2,195	2,322	3,018
Feb-June Unimpaired Flow Level (TAF)	656	749	839	881	1,007	1,137	1,458	1,572	1,623	1,779	2,075
Delta Inflow Criterion (60% of UF, TAF)	394	450	503	529	604	682	875	943	974	1,068	1,245
Diversion Cap (TAF)	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
Remaining Flow, July-December	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
														November Through June	
Trinity River at Lewiston															
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%
														November Through June	
Sacramento River to Feather Confluence (including Pit River,															
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	
														November Through June		
Feather River																
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%	
														November Through June		
Yuba River																
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
														November Through June	
Bear River															
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%
														November Through June	
American River															
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
November Through June															
Sacramento Valley Total															
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%
February Through June															
Stanislaus River															
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
Tuolumne River															
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%
Merced River															
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	
														February Through June		
San Joaquin River																
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%	
														February Through June		
San Joaquin Valley Total																
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 Adjudication - Butte County Decree No. 18917, November 6, 1942

**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)			
Schedule 3, Foreign Water Rediversion Group														
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
Subtotal, Schedule 3, Foreign Water Rediversion Group	22,843.30			10.00	7,243.90	100.00	72,446.28	0.00	0.00	0.00	0.00		110.00	79,690.18
Schedule 4, Nonconsumptive Claimants on Butte Creek and Tributaries														
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
Subtotal, Schedule 4, Nonconsumptive Claimants on Butte Creek and Tributaries				596.85	432,395.63								596.85	432,395.63
Schedule 5, Little Butte Creek and Tributaries Claimants Group														
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

**Butte Creek Decree
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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
Subtotal, Schedule 5, Little Butte Creek and Tributaries Group	11,263.30			7.75	5,614.59	11.86	4,657.75	1.98	777.60	2.50	981.82	24.09	12,031.75
Schedule 6, Upper Butte Creek and Tributaries Claimants (above Little Butte Creek)													
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
Subtotal Schedule 6, Upper Butte Creek and Tributaries Group	899.00			7.59	5,498.67	9.65	3,789.82	0.00	0.00	0.00	0.00	17.24	9,288.49

Butte Creek Adjudication - Butte County Decree No. 18917, November 6, 1942

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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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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)			
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
Subtotal, Schedule 7, Lower Butte Creek and Tributaries Claimants Group	13,702.40			24.66	17,865.25	63.25	24,840.00	6.00	4,346.78	2.75	1,992.27	96.66	49,044.30	
Additional Continuous Year-Round Usage Claimants - Special Class														
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 Adjudication - Butte County Decree No. 18917, November 6, 1942

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Claimants	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 (cfs)	Fourth 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)						
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								
Subtotal, Additional Continuous Usage Claimants				4.05	2,934.07								
Additional Irrigation Season Usage Claimants - Special Class													
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						

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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 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								
Subtotal, Additional Irrigation Season Usage Claimants				63.46	16,200.87									
Surplus Class Rights Claimants														
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								

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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)		
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				
Subtotal, Additional Surplus Class Claimants				164.78	60,987.30					

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Summary	Total, cfs	Total, AF											
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											
Subtotal, Consumptive Use Claimants in Butte Creek System	315.50	169,189.68											
Subtotal, Basic Claimants to Butte Creek System Flows	912.35	601,585.30											
Subtotal, Additional Surplus Class Claimants	164.78	60,987.30											
Total, All Consumptive Use Claimants to Butte Creek System	480.28	230,176.97											
Total, All Claimants to Butte Creek System	1,077.13	662,572.60											

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)
Schedule 3, Claimants from Wolf Creek and its Tributaries										
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

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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
Subtotals, Schedule 3 - Wolf Creek Group	1,838.70			8.38	5,837.26	10.90	5,296.86	3.35	1,627.93	12,762.05
Schedule 4: Claimants from Lights Creek and Its Tributaries										
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	0.10	72.45	0.75	364.46			436.91
A J Downey and D W Downey	Power	86, 87	Downey Upper, Downey Lower	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

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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
Subtotals, Schedule 4 - Lights Creek Group	2,131.70			6.90	4,998.79	18.98	9,220.91	1.85	899.01	15,118.71
Schedule 5: Claimants from Streams in Upper Tributary Area										
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

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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

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Clover Valley Lumber Company	Industrial	-	Upper Tributary of Stream System	1.00	724.46					724.46
Subtotals, Schedule 5 - Upper Tributary Area Group	2,081.60			5.80	4,201.88	13.25	5,624.13	0.00	0.00	9,826.02
Schedule 6, Indian Creek in Genesee and Indian Valleys Group										
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

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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
Subtotal, Schedule 6 - Indian Creek in Genesee and Indian Valleys Group	5,033.80			20.60	14,923.93	54.08	26,518.71	10.65	6,010.17	47,452.81
Schedule 7, "Special Class" Rights on Indian Creek Stream System										
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

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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

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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	0.13	94.18					94.18
B B Gregory & Estella E Gregory	2.00	123A	Domestic 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
Subtotal, Schedule 7 - "Special Class" Rights Group	707.40			12.148	8,800.77					8,800.77
Schedule 8, "Surplus Class" Rights on Indian Creek Stream System										
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

