D R A F T

August 3, 2001

STATE WATER RESOURCES CONTROL BOARD MEETING
BOARD MEETING SESSION – DIVISION OF WATER RIGHTS
AUGUST 16, 2001

ITEM: 6

SUBJECT:

PROPOSED ORDER TAKING FINAL ACTION ON PETITIONS FOR RECONSIDERATION OF DECISION 1635, MODIFYING DECISION 1635, AND AFFIRMING THE DECISION AS MODIFIED. DECISION 1635 APPROVED EL DORADO IRRIGATION DISTRICT'S AND EL DORADO COUNTY WATER AGENCY'S (EL DORADO) PETITION FOR PARTIAL ASSIGNMENT OF STATE-FILED APPLICATION 5645

DISCUSSION:

During June 1993 and October 1995, the SWRCB held a hearing to consider competing petitions for partial assignment of state-filed Application 5645 and related water right applications. On October 2, 1996, the SWRCB adopted Decision 1635. Decision 1635 approved El Dorado Irrigation District's (EID) and El Dorado County Water Agency's (hereafter collectively referred to as El Dorado) petition for partial assignment of state-filed Application 5645. The approval authorized El Dorado to divert to storage a total of 32,931 acre-feet per annum (afa) at Lake Aloha, Silver Lake and Caples Lake, and to redivert water released from upstream storage and to directly divert a total of 17,000 afa at Folsom Reservoir. Decision 1635 denied all other applications and petitions for assignment, except the applications by Kirkwood, Inc., which had already been approved.

Five parties filed timely petitions for reconsideration of Decision 1635: the State Water Contractors (SWC), Westlands Water District (Westlands), the U.S. Bureau of Reclamation (USBR), Pacific Gas & Electric Company (PG&E), and the League to Save Sierra Lakes et al. (the League). The Department of Water Resources (DWR) filed an untimely petition. The petitioners raised the following issues:

- The SWC, Westlands and DWR argue only that El Dorado's permit should include Standard Permit Term 91.

- The USBR argues that El Dorado's permit should include Term 91 and that the month of July should be excluded from the authorized season of diversion.

- The League's petition contains a number of arguments, including the following: (1) the lake level requirements imposed by Decision 1635 do not adequately protect recreational uses at the lakes, (2) the SWRCB should have addressed EID's alleged unlawful water use under claimed pre-1914 appropriative rights, (3) the SWRCB approved an improper season of diversion and should have included Term 91 in El Dorado's permit, (4) the SWRCB violated the California Environmental Quality Act (CEQA) because it approved a project that is different from that addressed in the project EIR, (5) the SWRCB violated the California

Endangered Species Act, and (6) Decision 1635 failed to reserve sufficient water for future local uses around the lakes.

- PG&E contends that: (1) the SWRCB's authority to impose lake level requirements is preempted by federal law, and (2) the SWRCB improperly commented on PG&E's claimed pre-1914 appropriative rights to supply water for consumptive use to EID.

On November 21, 1996, the SWRCB adopted Water Right Order WR 96-06. Order WR 96-06 held that the petitions raised substantial issues that merited reconsideration, and granted reconsideration of Decision 1635 without ruling on the merits of the issues raised by the petitioners.

Prior to the SWRCB adopting Decision 1635, El Dorado, as lead agency under CEQA, certified an Environmental Impact Report for the project. Litigation was filed on the adequacy of the EIR. Acting as a responsible agency under CEQA, the SWRCB presumed the EIR was adequate pursuant to Public Resources Code section 21167.3 despite the pending litigation. Subsequently, the Third District Court of Appeal invalidated El Dorado's EIR. On July 12, 1999, EID's Board of Directors certified a new final EIR. On October 29, 1999, the SWRCB admitted the 1999 EIR into the administrative record for this proceeding.

The proposed order concludes that El Dorado should be required to curtail diversions when natural and abandoned flows in the Delta watershed are insufficient to meet water quality objectives in the San Francisco Bay and Sacramento-San Joaquin Delta Estuary and other inbasin entitlements. Accordingly, the order modifies Decision 1635 to require El Dorado to comply with Standard Permit Term 91.

The order also makes certain modifications to Decision 1635 in light of the 1999 EIR. The order revises the lake level requirements imposed by Decision 1635 to protect recreational uses at Caples Lake and Silver Lake to incorporate the Lake Level Operational Commitment set forth in EID's 1999 EIR, subject to certain modifications. In addition, the order makes new findings, as required by CEQA, and imposes new requirements, based on the 1999 EIR.

The order finds that the remaining issues that were raised in the petitions for reconsideration filed by the USBR, PG&E and the League lack merit. Except to the extent that the order modifies Decision 1635, the order denies the petitions. With the modifications described above, the order finds that Decision 1635 was appropriate and proper, and affirms the decision.

POLICY ISSUE:

Should the proposed order taking final action on petitions for reconsideration of Decision 1635, modifying Decision 1635, and affirming the decision as modified be adopted?

FISCAL IMPACT:

None. This proposed decision is budgeted within existing resources.

RWQCB IMPACT:

None.

RECOMMENDATION:

Staff recommends adoption of the proposed order.

Note: Proposed Order is below:

D R A F T

August 3, 2001

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WR 2001 -

In the Matter of Applications 29919, 29920, 22921, and 29922
and Petition for Assignment of State Filed Application 5645 by
EL DORADO COUNTY WATER AGENCY
AND EL DORADO IRRIGATION DISTRICT,

Applications 30062 and 30453 and Petition for Assignment
of State Filed Application 5645 by
KIRKWOOD ASSOCIATES, INC. AND U.S. ELDORADO NATIONAL FOREST,

Application 30204 by
KIRKWOOD MEADOWS PUBLIC UTILITY DISTRICT
AND U.S. ELDORADO NATIONAL FOREST,

Application 30219 and Petition for Assignment of State Filed Application 5645 by
ALPINE COUNTY WATER AGENCY,

Application 30218 and Petition for Assignment of State Filed Application 5645 by
AMADOR COUNTY

SOURCES: Silver Lake tributary to Silver Fork American River; Caples Lake tributary to Caples Creek and Silver Fork American River; and Lake Aloha tributary to Pyramid Creek all three being tributary to the South Fork American River

COUNTIES: Alpine, Amador, and El Dorado

ORDER TAKING FINAL ACTION ON PETITIONS FOR RECONSIDERATION OF DECISION 1635, MODIFYING DECISION 1635, AND AFFIRMING THE DECISION AS MODIFIED

BY THE BOARD:

1.0 INTRODUCTION

This order takes final action on petitions for reconsideration of Decision 1635, modifies Decision 1635 and affirms the decision as modified.

The SWRCB adopted Decision 1635 on October 2, 1996. Among other things, Decision 1635 approved, subject to specified conditions, a petition for partial assignment of state filed

Application 5645 filed by El Dorado County Water Agency (EDCWA) and El Dorado Irrigation District (EID) (both entities will be referred to collectively as El Dorado).

The approval authorized the diversion to storage of a total of 32,931 acre-feet per annum (afa) in three existing storage reservoirs: Lake Aloha, Silver Lake, and Caples Lake. The three lakes are tributary to the South Fork American River (SFAR). Lake Aloha is tributary to Pyramid Creek, which is tributary to the SFAR. Silver Lake is tributary to the Silver Fork of the SFAR. Caples Lake is tributary to Caples Creek, which is tributary to the Silver Fork of the SFAR. The approval also authorized the rediversion of stored water and direct diversion of a total of 17,000 afa at Folsom Reservoir, downstream of the lakes. The total amount authorized to be directly diverted at Folsom Reservoir was 15,000 afa, and was limited to water originating in the SFAR upstream of a point near the town of Kyburz. The authorized purposes of use were domestic, municipal, and irrigation. The authorized place of use was an area within El Dorado County, including a portion of EID's service area.

The United States Bureau of Reclamation (USBR), the State Water Contractors (SWC), Westlands Water District (Westlands), Pacific Gas & Electric Company (PG&E), and the League to Save Sierra Lakes, et. al (the League)[1] filed timely petitions for reconsideration of Decision 1635. The Department of Water Resources (DWR) filed a late petition for reconsideration. On November 21, 1996, the SWRCB granted the timely petitions for reconsideration without taking action on them. (Order WR 96-06.) In Order WR 96-06, the SWRCB held that the petitions raised substantial issues that merited reconsideration. The SWRCB also held that, although it could not accept DWR's petition because it was untimely, the SWRCB would address the arguments made in support of DWR's petition because the issue raised in DWR's petition was also raised by the USBR, the SWC, and Westlands.