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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
Subtotal, Schedule 8 - "Surplus Class" Rights	1,206.20							9.51	4,036.64	4,036.64
Special Class Claimants										
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
Subtotal, Special Class Claimants					4,845.00					
Surplus Class Claimants										
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
Subtotal, Surplus Class Claimants				1.27	1,117.17					
Summary of Indian Creek Adjudication										
Schedule 3 - Wolf Creek Group	1,838.70	8.38	5,837.26	10.90	5,296.86	3.35	1,627.93			12,762.05
Schedule 4 - Lights Creek Group	2,131.70	6.90	4,998.79	18.98	9,220.91	1.85	899.01			15,118.71
Schedule 5 - Upper Tributaries Group	2,081.60	5.80	4,201.88	13.25	5,624.13	0.00	0.00			9,826.02
Schedule 6 - Indian Creek in Genesee & Indian Valleys Group	5,033.80	20.60	14,923.93	54.08	26,518.71	10.65	6,010.17			47,452.81
Schedule 7 - Special Class Group	707.40	12.148	8,800.774	0.000	0.000	0.000	0.000			8,800.774
Schedule 8 - Surplus Class Group	1,206.20	0.00	0.00	0.00	0.00	9.51	4,036.64			4,036.64
Subtotal, Special Class Claimants										4,845.00
Subtotal, Surplus Class Claimants										1,117.17
Total Face Value (AF), Indian Creek Decree	12,999.40	53.83	38,762.64	97.21	46,660.61	25.36	12,573.75			103,959.17

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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

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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
Subtotal, Schedule 3 - Last Chance Creek Group	1,401.10			18.00	7,140.50	0.50	198.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,338.84	18.50
Schedule 4, Claimants from Last Chance Creek and Its Tributaries below Frenchman Creek																	
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		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					2.75	1,090.91							1,090.91	2.75
Edmond J Goble & Ida C Goble	251.00	35, 36, 37	Goble Upper North 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

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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	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

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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
Subtotal, Last Chance Creek below Frenchman Creek Group Schedule 5, Claimants from Last Chance Creek Below Adams Neck	5,474.10			8.75	3,471.07	13.80	5,474.38	15.60	6,188.43	19.80	7,854.55	17.10	5,970.25	28,958.68	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
Subtotal, Last Chance Creek Group Below Adams Neck	2,716.00			3.20	1,269.42	5.70	2,261.16	6.95	1,368.60	0.00	0.00	0.00	0.00	4,899.17	15.85	
Schedule 6, Claimants from Smithneck Creek and Tributaries																
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 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	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
Subtotal, Claimants from Smithneck Creek and Its Tributaries Group	5,886.60			10.94	7,925.62	33.11	15,514.15	13.20	5,236.36	7.00	2,776.86	2.89	1,146.45	31,012.66	67.14

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)			
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	Humphrey Mercer, Albini & Humphrey Matley, 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 Berry West Side, Ghidossi Upper Field Dams							0.90	357.02	0.50	198.35		555.37	1.40
E F Ghidossi	349.40	213, 216	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
Subtotal Schedule 7 - Claimants from West Side Canal and its Tributaries (Hamlin, Miller and Turner Creeks)	7,712.40			8.35	6,049.26	30.85	14,352.12	29.00	11,504.13	22.50	8,528.93	5.45	2,161.98	41,997.02	96.15	

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Schedule 8, Claimants from Fletcher Creek and Spring Channels															
Davies-Johnson Lumber Company	134.80	192, 193, 197	Davies-Johnson House, Davies-Johnson Spring Challen Davies-Johnson Meadow	0.85	615.79	0.85	337.19							952.98	1.70
Davies-Johnson Lumber Company	Industrial	196	Calpine Pipe Freeman Spring Channel, Freeman Fletcher Creek Meadow Devine Spring											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 Meadow	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 Clarke Fletcher Creek Meadow	0.20	144.89	1.45	575.21	0.28	111.07					831.17	1.93
Subtotal Schedule 8, Claimants from Fletcher Creek and Spring Channels	583.80			1.55	1,122.92	3.90	1,547.11	0.63	249.92	0.00	0.00	0.00	0.00	2,919.94	6.08

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

Name	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
Subtotal, Schedule 9	6,175.00	60	23,801.65

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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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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									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
Subtotal, Schedule 10, Claimants from Middle Fork of Feather River and Tributaries Cold, Webber, Town, and Perry Creeks	10,045.70			9.79	7,092.49	8.28	3,841.83	20.81	8,255.21	31.42	12,464.13	30.65	12,158.68	16.70	6,624.79	50,437.14	117.65
Additional Special Class Claimants, Last Chance Creek Group				cfs	AF	Season											
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											

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)		
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										
Subtotal, Additional Special Class Claimants - Last Chance Creek Group				13.48	8,344.71											
Additional Surplus Class Claimants - Last Chance Creek Group																
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											
Subtotal, Additional Surplus Class Claimants, Last Chance Creek Group					331.00											
Additional Special Class Claimants, Smithneck Creek Group																
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										
Subtotal, Additional Special Class Claimants - Smithneck Creek Group				2.95	1,711.07											
Additional Surplus Class Claimants - Smithneck Creek Group																
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											
Subtotal, Additional Surplus Class Claimants - Smithneck Creek Group					240.00											
Additional Special Class Claimants, West Side Canal Group																

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
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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)		
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										
Subtotal, Additional Special Class Claimants, West Side Canal Group				1.95	773.55											
Additional Surplus Class Claimants - Fletcher Creek Group																
Isolina Pasquetti	Domestic, Stockwater, Irrigation		Fletcher Creek and Spring Channels	0.25	99.17	Irrigation Season										
Subtotal, Additional Surplus Class Claimants, Fletcher Creek Group				0.25	99.17											
Additional Special Class Claimants - Middle Fork Feather River Group																
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										

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
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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)		
Westover Company	Domestic, Stockwater, Irrigation	266		1.80	1,304.03	Continuous				
Westover Company	Domestic, Stockwater	Unnamed Spring	Unnamed Spring Amodel Upper Spring, Amodel Meadow Spring Ditches Amodel Upper Spring, Amodel Meadow Spring Ditches Amodel Meadow Springs	0.01	3.62	Continuous				
John Amodel & Anna Amodel	Domestic, Stockwater, Irrigation	259, 260		1.20	869.36	Continuous				
A E Strang	Domestic, Stockwater, Irrigation	259, 260		0.20	144.89	Continuous				
A E Strang	Irrigation	Amodel Springs		0.80	579.57	Continuous				
Subtotal, Additional Special Class Claimants - Middle Fork Feather River				26.51	17,235.28					
Additional Surplus Class Claimants - Middle Fork Feather River										
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					
Subtotal, Additional Surplus Class Claimants - Middle Fork Feather River Group				6.30	2,779.17					

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)		
Summary of Middle Fork of Feather River Adjudication Decree	Total cfs	Total AF								
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								
Subtotal, Schedules 3-10	456.42	191,365.11								
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								
Subtotal Schedules 3-10 and Special Class Claimants	498.35	217,958.65								
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								
Subtotal, All Surplus Class Claimants	6.55	3,449.35								
Grand Total, All Schedules and Classes of Claimants	504.90	221,408.00								

Summary of Pit River Decrees

Pit River Decrees	Face Amount
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
Total Pit River Decrees	435,554.75

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)			
Rush Creek Group (Schedule 3)																
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
Subtotal, Rush Creek Group	305.70			5.25	2,061.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.25	2,061.82
Butte Creek Group (Schedule 4)																
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
Subtotal, Butte Creek Group	291.60			2.50	981.82	0.90	353.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40	1,335.27
Willow Creek Group (Schedule 5)																
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
Subtotal, Willow Creek Group	1,432.70			0.97	702.73	7.83	3,075.05	1.50	589.09	2.30	903.27	0.00	0.00	12.60	5,270.15	
Ash Creek Group (Schedule 6)																
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	Cannon Box					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	Jenkins-Cannon			0.50	362.23	0.60	272.53							1.10	634.76
W H Hunt Estate Co.	88.00	23	Cannon Box, 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									0.30	136.26			0.30	136.26
Wm Kramer and Rachel R Kramer	25.00	22, 23	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	South Channel Head Box, Chisholm Upper Dam, Chisholm Lower Dam					0.50	227.11							0.50	227.11
Wm H Bean	38.90	25, 29, 30	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
M D Wayman and Alice M Wayman	232.90	25, 26, 31, 32, 33	South Channel Head Box, Holmes Upper Dam, Holmes Lower Dam					1.20	545.06							1.20	545.06
R L Holmes and May L Holmes	94.00	25, 34, 35	South Channel Head Box, Miller Upper Dam, Miller Middle Dam, Miller Lower Dam					2.15	976.56							2.15	976.56
J P Miller and Clara Miller	172.40	25, 39, 40, 41	South Channel Head Box, Weigand-Gerig Dam					1.75	794.88							1.75	794.88
Kasper Weigand and Etta Weigand	141.10	25, 42	South Channel Head Box, Weigand-Gerig Dam, Gerig Swamp Dam					2.50	1,135.54							2.50	1,135.54
Charles A Gerig	200.70	25, 42, 43	Big Valley Drainage Canal									1.25	567.77			1.25	567.77
W H Hunt Estate Co.	97.90	26	Gerig, Mouth of Ash Creek									0.20	90.84			0.20	90.84
W H Hunt Estate Co.	38.00	52, 53	Gerig, Mouth of Ash Creek									1.15	522.35			1.15	522.35
James A Hollenbeak and Lela Hollenbeak	207.00	52, 54, 55	Gerig, Watson, Hollenbeak Swale														
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
Subtotal Ash Creek Group Special Class Claimants on Ash Creek (Schedule 7)	8,588.40			33.65	14,134.51	1.00	724.46	63.60	28,888.07	6.60	2,997.82	2.15	976.56	107.00	47,721.42	
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	
Subtotal, Special Class (Schedule 7)	3,645.60			23.53	10,129.74									23.53	10,129.74	

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
Total	28,010.61	4,152.97	29,477.16	3,901.09	976.56	66,518.40

**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)
Tributary Group													
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
Subtotal, Tributary Group	3,871.00			23.79	8,635.18	17.75	6,442.81	10.45	3,793.09	3.49	1,266.78	55.48	20,137.86
Big Valley Pit River Group													
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 Pircen and Verna L Pircen	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	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)		
S J Thompson and W H Thompson	304.00	49				3.21	1,165.15			1.13	410.16	4.34	1,575.31
Subtotal, Big Valley Pit River Group	15,819.00			15.00	5,444.63	154.23	55,981.67	29.59	10,740.44	43.00	15,607.93	241.82	82,330.04
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										
Total, Surplus Water Claims	568.67	171,140.62											
Summary	cfs	Acre-feet											
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											
Total, Big Valley Pit River Decree Claims	865.97	273,608.52											