[1] The League to Save Sierra Lakes is one of a number of parties jointly represented in this proceeding by the Sierra Club Legal Defense Fund (later renamed the Earthjustice Legal Defense Fund). Those parties are: the Forty-Niner Council of the Boy Scouts of America, Plasse Homestead Homeowners' Association, Kit Carson Lodge, Caples Lake Resort, Kirkwood Meadows Public Utilities District, Northern Sierra Summer Homeowners' Association, East Silver Lake Improvement Association, South Silver Lake Homeowners' Association, Lake Kirkwood Association, Plasse's Resort, Alpine County, California Sportfishing Protection Alliance, Friends of the River, and El Dorado County Taxpayers for Quality Growth.

For the reasons explained more fully below, we agree with the USBR, the SWC, Westlands, and the League that El Dorado should be required to curtail diversions when natural and abandoned flows in the Delta watershed are insufficient to meet water quality objectives in the San Francisco Bay and Sacramento-San Joaquin Delta Estuary and other inbasin uses. Accordingly, Decision 1635 should be modified to require El Dorado to comply with Standard Permit Term 91.

In addition, certain modifications to Decision 1635 should be made in light of the 1999 Environmental Impact Report for the Acquisition, Permanent Repair, and Operation of the El Dorado Hydroelectric Project and Acquisition of 17,000 Acre-Feet Per Year of New Consumptive Water (1999 EIR), which was prepared and certified by EID, and accepted into the administrative record for this proceeding in October, 1999. The lake level requirements imposed by Decision 1635 to protect recreational uses at Caples Lake and Silver Lake should be revised to incorporate the Lake Level Operational Commitment set forth in the 1999 EIR, subject to certain modifications. In addition, we make new findings, as required by the California Environmental Quality Act (CEQA), and impose new requirements, based on the 1999 EIR.

For the reasons described below, we conclude that the remaining issues that were raised in the petitions for reconsideration filed by the USBR, PG&E, and the League lack merit. Except to the extent that this order modifies Decision 1635, the petitions are denied. With the modifications described above, we find that Decision 1635 was appropriate and proper and should be affirmed.

2.0 FACTUAL AND PROCEDURAL BACKGROUND

El Dorado's proposed water development project involves the use of facilities that are part of an existing hydroelectric project, Federal Energy Regulatory Commission (FERC) Project Number 184. Project 184 diverts water from the SFAR below the confluence of the Silver Fork and the SFAR into the 22-mile El Dorado Canal. The El Dorado Canal terminates at the El Dorado Forebay. Some of the water delivered to the forebay is used to generate power at the El Dorado powerhouse, then returned to the SFAR. Lake Aloha, Silver Lake, and Caples Lake are part of

Project 184. Water stored in the lakes is used to supplement natural flows in the SFAR. Figure 1 is a map that shows the location of Project 184 facilities.

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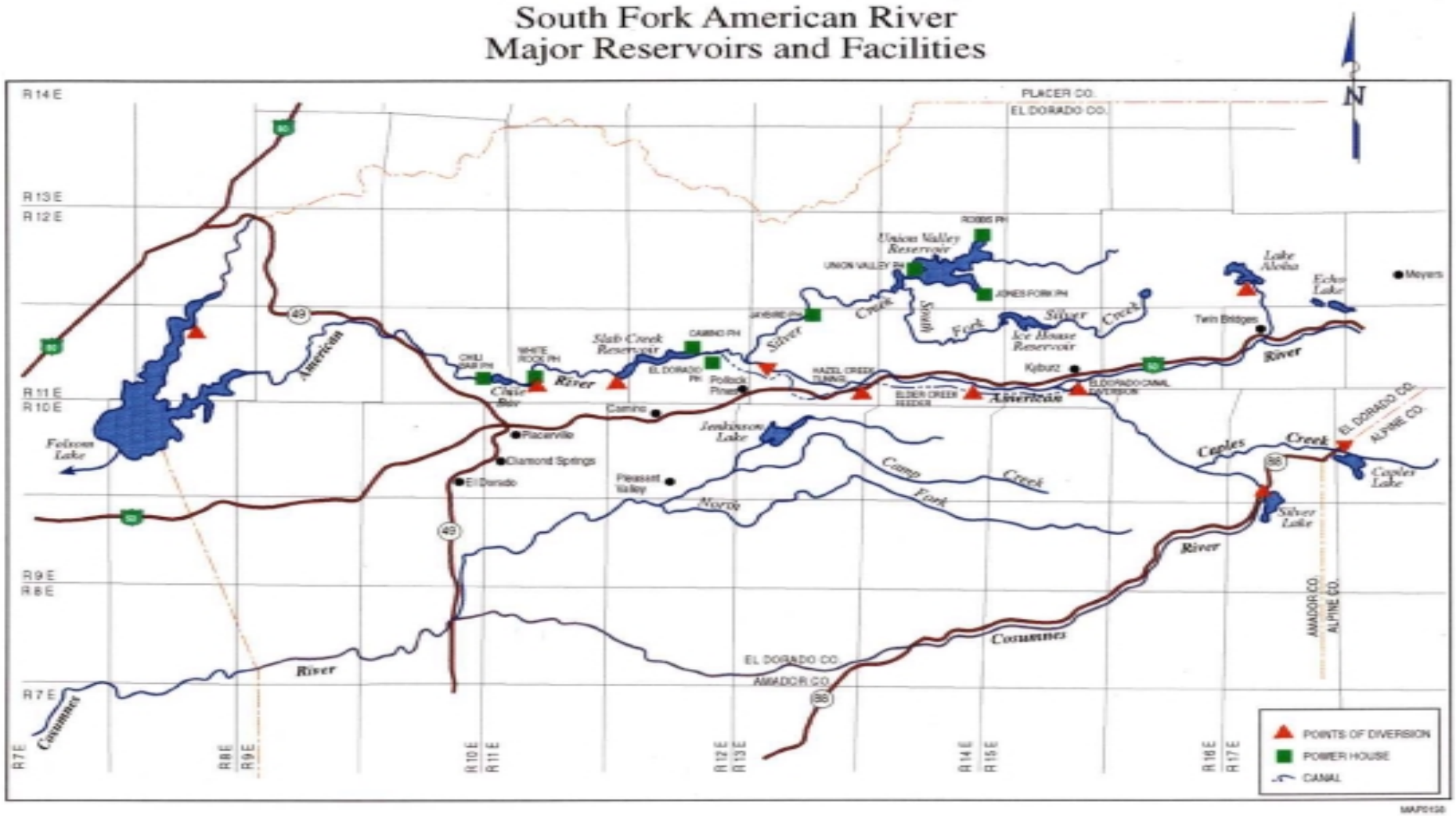
FIGURE 1


South Fork American River
Major Reservoirs and Facilities
N
PLACER CO.
EL DORADO CO.
R14E
R13E
R12E
R11E
R10E
R9E
R8E
R7E
Union Valley Reservoir
Ice House Reservoir
Lake Aloha
Echo Lake
Meyers
Twin Bridges
Silver Creek
South Fork
American River
Slab Creek Reservoir
Chili Bar
White Rock PH
El Dorado PH
Pollock Pines
Kyburz
Placerville
Diamond Springs
El Dorado
Camino
Folsom Lake
Jenkinson Lake
Pleasant Valley
Camp Creek
North Fork
Cosumnes River
Cosumnes
Caples Creek
Caples Lake
Silver Lake
EL DORADO CO.
ALPINE CO.
AMADOR CO.
POINTS OF DIVERSION
POWER HOUSE
CANAL

When the SWRCB adopted Decision 1635, PG&E was the owner and operator of Project 184. In addition to generating power, PG&E delivered up to 15,080 afa of water to EID through the El Dorado Canal and Forebay for irrigation and domestic use pursuant to a 1919 contract. PG&E delivered this water to EID under claimed pre-1914 appropriative water rights. Since the SWRCB granted reconsideration of Decision 1635, EID has acquired Project 184 and the associated pre-1914 water rights from PG&E.[2]

Folsom Reservoir is a component of the Central Valley Project (CVP), which is owned and operated by the USBR. Folsom Reservoir is located at the confluence of the North and South Forks of the American River. The American River is tributary to the Sacramento River, which is tributary to the Sacramento–San Joaquin Delta. The Sacramento and San Joaquin rivers converge in the Delta before flowing into San Francisco Bay. The Delta is a vital link for the CVP and the State Water Project (SWP), operated by DWR. From diversion points within the Delta, the CVP and the SWP export natural flows and water that has been released from storage in reservoirs above the Delta, including Folsom Reservoir, for use south of the Delta.

Application 5645 was filed by the Department of Finance in 1927, pursuant to Water Code section 10500. Section 10500, as in effect at that time, authorized the Department of Finance to file applications for water that may be required in the development of a general or coordinated plan for the development, utilization, or conservation of water resources.[3] Such applications have a priority based on the date of filing, and may be assigned for purposes of development consistent with the general or coordinated plan, and with water quality objectives established pursuant to law. (Wat. Code, §§ 10500, 10504.) Decision 1635 approved El Dorado's petition for partial assignment of Application 5645, subject to conditions.