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)
West Side Users					
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
Subtotal, West Side Users	1,029.00			25.90	4,649.16
East Side Users					
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
Subtotal, East Side Users	969.00			25.30	4,541.45
Surplus Water Users					
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
Subtotal, Surplus Water Users	472.00			5.90	2,118.15
Total, Burney Creek Decree	2,470.00			31.50	11,308.76

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)						
Allotments from Franklin Creek													
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, 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	0.20 72.60
John & Fannie Morrison	22.50		Morrison and/or Morrison Middle									0.15	54.45	0.15 54.45
Earl & Bernice Sherer and Bank of America NT&SA	51.60		Morrison Middle, and/or Morrison Lower											101.63
Total Franklin Creek Allotments	909.35			0.18	63.52	1.46	529.94	8.49	3,081.66	1.53	555.35	11.66	4,230.48	

**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)
Summer Season Decree No. 5724			
Upper Users, First Rotation - Schedule I			
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	Rieger	3.25	580.17
Charles Sidney Gray	Gray	1.00	178.51
Subtotal, Schedule I, First Rotation		103.50	18,476.03
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
Subtotal, Schedule II, Second Rotation		10.13	1,807.44
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

**Hat Creek Decree
Shasta County Decree No. 5724
Shasta County Decree No. 7858**

**Summer Season
Winter Season**

Continuous, regardless of season	365.25	days
May 1 through October 27	180.00	days
October 28 through April 30	185.25	days

Name of Claimant	Name of Diversion System	Allotments	
		Allotment (cfs)	Allotment (AF)
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
Subtotal, Schedule III, First Rotation		129.00	23,028.10

Lower Users, Second Rotation - Schedule IV

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
Subtotal, Schedule IV, Second Rotation		9.13	1,628.93

Schedule 2 - Decree No. 7858

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**

**Summer Season
Winter Season**

Continuous, regardless of season 365.25 days
 May 1 through October 27 180.00 days
 October 28 through April 30 185.25 days

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
Subtotal, Schedule 2, Decree No. 7858		131.37	48,270.33

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
Total, Hat Creek Decrees		383.12	93,210.83

**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)			
Linville Creek and Its Tributaries Claimants																
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
Subtotal, Linville Creek Group	661.40			3.91	2,832.65	4.39	1,593.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.30	4,426.11
Joseph Creek and its Tributaries Claimants																
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
Subtotal, Joseph Creek Group	786.60			4.59	3,325.28	3.30	1,197.82	1.70	617.06	2.39	867.51	0.00	0.00	0.00	11.98	6,007.67
Thoms Creek and Its Tributaries Claimants																
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
Subtotal, Thoms Creek Group Gleason Creek and Its Tributaries Group	306.70			1.01	731.71	3.14	1,052.55	2.29	767.62	0.00	0.00	0.00	0.00	0.00	6.44	2,551.88	
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
Subtotal, Gleason Creek Group Parker Creek and Its Tributaries Claimants	301.90			0.20	144.89	0.40	289.79	1.80	0.00	1.35	490.02	0.80	290.38	4.55	1,215.07		
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
Subtotal, Parker Creek Group	1,935.10			2.58	1,869.11	6.12	2,221.41	15.58	5,655.15	2.92	1,059.89	0.00	0.00			27.20	10,805.56
North Fork of Pit River Claimants																	
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
Subtotal, North Fork of Pit River Group	6,378.90			8.15	5,904.37	16.20	5,880.20	8.00	2,903.80	16.79	6,094.35	2.94	1,067.15			52.08	21,849.87
Special Class Continuous Usage																	
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												
Subtotal, Special Class Continuous	3.68	2,666.02												
Surplus Class (Apr 1 - Sep 30)														
James C Porter	1.15	417.42												
Subtotal, Surplus Class	1.15	417.42												
Special Class (Apr 15 - Sep 30)														
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												
Subtotal, Special Class Apr 15-Sep 30	5.00	1,676.03												

**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)						
Summary	Total cfs	Total AF												
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												
Total, All Groups	110.55	46,856.17												

**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 2, Allotments from Rattlesnake Creek and Pit River					
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
Subtotal, Schedule 2	4,147.00			14.00	5,081.65

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
Subtotal Schedule 3	4,400.00			88.00	31,941.82