[2] We take official notice of the fact that EID acquired the project and the pre-1914 water rights in 1999. On April 2, 1999, FERC approved the transfer to EID of the federal license to operate Project 184, and on September 16, 1999, the California Public Utilities Commission approved the transfer to EID of project facilities and related assets, including the water rights. (*Pacific Gas and Electric Co*. (April 2, 1999) 87 FERC ¶ 61,022; *In re Pacific Gas and Electric Co*. (1999) Cal. P.U.C. Decision No. 99-09-066.)

[3] Under current law, DWR has the responsibility to make and file applications under Water Code section 10500.

In Order WR 96-06, the SWRCB held that the issues raised in the petitions for reconsideration of Decision 1635 would be based on the existing administrative record, the points and authorities in the petitions, and El Dorado's response to the petitions. Since the SWRCB ordered reconsideration, the hearing officer for this proceeding has ruled on two requests to augment the administrative record. By letter dated October 29, 1999, Hearing Officer James M. Stubchaer accepted into the administrative record the 1999 EIR, which was prepared by EID and certified by EID on July 12, 1999.

By letter dated August 1, 2000, Hearing Officer Arthur G. Baggett, Jr. ruled that the SWRCB would take official notice of a settlement agreement reached on April 6, 1999, between EDCWA, EID, El Dorado County and Amador County, which prescribes a regime of water storage and releases for Silver Lake. Hearing Officer Baggett ruled further that the SWRCB would take official notice of the settlement agreement for the limited purpose of recognizing that the parties have reached agreement concerning the operation of Silver Lake on the terms set forth in the agreement.

3.0 GROUNDS FOR RECONSIDERATION

A petition for reconsideration of a SWRCB decision or order may be filed on the grounds, among other things, that irregularity in the proceeding or abuse of discretion prevented a person from having a fair hearing; on the grounds that the decision or order is not supported by substantial evidence; or on the grounds that the decision or order contains an error in law. (Cal. Code Regs., tit. 23, § 768, subds. (a), (b) & (d).) In response to a petition for reconsideration, the SWRCB may, among other things, deny the petition if the SWRCB finds that the decision or order in question was appropriate and proper, set aside or modify the decision or order, or take other appropriate action. (Cal. Code Regs., tit. 23, § 770, subd. (a)(2)(A-C).)

4.0 TERM 91 SHOULD BE INCLUDED IN EL DORADO'S PERMIT

In their petitions for reconsideration, the USBR, the SWC, Westlands, DWR and the League contend that the SWRCB's failure to include Term 91 in El Dorado's permit constituted error in law and was not supported by substantial evidence. Upon careful consideration, we agree with petitioners that, notwithstanding the 1927 priority date of Application 5645, El Dorado should be

required to curtail diversions when natural and abandoned flows in the Delta watershed are insufficient to meet water quality objectives in the San Francisco Bay and Sacramento-San Joaquin Delta Estuary and other inbasin uses. Accordingly, Decision 1635 should be modified to require El Dorado to comply with Term 91.

Term 91 was developed in response to the requirements imposed on the CVP and SWP (hereafter Projects) pursuant to Decision 1485. (Decision 1594, pp. 7-9.) Decision 1485 required the Projects to curtail diversions or release stored water to the extent necessary to meet specified water quality objectives in the Delta and in Suisun Marsh, which is adjacent to the Delta. (Decision 1485, p. 22.) The objectives were designed to protect fish and wildlife, agricultural uses, and municipal and industrial uses. (Decision 1485, p. 10.)[4] After the SWRCB adopted Decision 1485 on August 16, 1978, the USBR and DWR protested numerous, new applications to appropriate water from the Delta or its tributaries on the grounds that if the applicants were permitted to divert water at times when the Projects were releasing stored water in order to meet water quality objectives, the Projects would be forced to release additional stored water.

Term 91 is imposed to prevent water released from storage by the Project from being diverted by other users, and serves to resolve most of the USBR's and the DWR's protests against new applications. Term 91 prohibits diversions when natural and abandoned flow in the Sacramento-San Joaquin Delta and its tributaries is insufficient to meet water quality objectives in the Delta and other inbasin uses, and the CVP or the SWP is required to release stored water in order to meet water quality objectives and inbasin uses. Term 91 provides in relevant part:

[4] Decision 1485 implemented the 1978 Water Quality Control Plan for the Sacramento-San Joaquin Delta and Suisun Marsh by assigning to the Projects responsibility for meeting flow and other water quality objectives that were set forth in the plan. In 1995, the SWRCB revised the water quality control plan, now called the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. Subsequently, the SWRCB has accepted the flow contributions that certain water right holders will make to meet the 1995 flow objectives, and continued the responsibility of the Projects to meet the 1995 objectives. (Decision 1641; Order WR 2000-02; Order WR 2000-10; Order WR 2001-05.) Although the requirements imposed on the projects have changed, the Projects are still responsible for meeting Delta water quality objectives, and therefore the applicability of Term 91 remains unchanged.

No diversion is authorized by this permit when satisfaction of inbasin entitlements requires release of supplemental Project water by the Central Valley Project or the State Water Project.

a. Inbasin entitlements are defined as all rights to divert water from streams tributary to the Sacramento-San Joaquin Delta or the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the Board for maintenance of water quality and fish and wildlife. Export diversions and Project carriage water are specifically excluded from the definition of inbasin entitlements.

b. Supplemental Project water is defined as that water imported to the basin by the Projects plus water released from Project storage which is in excess of export diversions, Project carriage water, and Project inbasin deliveries.

The SWRCB initially placed Term 91 in permits issued on applications filed after August 16, 1978. (Decision 1594, p. 8.) On March 25, 1980, the SWRCB adopted Term 91 as a standard permit term. In Decision 1594, adopted in 1983, the SWRCB applied Term 91 to certain permits that contained Standard Permit Term 80. The SWRCB had included Term 80 in permits issued beginning in 1965 because of uncertainty regarding water availability in the Delta watershed. Term 80 reserved jurisdiction to change the authorized season of diversion in light of subsequent findings regarding water availability. (Decision 1594, pp. 1, 4.) In Decision 1594, the SWRCB chose Term 91 as the best method for determining when water was available for appropriation on a real-time basis. (Decision 1594, p. 24.)

In effect, permittees who are subject to Term 91 are required to cease diversions when natural and abandoned flows are insufficient to satisfy inbasin uses and water quality objectives. Thus, the inclusion of Term 91 in Term 80 permits reflected the SWRCB's conclusion that those permittees should share in the responsibility of meeting Delta water quality objectives. (Decision 1594, pp. 34-36.)

In Decision 1594, the SWRCB included Term 91 in some Term 80 permits that had been issued on state-filed applications with relatively early filing dates, including part of the same state-filed application at issue here, Application 5645. (Decision 1594, Appendix A, p. 1.) Other than

stating that Term 80 permittees should share in the responsibility of meeting water quality objectives, however, Decision 1594 does not expressly address the propriety of applying Term 91 to an application with a 1927 priority date.[5]

In Decision 1594, the SWRCB also set forth a policy for future implementation of Term 91. The SWRCB stated that "[t]erm 91 shall be included in new permits for diversion from the Sacramento-San Joaquin Delta watershed except when:

(1) Hydraulic continuity with the Delta is not likely to exist at any time during the authorized diversion season.

(2) Diversion is from the Putah Creek, Stony Creek or Cache Creek watersheds.

(3) The authorized use of water is for power or other non-consumptive purposes that do not alter the rate or quantity of the flow regime in the Delta.

(4) The authorized diversion is for less than 1.0 cubic foot per second by direct diversion or less than 100 acre-feet per annum by diversion to storage.

(5) The authorized season of diversion excludes the months of March through September.

Although Decision 1594 does not expressly address the issue, the SWRCB appears to have concluded that Term 91 should be included in all permits issued after 1965, regardless of the priority date of the underlying application.

In Decision 1635, the SWRCB concluded that El Dorado's permit should not contain Term 91 because a permit issued on Application 5645 would be senior to most of the permits pursuant to which the USBR and DWR operate the Projects. The SWRCB also reasoned that it would be

[5] Similarly, in Decision 1587, the SWRCB applied Term 91 to the partial assignment of a number of state-held applications with early priority dates, including Application 5645. The SWRCB included Term 91 on the basis that the project in question, El Dorado's proposed South Fork American River (SOFAR) project near Sciots Camp, could have a cumulative adverse effect on water quality in the Delta. (Decision 1587, pp. 21-22.) Decision 1587 does not otherwise discuss the propriety of applying Term 91 to applications with relatively early filing dates. Decision 1594 affirmed that Term 91 should be retained in the permits issued to El Dorado pursuant to Decision 1587.