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			
Total	102.00	37,023.47			

Roaring Creek Stream System Adjudication - Shasta County Decree No. 83723

**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)		
Schedule 3, Roaring Creek Claimants													
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
Subtotal, Schedule 3, Roaring Creek Claimants	122.00			2.01	857.16	0.00	0.00	0.15	63.97	4.41	1,901.49	6.57	2,822.61
Schedule 4, Jake Creek Claimants													
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
Subtotal, Schedule 4, Jake Creek Claimants	49.00			0.00	0.00	2.30	980.83	0.00	0.00	0.00	0.00	2.30	980.83
Schedule 5, Browns Creek Claimants													
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
Subtotal, Schedule 5, Browns Creek Claimants	65.00			0.75	319.83	1.08	460.56	0.04	17.06	1.26	537.32	3.13	1,334.78
Schedule 6, Miscellaneous Claimants													
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
Subtotal, Schedule 6, Miscellaneous Claimants	0.00			0.11	79.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	79.69
Paragraph 19: Winter Season Domestic and Stockwater Entitlement														
Schedule 3, Roaring Creek Claimants														
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		6	Domestic											
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									
Subtotal, Schedule 3, Roaring Creek Claimants	122.00			0.15	44.70									
Schedule 4, Jake Creek Claimants														
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									
Subtotal, Schedule 4, Jake Creek Claimants	49.00			0.04	11.92									
Schedule 5, Browns Creek Claimants														
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)		
Subtotal, Schedule 5, Browns Creek Claimants	65.00			0.05	14.90								
Subtotal, Winter Season Domestic & Stockwater Allotments	236.00			0.24	71.52								
Summary	Total cfs	Total AF											
Subtotal, Schedule 3, Roaring Creek Claimants	6.57	2,822.61											
Subtotal, Schedule 4, Jake Creek Claimants	2.30	980.83											
Subtotal, Schedule 5, Browns Creek Claimants	3.13	1,334.78											
Subtotal, Schedule 6, Miscellaneous Claimants	0.11	79.69											
Subtotal, Winter Season Domestic & Stockwater Allotments	0.24	71.52											
Total, Roaring Creek Stream System Decree Claims	12.35	5,289.43											

**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)		
Schedule 2, Fitzhugh Creek and Its Tributaries Claimants									
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
Subtotal, Schedule 2, Fitzhugh Creek Claimants	984.50			3.60	2,077.29	11.40	4,477.09	15.00	6,554.38

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		Second Priority Class (cfs)	Second Priority Face Value (AF)	Total cfs	Total AF
				First Priority Class (cfs)	First Priority Face Value (AF)				
Schedule 3, South Fork of Pit River and Its Tributaries Claimants									
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
Arthur Flournoy	178.10	23, 24	Mill Creek				2.80	505.39	2.80
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
Subtotal, Schedule 3, South Fork Pit River and Tributaries Claimants	16,271.10			29.48	20,074.85	182.71	30,279.99	196.34	50,354.84
Schedule 3, Surplus Rotational Allotments for Second Priority Class Claimants, July 1 through July 21									

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 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
Subtotal, July 1 to 21 Surplus Rotation Claimants Schedule 3, Surplus Rotational Allotments for Second Priority Class Claimants, July 22 through August 11	3,795.90				35.45		1,476.60
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
Subtotal, July 22 to August 11 Rotations Claimants	12,475.20				147.26		6,133.80

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
Subtotal, August 12 to October 15 Rotations Claimants	27.75	3,577.69

**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)		
Summary	Cubic Feet per Second	Acre-Feet						
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						
Subtotal, Basic South Fork Claimants Before Surplus Rotations	211.34	56,909.22						
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						
Grand Total, All Claimants, Basic Plus Surplus Rotations	421.80	68,097.30						

**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)		
Schedule 3, Willow Creek Claimants									
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
Subtotal, Schedule 3 Willow Creek Claimants	88.00			0.05	36.62	0.75	319.83	0.80	356.45
Schedule 4, Minnow and Dunn Creeks Claimants									
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
Subtotal, Schedule 4 Minnow and Dunn Creeks Claimants	26.00			0.02	14.49	0.26	110.88	0.28	125.37
Schedule 5, Post-1914 Appropriative Water Rights									
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			
Subtotal, Post-1914 Appropriative Water Rights	45.00			0.00	70.20			
Summary	Total cfs	Total AF						
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						
Total, Willow Creek Decree Claimants	1.08	552.02						

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)				
Schedule 3, Willow Creek Claimants									
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
Subtotal, Schedule 3 Willow Creek Claimants	88.00			0.05	36.62	0.75	319.83	0.80	356.45
Schedule 4, Minnow and Dunn Creeks Claimants									
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
Subtotal, Schedule 4 Minnow and Dunn Creeks Claimants	26.00			0.02	14.49	0.26	110.88	0.28	125.37
Schedule 5, Post-1914 Appropriative Water Rights									
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				
Subtotal, Post-1914 Appropriative Water Rights	45.00			0.00	70.20				

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)				
Summary	Total cfs	Total AF							
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							
Total, Willow Creek Decree Claimants	1.08	552.02							

**Deer Creek Decree
Tehama County Suit No. 2449
Stanford Vina Ranch, plaintiff**

	Cubic Feet Per Second	Acre-feet	Source
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
	Dept of Fish and Game Total	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
	EDGAR MURRISON Total	4,356.46						
S002528	KEITH L GROVES	2,400.00	Pre-14	1866	All	Irrigation, Stockwater, Domestic	Trinity	HALLS GULCH
	KEITH L GROVES Total	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
	ROGER P ECKART Total	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
	WEAVERVILLE COMMUNITY SERVICES DISTRICT Total	1,531.01						
	Grand Total	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
	ALBERT E PUHLMAN JR Total	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
	CLIFFORD K OILAR Total	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
	CRAIG MCARTHUR Total	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
	Dennis Hoffman Total	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
	Dept of Fish and Game Total	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
	DIXIE VALLEY RANCH Total	24,173.39						
S008053	ED DEVAUL	1,620.00	Riparian	1949	All	Irrigation, Stockwatering, Domestic	Shasta	UNST
	ED DEVAUL Total	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
	EDWARD A BOSWORTH JR Total	7,245.51						
S000798	ELLEN E TAYLOR	1,451.90	Pre-14	1913	Apr-Nov	Irrigation, Stockwatering	Shasta	LOST CREEK
	ELLEN E TAYLOR Total	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
	Glenn A Nader Total	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
	JOSEPH SCOTT VERMILYEA Total	11,585.00						
S001050	KNOCH INC	19,560.00	Riparian/Pre-14	1909	All	Irrigation, Stockwatering	Shasta	FALL RIVER
	KNOCH INC Total	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
	LOWELL L NOVY Total	2,920.00						
S008627	MILANO LAND AND CATTLE CO LLC	2,500.00	Pre-14	1902	May-Oct	Irrigation, Stockwatering	Modoc	DUNCAN RESERVOIR
	MILANO LAND AND CATTLE CO LLC Total	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)
	Outfitter Properties LLC-Oasis Springs Total	3,245.00						
S002509	R HAMBY	1,600.00	Pre-14	1898	All	Irrigation, Stockwatering, Domestic	Shasta	EAST FORK NELSON CREEK
	R HAMBY Total	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
	Raymond J Paige Total	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
	RICHARD L JENNINGS Total	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
	Western Agricultural Services (River Butte Ranch) Total	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
	Western Agricultural Services (Fall River Ranch) Total	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
	Western Agricultural Services (River Ranch L P) Total	2,850.00						
S012933	ROBERT G BAIRD	1,149.00	Pre-14	1872	Apr-Nov	Irrigation, Stockwatering	Modoc	TOMS CREEK
	ROBERT G BAIRD Total	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
	ROBERT H MACKEY & SONS INC Total	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
	RONALD L SCHLUTER Total	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
	S X RANCH INC Total	1,340.00						
S015534	SX Lowry Ranch	2,000.00	Pre-14	1897	Nov-Apr	Irrigation, Stockwatering	Modoc	SALISBURY GULCH AKA UNST
	SX Lowry Ranch Total	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
	WILLIAM K HAGGE Total	2,195.00						
	Grand Total	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
	A L HANSEN Total	2,800.00						
S000267	ALBANO P BRESCIANI	700.00	Riparian/Pre-14	1857	All	Stockwater	Plumas	CLEAR STREAM
	ALBANO P BRESCIANI Total	700.00						
S001884	Phillip A Bresciani	300.00	Pre-14	1904	May-Sep	Irrigation, Stockwater	Plumas	SPANISH CREEK
	Phillip A Bresciani Total	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
	ALBANO P BRESCIANI Total	2,202.00						
S010594	BERRY CREEK WATER USERS INCORPORATED	2,477.66	Pre-14	1852	All	Irrigation, Stockwater	Butte	BERRY CREEK
	BERRY CREEK WATER USERS INCORPORATED Total	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
	BROOKS WALKER ET AL Total	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
	DEAN PANFILI Total	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
	GRAEAGLE LAND & WATER COMPANY Total	3,287.39						
S008734	GRAEAGLE WATER COMPANY A CALIF CORP	990.71	Riparian	1941	All	Irrigation, Stockwater, Domestic	Plumas	GRAY EAGLE CREEK
	GRAEAGLE WATER COMPANY A CALIF CORP Total	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
	MOHAWK VALLEY RANCH, INC Total	7,259.15						
S009189	PLUMAS PINES GOLF RESORT	10,700.00	Pre-14	1877	May-Oct	Irrigation	Plumas	JAMISON CREEK
	PLUMAS PINES GOLF RESORT Total	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
	RED RIVER FORESTS PARTNERSHIP Total	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
	REID LAND & CATTLE COMPANY Total	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
	RICHARD D FRIPP II Total	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
	RICHARD D LEONHARDT Total	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
	RICHVALE IRRIGATION DISTRICT Total	13,560.00						
S000925	WESTERN CANAL WATER DISTRICT	348,469.00	Pre-14	1902	Apr-Jan	Irrigation	Butte	FEATHER RIVER
	WESTERN CANAL WATER DISTRICT Total	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
	WESTWOOD COMMUNITY SERVICES DISTRICT Total	1,053.00						
S015240	WILLIAM S KEELER TRUST	1,750.00	Riparian/Pre-14	1900	May-Sep	Irrigation, Stockwater	Lassen	GOODRICH CREEK
	WILLIAM S KEELER TRUST Total	1,750.00						
S013159	WILLIARD H WATTENBURG	0.00					Plumas	UNNAMED SPRING
	WILLIARD H WATTENBURG Total	0.00						
	Grand Total	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
	BIG LAND DEVELOPMENT CORP Total	2,730.00						
S010014	CITY OF NEVADA CITY	1,859.80	Pre-14	1910	All	Domestic	Nevada	LITTLE DEER CREEK
	CITY OF NEVADA CITY Total	1,859.80						
S016332	Hallwood Irrigation Company	69,798.00	Pre-14	1909	All	Irrigation	Yuba	Yuba River
	Hallwood Irrigation Company Total	69,798.00						
S001241	LAKE WILDWOOD ASSOCIATION	1,811.16	Pre-14	1861	All	Irrigation	Nevada	NIGGER CREEK
	LAKE WILDWOOD ASSOCIATION Total	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
	NEVADA IRRIGATION DISTRICT Total	1,051,334.90						
	Grand Total	1,127,533.86						