The SWRCB also concluded, with little discussion, that Term 91 applied to a state-filed application in Decision 1629. (Decision 1629, p. 23.) But that case involved an application with a 1961 priority date, and a state-filed application with a 1977 priority date, priorities that are not senior to the majority of the permitted rights at issue in Decision 1594. (Decision 1629, pp. 5-7.)

inequitable to include Term 91 in El Dorado's permit when the SWRCB has not included Term 91 in many permits that are junior in priority to Application 5645.

In their petitions for reconsideration, DWR and the SWC argue that the priority of El Dorado's right relative to the Projects is irrelevant because Term 91 protects the Projects' rights to stored water, not natural flow. Petitioners argue that, to the extent that junior applicants are allowed to divert when all natural flow is needed to satisfy inbasin uses and water quality objectives, the Projects will be required to release additional stored Project water to compensate. In its response to the petitions for reconsideration, El Dorado argues that it has a senior right to flows in the SFAR under area of origin protection laws, and that including Term 91 in its permit would negate its priority of right.

The petitioners' argument on this point has merit. Term 91 only applies when the Projects are bypassing all natural and abandoned flows and are releasing stored water. When Term 91 is in effect, all natural and abandoned flows are needed for inbasin entitlements and water quality objectives. Thus, the seniority of El Dorado's right relative to the Projects is irrelevant. El Dorado's seniority over the Projects based on the priority date of Application 5645 would require the Projects to curtail their diversions from natural and abandoned flows to the extent necessary to allow El Dorado to divert from natural and abandoned flows. Similarly, El Dorado's seniority over the Projects based on area of origin principles[6] would require the Projects to curtail their diversion and export of natural and abandoned flows to the extent necessary to allow El Dorado to divert. A water right holder's seniority over the Projects does not allow diversions when the Projects are not diverting natural and abandoned flows and there is insufficient natural and abandoned flows for additional appropriations. Nor does seniority over the Projects entitle a water right holder to make use of stored water which the Projects diverted to storage when natural flows were sufficient to divert water under the Projects' priorities, either

[6] The Watershed of Origin Act (Wat. Code, § 11460 et seq. & 11128) conditions the water rights of the Projects upon the prior right of the watershed of origin and immediately adjacent areas to the water needed for those areas. The effect is a reversal of priority as between the Projects, to the extent they are diverting for export, and a water right applicant in a protected area. Waters being exported are still available for appropriation in the watershed of origin provided that all other requirements for obtaining a permit are satisfied. (See generally 25 Ops.Cal.Atty.Gen. 8, 20-21; SWRCB Order WR 95-14 at pp. 16-18.)

by taking that water from Project reservoirs or by requiring the Projects to release additional stored water to meet water quality objectives.

In fact, applying Term 91 does not restrict the permittee's diversions at times when natural and abandoned flows might not be adequate to satisfy the Projects' direct diversion export rights, so long as natural and abandoned flows in the Delta are sufficient to meet inbasin uses and water quality objectives. Accordingly, in Decision 1594 the SWRCB noted that Term 91 would not protect the Projects' direct diversion export rights, even though many of the USBR's and DWR's permits had earlier filing dates than those of the Term 80 Permits. Thus, the SWRCB recognized that an implicit assumption underlying Term 91 was that the rights of inbasin users to natural and abandoned flows in the Delta watershed were senior to the Projects' export rights under area of origin protection statutes. (Decision 1594, pp. 14, 40.)

El Dorado argues that Term 91 does not apply in this case because the purpose of Term 91 is to protect stored Project water, and it is physically impossible for El Dorado to divert stored Project water because El Dorado's point of diversion is located upstream of Folsom Reservoir. Irrespective of the location of El Dorado's diversion, however, the effect of its diversion on the Projects will be the same. At times when natural and abandoned flows are inadequate to meet inbasin uses and water quality objectives, any reduction in natural inflow into Folsom Reservoir will require a corresponding increase in the release of stored Project water.

In summary, the issue presented in this case is not whether assignment of Application 5645 to El Dorado confers a priority of right to divert natural and abandoned flows that is senior to the Projects' rights. Rather, the issue is whether El Dorado should be required to bypass natural and abandoned flows under Term 91 conditions. Upon reevaluation, we conclude that it should.

As stated earlier, in Decision 1635 the SWRCB also expressed concern that it would be inequitable to include Term 91 in El Dorado's permit when the SWRCB has not included Term 91 in many permits that are junior in priority to Application 5645. If Term 91 is included in El Dorado's permit, El Dorado will be required to cease its diversions under Term 91 conditions, while some inbasin users whose rights are junior to El Dorado may continue to

divert. The SWC argue that the proper solution to this perceived inequity is to restrict junior diversions.

Term 91 applies whenever natural and abandoned flows are insufficient to satisfy both water quality objectives and inbasin uses. Under Term 91 conditions, the degree to which natural and abandoned flows are insufficient may vary. At certain times when Term 91 is in effect, natural and abandoned flows may be insufficient to meet water quality objectives alone, or may be insufficient to meet water quality objectives, riparian rights and inbasin appropriative rights that have priorities senior to Application 5645. Under these conditions, there is no water available for appropriation. (See Wat. Code, §§ 1202, 1243.5.) The authority of the SWRCB to issue water right permits applies to unappropriated water. (*Id.* § 1253.) Equitable concerns cannot provide a basis for issuing a permit to appropriate water at times when no water is available for appropriation.

Equitable considerations may come into play when natural and abandoned flows exceed those necessary to satisfy water quality objectives and all inbasin users who are senior to El Dorado, but are insufficient to satisfy all inbasin entitlements. Even under these conditions, however, it does not follow that imposing Term 91 on El Dorado would be inequitable. Unless junior users are required to cease their existing diversions in favor of El Dorado's, allowing El Dorado to divert under such conditions would increase the burden on the Projects. To the extent that it would be inequitable to require El Dorado to curtail diversions at times when other more junior inbasin users continue their diversions because their permits do not include Term 91, exempting El Dorado from Term 91 would merely shift the inequity to the Projects. Exempting El Dorado from Term 91 would also create inequities as between El Dorado and other senior users who have Term 91 in their permits. Moreover, where other inbasin uses are well established, it may be equitable to favor those uses over El Dorado's new use, even though El Dorado's permit has the priority of a state-filed application.

In sum, circumstances exist when El Dorado clearly should be required to limit its diversions as required by Term 91, because there would be no water available for appropriation under El Dorado's priority, even if all diversions under junior priorities were curtailed. There may also

be circumstances when sufficient water would be available for diversion by El Dorado if more junior inbasin users were subjected to Term 91. But it is not clear based on the record in this proceeding how frequently those circumstances occur or whether there are equities that favor some of the junior inbasin users over El Dorado. The SWRCB cannot impose Term 91 on junior inbasin users as part of this proceeding, and to the extent that it may be inequitable to restrict diversions by El Dorado at times when junior inbasin users continue their diversions because their permits do not include Term 91, it would be inequitable to shift that burden to the Projects.

Accordingly, we conclude that Term 91 constitutes the best method presently available for determining when water is available for appropriation by El Dorado. We will reserve jurisdiction to modify El Dorado's permit in light of subsequent findings regarding water availability.[7]

5.0 WATER IS AVAILABLE FOR APPROPRIATION IN JULY

In addition to arguing that Term 91 should be included in El Dorado's permit, the USBR also argues in its petition for reconsideration that water is not available for appropriation from the SFAR during the month of July. Contrary to the USBR's argument, we find that the season of diversion authorized in Decision 1635 was appropriate and proper, and therefore the USBR's petition for reconsideration should be denied as to this issue.

Based on previous SWRCB precedent, Decision 1635 authorized a season of diversion of November 1 through July 31 of the following year. (D 1635, pp. 38, 136-138.) As stated earlier, Decision 1635 limited El Dorado's direct diversion rights to 15,000 afa originating in the SFAR upstream of the El Dorado Canal diversion near Kyburz. (D 1635, p. 136.) During a general discussion of the historic operations of Project 184, Decision 1635 cited to evidence submitted by Amador County, which indicated that historically, beginning in the first or second week of July, PG&E released water from storage in Lake Aloha in order to satisfy PG&E's demands at

[7] Nothing in this order is intended to preclude El Dorado from participating in any proceeding before the SWRCB regarding implementation of water quality objectives for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, and presenting evidence and legal or policy arguments in that proceeding regarding El Dorado's responsibility for meeting water quality objectives or the applicability of Term 91 to El Dorado.

the El Dorado Canal. (D 1635, pp. 50-51.) Based on this evidence, the USBR argues that water is unavailable for appropriation by El Dorado in the month of July.