Bear River Watershed - Consumptive Statements of Diversio and Use

Application ID	Holder Name	Highest Amount Claimed	Water Rights Claim Type	Year of First Use	Season	Purpose of Use	County	Source
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
	1990 Johannessen Family Trust Total	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
	BATTLE CREEK MEADOWS RANCH INC Total	3,500.00						
S000550	BUTTE SINK WATERFOWL ASSOCIATION	43,800.00	Riparian/Pre-14	1900	All	Irrigation, Habitat	Butte	BUTTE CREEK
	BUTTE SINK WATERFOWL ASSOCIATION Total	43,800.00						
S002387	CLINE C SOULE	3,200.00	Riparian/Pre-14	1885	Apr - Oct	Irrigation, Stockwater	Siskiyou	BUTTE CREEK
	CLINE C SOULE Total	3,200.00						
S000731	DEER CREEK IRRIGATION DISTRICT	20,400.00	Adjudication	1923	Feb-Nov	Irrigation	Tehama	DEER CREEK
	DEER CREEK IRRIGATION DISTRICT Total	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
	DOUGLAS H BOSCO Total	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
	E J LOUIE & SONS Total	5,064.00						
S009605	MAURICE JOHANNESSEN	2,759.01	Pre-14	1880	Apr-Oct	Irrigation, Stockwater	Shasta	DEER CREEK
	MAURICE JOHANNESSEN Total	2,759.01						
S008459	Paradise Irrigation District	9,251.00	Pre-14	1916	All	Domestic	Butte	LITTLE BUTTE CREEK
	Paradise Irrigation District Total	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
	STANFORD VINA RANCH IRRIGATION CO Total	19,353.00						
S000732	U S BUREAU OF LAND MANAGEMENT	11,615.21	Pre-14	1870	Apr-Nov	Irrigation, Stockwater, Habitat	Tehama	BATTLE CREEK
	U S BUREAU OF LAND MANAGEMENT Total	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
	WESTERN CANAL WATER DISTRICT Total	5,045.00						
	Grand Total	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 PAYNE FARMS - WA PAYNE	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 YOLO COUNTY F C & W C	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 U.S. BUREAU OF RECLAMATION	56,000.00 170,300.00	Fed Adjudication	1910	Oct-Mar	Irrigation	Colusa	STONY CREEK
	Grand Total	775,063.00						

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
	ANDERSON-COTTONWOOD IRRIGATION DISTRICT Total	162,788.00						
S013880	CARTER MUTUAL WATER COMPANY	3,829.00	Riparian	1924	May-Feb	Irrigation, Stockwater, Domestic	Colusa	SACRAMENTO RIVER
	CARTER MUTUAL WATER COMPANY Total	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
	CHARLES W TUTTLE JR Total	7,600.00						
S014834	CITY OF SACRAMENTO	74,036.91	Pre-14	1849	All	Municipal	Sacramento	SACRAMENTO RIVER
	CITY OF SACRAMENTO Total	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
	Dead Horse LP Total	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
	Deadhorse LP Total	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
	Edward McDowell Total	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
	Elliot Delta Orchards, LLC Total	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
	Elliot Family Co., LLC Total	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
	Elliot Family Revocable Trust Total	1,215.00						
S018613	Farmland Reserve, Inc.	1,800.00	Riparian	1950s	Apr-Oct	Irrigation	Butte	SACRAMENTO RIVER
	Farmland Reserve, Inc. Total	1,800.00						
S018603	Faye Properties, Inc.	3,200.00	Riparian	1800s	Mar-Sep	Irrigation	Yolo	SACRAMENTO RIVER
	Faye Properties, Inc. Total	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
	GLENN-COLUSA IRRIGATION DISTRICT Total	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
	Greene & Hemly - Merritt Island Ranch- Greene & Hemly, Inc Total	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
	Greene & Hemly - Randall Ranch Greene & Hemly Inc. Total	359.05						
S017193	Greene & Hemly - Wheeler Ranch Greene and Hemly, Inc	753.79	Riparian/Pre-14	1850	Mar-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	Greene & Hemly - Wheeler Ranch Greene and Hemly, Inc Total	753.79						
S013264	HAROLD ARMSTRONG	2,200.00	Riparian	1895	Feb-Oct	Irrigation	Colusa	SACRAMENTO RIVER
	HAROLD ARMSTRONG Total	2,200.00						
S013717	JOSEPH BORGES RANCHES	1,400.00	Riparian	1922	Apr-Sep	Irrigation	Sacramento	SACRAMENTO RIVER
	JOSEPH BORGES RANCHES Total	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
	Joseph T Sanchez Total	1,300.00						
S010294	LAUTRUP INVESTMENT PARTNERSHIP	1,000.00	Riparian	1965	Apr-Oct	Irrigation	Yolo	SACRAMENTO RIVER
	LAUTRUP INVESTMENT PARTNERSHIP Total	1,000.00						
S019846	Leary - Dennis Leary Trust 11/19/1990	0.00	Riparian	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
	Leary - Dennis Leary Trust 11/19/1990 Total	0.00						
S018049	Leary - M G	349.00	Riparian/Pre-14	1800s	Apr-Nov	Irrigation	Sacramento	SACRAMENTO RIVER
	Leary - M G Total	349.00						
S018046	Leary (Dennis)	582.80	Riparian/Pre-14	1800s	Apr-Nov	Irrigation	Sacramento	SACRAMENTO RIVER
	Leary (Dennis) Total	582.80						
S019868	Leary etal	600.00	Riparian/Pre-14	1800s	All	Irrigation	Sacramento	SACRAMENTO RIVER
	Leary etal Total	600.00						
S018146	MARY CRANE	1,055.66	Riparian	1907	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	MARY CRANE Total	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
	MCCORMACK WILLIAMSON COMPANY Total	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
	MYERS LAND COMPANY LLP Total	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
	PACIFIC FRUIT FARMS Total	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
	PARROTT INVESTMENT COMPANY Total	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
	Pylman - A & M PYLMAN FARMS Total	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
	PYLMAN VINEYARDS INC Total	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
	RECLAMATION DISTRICT #108 Total	172,198.00						
S018031	RIVER GARDEN FARMS COMPANY	356.00	Riparian	1950	Mar-Sep	Irrigation	Yolo	SACRAMENTO RIVER
	RIVER GARDEN FARMS COMPANY Total	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
	Rivermaid Land Company Total	3,326.74						
S009950	ROY MORRESCO JR	1,654.00	Riparian	1920	Apr-Jan	Irrigation	Sutter	SACRAMENTO RIVER
	ROY MORRESCO JR Total	1,654.00						
S020145	SACRAMENTO RIVER RANCH II LLC	3,834.40	Riparian	NA	NA	Irrigation	Yolo	Sacramento River
	SACRAMENTO RIVER RANCH II LLC Total	3,834.40						
S016992	Spinella (Art, Janelle)	269.20	Pre-14	1908	Apr-Oct	Irrigation	Sacramento	SACRAMENTO RIVER
	Spinella (Art, Janelle) Total	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
	Spinella (Frankie) Total	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
	THE ARCHES LTD Total	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
	TOWNE ENTERPRISES Total	8,908.00						
	Grand Total	1,433,668.02						