Notwithstanding the evidence submitted by Amador County, evidence in the record supports the conclusion that water is available for appropriation in July. In Decision 1635, the SWRCB calculated natural flows in the SFAR near Kyburz in order to determine whether El Dorado might alter historic operations and release more water from storage during the summer months in order to satisfy El Dorado's projected water demands. (D 1635, pp. 96-101.) Natural flows were calculated in the following manner. For the period of record (1923-1991), the SWRCB calculated the average of monthly releases from Silver Lake, Caples Lake, and Lake Aloha, as measured at United States Geological Survey (USGS) gages 11436000, 11437000, and 11435100, respectively. The SWRCB subtracted this figure, together with the monthly demand associated with EID's claimed pre-1914 appropriative water rights, from the average of monthly flows in the SFAR near Kyburz, as measured at USGS Gage No. 11439501. Based on these calculations, the SWRCB concluded that under historic average conditions, sufficient natural flow was available to meet El Dorado's projected demands during all months except August. (D 1635, pp. 98, 100.)

We have reproduced and refined the calculations described above in Table 1, set forth below. Table 1 is essentially the same as Table 13-1 of Decision 1635, with the following exceptions. In addition to subtracting releases from the lakes and the demand associated with EID's pre-1914 rights from recorded flows in the SFAR, we have subtracted the instream flows that EID must meet below Kyburz under the FERC license for Project 184 and the amount of water needed to satisfy recorded consumptive use water rights on the SFAR with priorities senior to Application 5645. (In addition, for releases from Silver and Caples Lake, and recorded flows on the SFAR, we used the data set 1935-1992, rather than 1923-1992, in order to maintain consistency with the data set analyzed in the 1999 EIR. We subtracted releases from the lakes for the months when water is released from storage in the lakes. (1999 Draft EIR, vol. 1, pp. 3-21 – 3-26.)) These calculations demonstrate that under historic average conditions, sufficient natural flow is available to satisfy El Dorado's projected demands during all months except August, September,

and October. Under historic average conditions, 5,132 af is available for appropriation during the month of July.

Table 2 depicts average monthly flows under dry year conditions, and Table 3 depicts average monthly flows under critical year conditions. (In developing Tables 2 and 3, we used data from the years during the period of record that were classified as dry or critical, respectively, in Table 3-3 of the 1999 EIR.) Tables 2 and 3 indicate that natural flows are insufficient to satisfy El Dorado's projected demand in July under dry and critical year conditions.

For the foregoing reasons, we conclude that under average conditions, water is available for appropriation from the SFAR by El Dorado during the month of July, subject, of course, to water availability as determined by Term 91.

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TABLE 1
SEASON OF WATER AVAILABILITY
AVERAGE HISTORIC CONDITIONS (AF)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL ANNUAL
1. Silver Lake Outlet Operations Storage Release Season (Sept.-Feb. Ave.) (D-1635, table 5-5) (1935-1992) USGS #11436000	1706	1242	1108	853	786	--	--	--	--	--	--	2488	8183
2. Caples Lake Outlet Operations Storage Release Season (Jul.-Mar. Ave.) (D-1635, table 5-6) (1935-1992) USGS #11437000	2230	2571	2706	1652	1113	789	--	--	--	3230	3155	2091	19537
3. Aloha Lake Operations Storage Release Season (Jun.-Oct. Ave.) (Pyramid Creek at Twin Bridges) (D-1635, table 5-7) (1971-1992) -USGS #11435100	705	---	--	--	--	--	--	--	5582	4066	2753	911	14017
4. Total Combined Average Releases (1 + 2 + 3)	4641	3813	3814	2505	1899	789	--	--	5582	7296	5908	5490	41737
5. S.F.A.R. USGS #11439501 (1935-1991 recorded average flow) (D-1635, table 7-5)	7359 (120 cfs)	10976 (185 cfs)	15605 (254 cfs)	15182 (247 cfs)	15811 (285 cfs)	22715 (370 cfs)	44860 (755 cfs)	85536 (1393 cfs)	60286 (1015 cfs)	18866 (307 cfs)	9609 (156 cfs)	8434 (142 cfs)	315241
6. S.F.A.R. Instream Flow Requirement Normal Year (EID/EDCWA Exhibit 78, p. 13)	2639 (43 cfs)	2970 (50 cfs)	3069 (50 cfs)	3069 (50 cfs)	2772 (50 cfs)	3069 (50 cfs)	2970 (50 cfs)	3069 (50 cfs)	2970 (50 cfs)	3069 (50 cfs)	3069 (50 cfs)	2257 (38 cfs)	34992
7. EID's Monthly 1919 Agreement Water (EID/EDCWA Exhibit 78, p. 13)	553	416	430	615	555	1230	2082	2152	2082	2152	2152	661	15080
8. Consumptive use rights on S.F.A.R. senior to A 5645 (except 1919 Agreement Water) (D 1635, table 5-4)	1213	1174	200	200	181	200	1174	1217	1178	1217	1217	1178	10345
9. Water Available For Direct Diversion (5) - (4 + 6 + 7 + 8)	-1602	2603	8092	8793	10404	17427	38634	79100	48474	5132	-2737	-1152	213087
10. EID's Monthly Demand - Year 2021 El Dorado Hills Service Area (D-1635, table 12-1)	1130	742	694	662	549	581	872	1630	2357	2647	2550	1727	16141

TABLE 2
SEASON OF WATER AVAILABILITY
AVERAGE HISTORIC DRY CONDITIONS (AF)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL ANNUAL
1. Silver Lake Outlet Operations Storage Release Season (Sept.-Dec. Ave.) (D-1635, table 5-5) (1935-1992) USGS #11436000	2189	1173	722	--	--	--	--	--	--	--	--	2334	6418
2. Caples Lake Outlet Operations Storage Release Season (Jul.-Mar. Ave.) (D-1635, table 5-6) (1935-1992) USGS #11437000	2336	3006	3657	2142	1221	685	--	--	--	1524	4062	2831	21464
3. Aloha Lake Operations Storage Release Season (Jun.-Sept. Ave.) (Pyramid Creek at Twin Bridges) (D-1635, table 5-7) (1971-1992) USGS #11435100	--	--	--	--	--	--	--	--	3841	3676	2025	309	9851
4. Total Combined Average Releases (1 + 2 + 3)	4525	4179	4379	2142	1221	685	--	--	3841	5200	6087	5474	37733
5. S.F.A.R. USGS #11439501 (Dry Years recorded average flow) (1935-1991) (D-1635; table 7-5)	8010 (130 cfs)	8913 (150 cfs)	9282 (151 cfs)	12365 (201 cfs)	10538 (190 cfs)	19216 (313 cfs)	34422 (579 cfs)	55084 (897 cfs)	27944 (470 cfs)	9513 (155 cfs)	8713 (142 cfs)	7612 (128 cfs)	211612
6. S.F.A.R. Instream Flow Requirement - Dry Year (EID/EDCWA Exhibit 78, p. 13)	920 (15 cfs)	1069 (18 cfs)	1104 (18 cfs)	1104 (18 cfs)	997 (18 cfs)	1104 (18 cfs)	1069 (18 cfs)	1104 (18 cfs)	1069 (18 cfs)	1104 (18 cfs)	1104 (18 cfs)	594 (10 cfs)	12342
7. EID's Monthly 1919 Agreement Water (EID/EDCWA Exhibit 78, p. 13)	553	416	430	615	555	1230	2082	2152	2082	2152	2152	661	15080
8. Consumptive use rights on S.F.A.R. senior to A 5645 (except 1919 Agreement Water) (D 1635, table 5-4)	1213	1174	200	200	181	200	1174	1217	1178	1217	1217	1178	10345
9. Water Available For Direct Diversion (5) - (4 + 6 + 7 + 8)	799	2075	3169	8304	7584	15997	30097	50611	19774	-160	-1847	-295	136112
10. EID's Monthly Demand Year 2021 El Dorado Hills Service Area (D-1635, table 12-1)	1130	742	694	662	549	581	872	1630	2357	2647	2550	1727	16141