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	CITY AND COUNTY OF SAN FRANCISCO Gallo Vineyards Inc	1,381,710.00 268.22	Riparian	1960	Apr-Oct	Irrigation	Stanislaus	TUOLUMNE RIVER
S011103	Gallo Vineyards Inc Total James E Coleman	268.22 1,520.00	Riparian	1917	Apr-Oct	Irrigation	Stanislaus	TUOLUMNE RIVER
S009161	James E Coleman Total 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
	Joseph E Gallo Total	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	TUOLUMNE UTILITIES DISTRICT Total TURLOCK IRRIGATION DISTRICT	20,413.00 1,196,100.00	Pre-14	1900	All	Irrigation, Domestic	Stanislaus	TUOLUMNE RIVER
	TURLOCK IRRIGATION DISTRICT Total	1,196,100.00						
	Grand Total	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
	Gallo Vineyards Inc Total	14,853.00						
S007674	Henry Te Velde	1,205.00	Riparian	1900	Mar-Sep	Irrigation	Merced	MERCED RIVER
	Henry Te Velde Total	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
	Kelsey Ranch LP Total	8,145.00						
S012547	MADERA IRRIGATION DISTRICT	21,457.00	Pre-14	1875	All	Irrigation	Madera	BIG CREEK
	MADERA IRRIGATION DISTRICT Total	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
	MERCED IRRIGATION DISTRICT Total	574,336.00						
	Grand Total	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
	ARNOLD SOUZA & SONS Total	1,242.00						
S001073	COLUMBIA CANAL COMPANY	62,879.00	Pre-14	1872	Feb-Dec	Irrigation	Madera	SAN JOAQUIN RIVER
	COLUMBIA CANAL COMPANY Total	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
	COSTA VIEW FARMS #2, A CA GEN	19,000.00						
S010411	LONE TREE MUTUAL WATER COMPANY	18,376.00	Riparian	1955	All	Irrigation	Merced	SAN JOAQUIN RIVER
	LONE TREE MUTUAL WATER COMPANY Total	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
	MADERA IRRIGATION DISTRICT Total	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
	Mark D McKean Total	2,575.00						
S006296	MENEFEE RIVER RANCH COMPANY	2,105.00	Riparian	1952	Mar-Oct	Irrigation	Merced	FRESNO RIVER
	MENEFEE RIVER RANCH COMPANY Total	2,105.00						
S009320	PATTERSON IRRIGATION DISTRICT	60,200.00	Pre-14	1910	Mar-Sep	Irrigation	Stanislaus	SAN JOAQUIN RIVER
	PATTERSON IRRIGATION DISTRICT Total	60,200.00						
S015523	POINT MILLERTON RANCH LLC	2,100.00	Riparian/Pre-14	2002	All	Irrigation, Stockwater	Madera	FINE GOLD CREEK
	POINT MILLERTON RANCH LLC Total	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
	R J GALLO Total	6,117.00						
S001116	ROBERT F FLYNN	4,200.00	Riparian	1926	All	Irrigation, Stockwater	Merced	DUCK SLOUGH
	ROBERT F FLYNN Total	4,200.00						
S009575	U S FISH & WILDLIFE SERVICE	12,976.00	Pre-14	1900	All	Irrigation, Wildlife Management	Merced	DEADMAN CREEK
	U S FISH & WILDLIFE SERVICE Total	12,976.00						
	Grand Total	261,659.00						

Appendix D

Section D.5 Other Pre-1914 Consumptive Water Rights Claims

Feather River Pre-1914 Consumptive Water Rights

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
			Total Face Value	533,784	(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
		Total Face Value	295,000	

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
		Total Face Value	1,811,157	(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
		SBCC Total Face Value	1,811,157	
		Western Canal Company's total claims	869,355	
		=		

Water Right Shares of Sutter Butte Canal Company's Decead 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	144,893	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
Total Face Value, Consumptive Rights			36,223	