TABLE 3
SEASON OF WATER AVAILABILITY
AVERAGE HISTORIC CRITICAL CONDITIONS (AF)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL ANNUAL
1. Silver Lake Outlet Operations Storage Release Season (Sept.-Dec. Ave.) (D-1635, table 5-5) (1935-1992) USGS #11436000	1814	1116	466	--	--	--	--	--	--	--	---	1663	5059
2. Caples Lake Outlet Operations Storage Release Season (Jul.-Mar. Ave.) (D-1635, table 5-6) (1935-1992) USGS #11437000	1597	2843	2841	1944	1174	530	--	--	--	1028	3514	1216	16687
3. Aloha Lake Operations Storage Release Season (Jun.-Sept. Ave.) (Pyramid Creek at Twin Bridges) (D-1635, table 5-7) (1971-1992) USGS #11435100	--	--	--	--	--	--	--	--	1484	3240	931	42	5697
4. Total Combined Average Releases (1 + 2 + 3)	3411	3959	3307	1944	1174	530	--	--	1484	4268	4445	2921	27443
5. S.F.A.R. USGS #11439501 (Critical Years recorded average flow) (1935-1991) (D-1635, table 7-5)	7473 (122 cfs)	7575 (127 cfs)	6415 (104 cfs)	6106 (99 cfs)	6507 (117 cfs)	11343 (185 cfs)	28061 (472 cfs)	29797 (485 cfs)	13243 (223 cfs)	7000 (114 cfs)	6975 (113 cfs)	4734 (80 cfs)	135229
6. S.F.A.R. Instream Flow Requirement - Dry Year (EID/EDCWA Exhibit 78, p. 13)	920 (15 cfs)	1069 (18 cfs)	1104 (18 cfs)	1104 (18 cfs)	997 (18 cfs)	1104 (18 cfs)	1069 (18 cfs)	1104 (18 cfs)	1069 (18 cfs)	1104 (18 cfs)	1104 (18 cfs)	594 (10 cfs)	12342
7. EID's Monthly 1919 Agreement Water (EID/EDCWA Exhibit 78, p. 13)	553	416	430	615	555	1230	2082	2152	2082	2152	2152	661	15080
8. Consumptive use rights on S.F.A.R. senior to A 5645 (except 1919 Agreement Water) (D 1635, table 5-4)	1213	1174	200	200	181	200	1174	1217	1178	1217	1217	1178	10345
9. Water Available For Direct Diversion (5) – (4 + 6 + 7 + 8)	1376	957	1374	2243	3600	8279	23736	25324	7430	-1741	-1943	-620	70019
10. EID's Monthly Demand Year 2021 El Dorado Hills Service Area (D-1635, table 12-1)	1130	742	694	662	549	581	872	1630	2357	2647	2550	1727	16141

6.0 PACIFIC GAS AND ELECTRIC COMPANY'S PETITION FOR RECONSIDERATION SHOULD BE DENIED

In its petition for reconsideration, PG&E raises two issues. First, PG&E argues that the SWRCB's authority to regulate the operation of Project 184 is preempted by federal law. PG&E also challenges the SWRCB's treatment of PG&E's claimed pre-1914 appropriative water rights. These arguments amount to allegations that Decision 1635 contains an error in law and that the decision is not supported by the evidence.

Presumably, PG&E no longer has an interest in this proceeding because it has transferred Project 184 and the associated water rights to EID. The SWRCB will address PG&E's arguments, however, because El Dorado supported PG&E's arguments in El Dorado's response to the petitions for reconsideration. The SWRCB assumes that, as the new owner of Project 184 and the associated pre-1914 water rights, EID intends to advance PG&E's arguments.

We find, however, that PG&E's arguments lack merit. The SWRCB's authority to regulate the consumptive use component of Project 184 is not preempted, and the SWRCB's treatment of PG&E's claimed pre-1914 appropriative rights was appropriate and proper. Accordingly, PG&E's petition for reconsideration should be denied.

6.1 The SWRCB's Authority to Regulate the Consumptive Use Component of Project 184 Is Not Preempted

In Decision 1635, the SWRCB addressed the possibility that, if El Dorado were to acquire a measure of control over the operations of Project 184, El Dorado might increase releases from the lakes during the summer months in order to increase the amount of water available for consumptive use. (D 1635, p. 104.) In order to protect recreational uses at Caples Lake and Silver Lake, the SWRCB conditioned the rediversion of water released from storage in the lakes for consumptive use purposes on compliance with certain lake level requirements designed to reflect PG&E's historic operational practices. (D 1635, pp. 108-112, 137-139.)[8] [9]

[8] The SWRCB reserved jurisdiction to consider whether to impose special conditions on the rediversion of water released from storage in Lake Aloha. (D 1635, pp. 141-142.)

[9] As discussed in section 7, infra, the new EIR prepared by EID since the SWRCB granted consideration of Decision 1635 describes the historic operations of Project 184 and includes EID's Lake Level Operational Commitment, a commitment to operate the lakes as they have been operated historically. By this order, we update the lake level

In Decision 1635, the SWRCB addressed the issue of federal preemption, and concluded that the consumptive use component of hydroelectric projects is subject to regulation under state law. (D 1635, pp. 28-29.) In its petition for reconsideration, PG&E argues that the SWRCB's authority to regulate the operations of a FERC-licensed hydroelectric project is limited to the SWRCB's authority to protect proprietary water rights. For the reasons explained below, however, we conclude that PG&E's interpretation of federal preemption of state water right law is overbroad. As we concluded in Decision 1635, the SWRCB's authority to regulate the use of Project 184's facilities for the purposes of appropriating water for consumptive use is not preempted by federal law.

PG&E and El Dorado cite to *California* v. *Federal Energy Regulatory Commission (Rock Creek)* (1990) 495 U.S. 490 and *Sayles Hydro Associates* v. *Maughan* (9th Cir. 1993) 985 F.2d 451 in support of their argument. In *Rock Creek*, the United States Supreme Court held that the Federal Power Act (FPA) preempted the SWRCB's authority to include minimum instream flows designed to protect fishery resources as a condition of a water right permit that authorized the use of water for purposes of power generation at the Rock Creek project on a tributary to the SFAR. Pursuant to the FPA, FERC had issued a license for the Rock Creek project which contained a much lower instream flow requirement.

Central to the Court's analysis in *Rock Creek* was its interpretation of section 27 of the FPA, the so-called savings clause, which reserves authority to the states to regulate water rights. Section 27 provides as follows:

> Nothing contained in this chapter shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.

16 U.S.C. § 821 (1982). The Court interpreted this language to mean that state law is protected from preemption only to the extent that it relates to the control, appropriation, use or distribution of water used for irrigation, municipal, or other uses *of the same nature*. (*Rock Creek*, at p. 498.)

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requirements to incorporate the Lake Level Operational Commitment, with certain modifications. The updated lake level requirements do not change our analysis of the question of preemption.

The Court concluded that section 27 refers to "proprietary rights," and that California's minimum instream flow requirements were preempted because they did not establish or reflect proprietary rights. (*Ibid*.) The Court also concluded that to allow California to set higher instream flow requirements than were set by FERC would interfere with FERC's broad authority to balance competing considerations, including the economic benefits of a project and its effect on fish and wildlife, when licensing hydroelectric projects under the FPA. (*Id*. at pp. 495-496, 506-507.)

In *Sayles Hydro*, a case decided after *Rock Creek*, the Ninth Circuit Court of Appeals held that the FPA preempted the SWRCB's authority to require a hydroelectric project operator that had applied for a water right permit to conduct studies designed to address the potential impacts of the project to the environment, recreation, and other flow-dependent resources. (*Sayles Hydro*, p. 456.) Language contained in the *Rock Creek* opinion had created an ambiguity as to whether all state requirements that are not protected under section 27 were preempted, or only those state requirements that directly conflicted with federal requirements. The Ninth Circuit held that federal law "occupied the field" of the regulation of federally-licensed hydroelectric projects, and California could not impose procedural or substantive requirements on a project supplemental to those imposed by FERC, except to the extent that California's authority was protected by the savings clause. (*Id.* at pp. 455-456.)

PG&E's and El Dorado's argument that the SWRCB's authority to regulate the consumptive use component of Project 184 is limited to the SWRCB's authority to protect proprietary water rights is not supported by the language of the savings clause or the holdings in *Rock Creek* and *Sayles Hydro*. The SWRCB's authority to impose conditions on the use of Project 184's facilities to appropriate water for consumptive use falls within the express language of the savings clause. State law governing the appropriation of water for consumptive use clearly relates to the "control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses . . . ."

The critical distinction between this case and *Rock Creek* and *Sayles Hydro* is that those cases concerned the SWRCB's authority to regulate the use of water exclusively for the purpose of power generation. Consistent with the savings clause, the SWRCB's authority in such cases is limited to its authority to protect proprietary rights. This case, by contrast, concerns the SWRCB's authority to regulate the use of water for domestic, municipal, and irrigation purposes.

The Third District Court of Appeal reached the same conclusion in *County of Amador et al*. v. *El Dorado County Water Agency et al*. (1999) 76 Cal.App.4th 931 [91 Cal.Rptr.2d 66]. *County of Amador*, which was decided after the SWRCB granted reconsideration of Decision 1635, was a challenge brought under California Environmental Quality Act (CEQA) to the original EIR prepared by El Dorado in connection with its proposed acquisition of Project 184 and the petition for partial assignment of Application 5645 that is the subject of this proceeding. El Dorado argued that this "project" was exempt from CEQA requirements. The Court held, however, that CEQA was not preempted because the project involved El Dorado's proposed new consumptive use of water. The Court reasoned that State law requiring environmental review of El Dorado's consumptive use of water "is clearly one 'relating to the control, appropriation, use or distribution of water used . . . for municipal . . . uses . . . ,'" within the meaning of the savings clause. (*County of Amador*, pp. 960-962, 84-86.)

In summary, the imposition of lake level requirements on El Dorado's consumptive use of water stored in Project 184's storage reservoirs is consistent with section 27 of the FPA and the cases described above. In addition, the SWRCB's regulation of the consumptive use component of Project 184 will not interfere with FERC's broad planning authority under the FPA. In particular, the SWRCB's actions in this proceeding will not affect FERC's ability to weigh the economic benefits of power generation against competing considerations, including the recreational uses of the lakes, when it considers whether and under what conditions to issue a new project license to EID. If EID chooses to operate Project 184 only for purposes of power generation, EID will be bound only by the terms of its federal license, and will not be bound by the SWRCB's lake level requirements. In this proceeding, however, El Dorado is seeking additional rights to use water for domestic, municipal, and irrigation purposes, rights that can only be conferred under State law. If El Dorado chooses to accept this additional benefit, it must comply with the conditions imposed by the SWRCB.

Although the SWRCB's authority to regulate the consumptive use component of Project 184 is not preempted, we recognize that if direct conflicts between state and federal requirements are avoided, El Dorado will be able to operate the project for purposes of both power generation and consumptive use, thereby maximizing the beneficial use of water. Decision 1635 recognized that

Project 184 likely would continue to be operated for purposes of power generation, and included an express exemption from the lake level requirements for nondiscretionary releases from the lakes that were required by the FERC license. The updated lake level requirements imposed by this order will likewise include this exemption.[10]

The exemption will allow EID to comply with federal release requirements, and to redivert for consumptive use any nondiscretionary releases, even if the lake level requirements are not being met. In addition, EID will not be required to comply with the lake level requirements if it is releasing water from the lakes only for purposes of power generation. The lake level requirements will apply only to the extent that El Dorado rediverts for consumptive use more water than is required to be released under the FERC license. Finally, we are confident that EID will be able to operate Project 184 consistent with both State and federal requirements in view of EID's Lake Level Operational Commitment.

6.2 The SWRCB Acted within Its Jurisdiction and Did Not Violate PG&E's Due Process Rights When It Required PG&E to Submit a Report Regarding PG&E's Claimed Pre-1914 Rights

In its petition for reconsideration, PG&E also takes issue with the SWRCB's treatment of its claimed pre-1914 appropriative water rights. As stated earlier, El Dorado concurred with PG&E's arguments in its response to the petitions for reconsideration, and therefore we will address PG&E's arguments even though PG&E has transferred Project 184, and the associated water rights, to EID.

In Decision 1635, the SWRCB addressed allegations that PG&E's claimed pre-1914 water rights were not adequate to supply 15,080 afa of water to EID pursuant to the 1919 contract between the two parties. The SWRCB acknowledged that the adequacy of PG&E's claimed pre-1914 rights was not an issue that had been noticed for hearing, and the record on the issue was not satisfactory. (D 1635, p. 90.) The SWRCB advised PG&E, however, to closely scrutinize the legal basis for the rights pursuant to which it was supplying water to EID and to file a new water right application, if

[10] The exemption also applies to nondiscretionary releases required by the State Division of Safety of Dams. Although such requirements do not raise the issue of federal preemption, we have determined that they should take precedence over the need to protect recreational uses at the lakes.

necessary. (*Id.* at p. 91.) The SWRCB also required El Dorado, within 90 days of obtaining approval to acquire PG&E's interests in the project, to file a report setting forth the legal basis for delivering 15,080 afa through the El Dorado Canal for consumptive use. (*Id*. at p. 140.) The report was to include proof of the nature of the claimed rights, when they were initiated and perfected and for what amounts and purposes, the chain of title for each right, and proof that the rights had been maintained through continuous diversion and use. (*Ibid*.)

PG&E incorrectly characterizes Decision 1635 as having alleged that PG&E's pre-1914 water rights were insufficient to allow delivery of the 15,080 afa of water to EID. PG&E also contends that the SWRCB violated PG&E's right to due process by commenting on the adequacy of its rights without having noticed the issue. Finally, PG&E argues that the SWRCB lacks jurisdiction to inquire into the basis of a claimed pre-1914 water right if a prima facie showing of the validity of the right is made. PG&E purports to make such a showing in its petition for reconsideration, and asserts that the SWRCB's inquiry should end there.

For the reasons set forth below, we disagree that we violated PG&E's due process rights or exceeded our jurisdiction. In addition, the reporting requirement imposed on El Dorado is reasonable and well within our jurisdiction. The requirement should be updated, however, to reflect the fact that EID has acquired the rights, and the deadline to submit the report should be extended, in light of the fact that more than a year has passed since EID acquired the rights from PG&E.

The argument that the SWRCB violated PG&E's right to due process is unfounded for the simple reason that, notwithstanding PG&E's allegation to the contrary, Decision 1635 did not make any determination regarding the validity of PG&E's claimed pre-1914 appropriative rights. The Decision merely instructed PG&E to examine whether its water rights were adequate to cover its water use, and required El Dorado, upon acquiring the rights, to file a report with information concerning the nature and extent of the rights.

The SWRCB has jurisdiction to impose such a reporting requirement to the extent necessary to ascertain whether EID's water use is covered by a valid pre-1914 appropriative water right. With the exception of riparian rights or appropriative rights perfected prior to December 19, 1914, all

water use is conditioned upon compliance with the statutory appropriation procedures set forth in division 2 of the Water Code (commencing with section 1000). (Wat. Code, §§ 1225, 1201.) Unless EID's water use is covered by valid pre-1914 rights, EID's water use constitutes an unauthorized diversion and trespass against the state. (Wat. Code, § 1052.) Water Code section 1051 expressly authorizes the SWRCB to investigate, take testimony, and ascertain whether water attempted to be appropriated is appropriated in accordance with state law. (See also Wat. Code, § 1825 [declaring intent of the Legislature that the SWRCB take vigorous action to prevent the unlawful diversions of water]; Wat. Code, § 183 [expressly authorizing the SWRCB to hold any hearings and conduct any investigations necessary to carry out the powers vested in it].) PG&E's assertion that a prima facie showing of a pre-1914 water right ends the SWRCB's jurisdiction lacks legal support and is inconsistent with the SWRCB's statutory mandate to ensure that unauthorized diversions do not take place.

The deadline to submit the report should be extended in light of the fact that El Dorado acquired Project 184 and PG&E's claimed pre-1914 appropriative water rights in 1999.

7.0 LAKE LEVEL OPERATIONAL COMMITMENT

In this section, we discuss the lake level requirements imposed by Decision 1635, and whether they should be modified in light of EID's Lake Level Operational Commitment, set forth in the 1999 EIR. For the reasons described below, we conclude that the lake level requirements should be revised to incorporate EID's Lake Level Operational Commitment, with certain modifications.

We address the League's petition in section 9, below, because many of the issues raised in the League's petition are addressed by this section and by section 8, below, the updated section regarding mandatory CEQA findings.

7.1 Lake Level Requirements Imposed by Decision 1635

Throughout this proceeding, El Dorado has maintained that it does not intend to change the manner in which PG&E has historically operated Project 184. Numerous protestants expressed concern, however, that El Dorado had not defined historic operations or committed to specific operating parameters that would ensure that operations would not change. Specifically, the protestants were concerned that El Dorado would adversely impact recreational uses at the lakes

by releasing more water from storage during the summer months in order to satisfy projected water demands.

In Decision 1635, the SWRCB recognized the recreational value of the lakes. Recreational uses associated with the lakes include boating, fishing, swimming, and camping. (D 1635, pp. 52-53, 109.) Recreational facilities located on the shores of Silver Lake include three resorts, two large public campgrounds, a Campfire Boys and Girls Camp, a Boy Scouts Camp, Stockton Municipal Camp, and numerous cabins. (*Id*. at p. 52.) One resort and a service campground are located on Caples Lake. (*Id*. at pp. 52-53.) Lake Aloha has no developed recreational facilities because it is located in the Desolation Valley Primitive Area. (*Id.* at p. 109.) Decision 1635 also recognized that recreational activities at the lakes were important sources of revenue for Alpine and Amador Counties. (*Ibid*.)

In order to determine whether recreational uses at the lakes might be impacted, the SWRCB compared the amount of water available under historical conditions to El Dorado's projected demand for water for consumptive use. (D 1635, pp. 96-103.) The SWRCB concluded that under critical year conditions, flows are insufficient to satisfy El Dorado's projected demand during the months of July, August, and September, and December. (*Id*. at pp. 98-99.) Accordingly, the SWRCB agreed with the protestants that, if El Dorado were to acquire some measure of control over operation of the lakes, El Dorado might be tempted to release more water from storage during the summer than PG&E had historically. (*Id*. at p. 104.)

To protect recreational uses at the lakes, the SWRCB developed lake level requirements designed to reflect PG&E's historic practices. For Caples Lake, the SWRCB conditioned the rediversion of water released from the lake for consumptive use purposes, excluding nondiscretionary releases required by the FERC license for Project 184 or the State Division of Safety of Dams, on compliance with the following end-of-the-month lake levels:

WATER-YEAR TYPE	JUNE E.O.M. GAGE HEIGHT (FEET)	JULY E.O.M. GAGE HEIGHT (FEET)	AUGUST E.O.M. GAGE HEIGHT (FEET)	LABOR DAY (SEPTEMBER) E.O.M. GAGE HEIGHT (FEET)
CRITICAL	45.9	44.8	43.1	43.1
DRY	56.0	55.9	48.2	48.2
BELOW NORMAL	62.0	61.6	54.8	54.8
ABOVE NORMAL	62.0	62.0	52.6	47.0
WET	62.0	62.0	52.6	47.0

(D 1635, pp. 137-138.) For Silver Lake, the SWRCB prohibited the rediversion of water released from the lake for consumptive use prior to Labor Day, again excluding nondiscretionary releases. (*Id*. at p. 138.) The SWRCB reserved jurisdiction to revise these requirements or to promulgate new requirements to assure the maintenance of lake levels as high as possible through Labor Day, consistent with historical operations. The SWRCB also reserved jurisdiction to consider whether to impose special conditions on the rediversion of water released from Lake Aloha. (*Id*. at pp. 141-142.)

7.2 EID's Lake Level Operational Commitment

Since the SWRCB adopted Decision 1635, EID has acquired Project 184 and now has control over project operations. EID also has prepared a new EIR which describes the historic operations of Project 184 in detail. The description of historic operations is part of the description of the project analyzed in the EIR. One component of EID's project is EID's proposal to operate Project 184 for purposes of power generation and consumptive use water supply. (1999 Draft EIR, vol. 1, pp. 3-17-3-45.[11]) The project description also includes EID's Lake Level Operational Commitment, a commitment to operate the lakes as they have been operated historically. In the 1999 EIR, EID proposes that the SWRCB replace the lake level requirements set forth in Decision 1635 with EID's Lake Level Operational Commitment. (*Id*. at p. 3-37.) In the event that the SWRCB retains the existing requirements or imposes requirements different from the Lake Level Operational

[11] The Final EIR is comprised of the 1999 Draft EIR, responses to comments, text changes to the DEIR, and a mitigation monitoring program. (1999 Final EIR, p. ii.) The Final EIR did not change the description of historic operations that is contained in the DEIR.

Commitment, EID states that it will operate Project 184 for purposes of power generation and the supply of water under its claimed pre-1914 appropriative rights consistent with the Lake Level Operational Commitment. EID will not redivert water for consumptive use under any new rights conferred by the SWRCB, however, unless the SWRCB's lake level requirements are met. (*Ibid.)*

EID's Lake Level Operational Commitment includes EID's commitment to operate Project 184 so that, for each water year type, end-of-the-month lake levels at Caples Lake, Silver Lake, and Lake Aloha will remain within the range of lake levels resulting from PG&E's historic operations. (*Id*. at p. 3-29.)[12] For each year type, EID commits to maintaining lake levels during the summer and fall that do not exceed the maximum or fall below the minimum levels reached by PG&E during the period of record, 1935-1996. (*Ibid.)* EID also commits to operating "so that its median lake levels, as reviewed at five year intervals, will be at or near the median levels resulting from PG&E's operations for each water year type." (*Ibid*.) Appendix 1 contains tables which show the minimum, median, and maximum lake levels pursuant to which EID proposes to operate. The data that EID used to calculate minimum, median, and maximum lake levels is reproduced in Appendix 2.

In addition, EID commits to not releasing water from Silver Lake prior to Labor Day for purposes of consumptive use, power production, rediversion, or other purposes, excluding non-discretionary releases required by the FERC license for Project 184 or the State Division of Safety of Dams. (This commitment is consistent with the settlement agreement reached between El Dorado, El Dorado County, and Amador County.) Finally, EID commits to preparing a compliance report every five years, and to making available on or about May of each year an Operating Plan that includes projected lake levels.

[12] EID's commitment also extends to Echo Lake, which is part of Project 184. EID's petition for partial assignment of Application 5645 does not encompass the rediversion of water released from storage in Echo Lake, however, and therefore we are not concerned that our approval of El Dorado's petition could lead to changes in the operation of Echo Lake.

7.3 Differences Between the Requirements Imposed by Decision 1635 and EID's Lake Level Operational Commitment

There are a number of differences between the SWRCB's lake level requirements and EID's Lake Level Operational Commitment. First, for Caples Lake, the SWRCB required El Dorado to keep end-of-the-month lake levels at or above the historic average. By contrast, EID commits to keeping end-of-the-month lake levels above the historic minimum, and to keeping median lake levels, as reviewed at five-year intervals, at or near the historic median. Second, the SWRCB prohibited the rediversion of water released from Silver Lake for consumptive use prior to Labor Day, while El Dorado commits to not rediverting water released from the lake for consumptive use, power generation, or other purposes prior to Labor Day. Third, EID's commitment is more comprehensive than the requirements set forth in Decision 1635 in that the commitment applies to Lake Aloha in addition to Caples Lake and Silver Lake, and extends beyond Labor Day. EID's commitment applies through December for Silver and Caples Lake, and through September for Lake Aloha.

The methodology that EID used to develop historic median lake levels is also different from the methodology that the SWRCB employed to develop historic average lake levels in several respects. EID used 62 years of data (1935-1996), while the SWRCB used only 7 years of data (1985-1992). The SWRCB used a more limited data set because FERC amended the license for Project 184 to require higher instream flows in the SFAR in 1984. (D 1635, p. 57.) In the EIR, however, EID found that the higher instream flow requirement resulted in a reduction in releases for purposes of power generation, and did not affect lake levels. (1999 Draft EIR, vol. 1, p. 3-38.) EID found that the data available for years before 1985 were representative of current conditions and the larger data set should be used to better define historic operations. We concur with this assessment.

EID also used a different water year classification index for purposes of calculating median lake levels for each year type, and proposes to use a different forecast point to determine the water year type for purposes of guiding project operations each year. In Decision 1635, the SWRCB developed a water year classification index in the following manner. The SWRCB divided the years 1949 through 1992 into five water year types – critical, dry, below normal, above normal, and wet – based on historic precipitation data measured at Caples Lake. (D 1635, pp. 56-60.) The

SWRCB then calculated for each water year type the average gaged flows in the SFAR near Kyburz for the period April through July. (*Id.* at pp. 56, 61.) The SWRCB used the resulting figures to establish a water year classification index, expressed as a range of flows in the SFAR near Kyburz. (*Id*. at p. 57, Table 7-4.) For example, a critical water year was defined as a year when flows in the SFAR near Kyburz for the period April through July were equal to or less than 87.9 thousand acre-feet. The SWRCB used the water year classification index to calculate average end-of-the-month lake levels for each year type.

Rather than using flows in the SFAR, EID based its water classification index on the average unimpaired American River inflow to Folsom Reservoir between April and July for the period 1946 through 1995. EID's water year classification index is expressed as a percent of the average inflow to Folsom Reservoir. (1999 Draft EIR, vol. 1, pp. 3-18, 3-30 – 3-31, 3-39; Table 3-3.) For example, a critical year is defined as a year when American River inflow to Folsom is less than 50 percent of the historic average. Similarly, EID proposes to use DWR's forecast of unimpaired American River inflow into Folsom Reservoir, as set forth in Bulletin-120, in order to determine the water year type for purposes of guiding project operations in an upcoming year.

The use of EID's water year classification index, rather than the SWRCB's index, does not result in a significantly different classification of the years during the period of record. Table 4 compares water year classifications for the years 1935-1996 based on the two indices. Differences in the classifications are highlighted. Moreover, EID's methodology for classifying and forecasting water year types probably is preferable to Decision 1635's methodology because EID's methodology relies on DWR's Bulletin 120, a widely accepted tool for forecasting water conditions throughout the State. In addition, EID's methodology is consistent with the forecast point used to determine minimum flow release schedules under the FERC license for Project 184.

TABLE 4
Comparison of Decision 1635 and EID's Water Year Classification Indices

WATER YEAR	D-1635 WATER-YEAR CLASSIFICATION (TABLE 7-5)	EID'S EIR WATER-YEAR CLASSIFICATION (TABLE 3-3)	WATER YEAR	D-1635 WATER-YEAR CLASSIFICATION (TABLE 7-5)	EID'S EIR WATER-YEAR CLASSIFICATION (TABLE 3-3)
1935	**AN**	**W**	1966	D	D
1936	W	W	1967	W	W
1937	**BN**	**AN**	1968	D	D
1938	W	W	1969	W	W
1939	**D**	**C**	1970	**BN**	**D**
1940	AN	AN	1971	AN	AN
1941	AN	AN	1972	**BN**	**D**
1942	W	W	1973	AN	AN
1943	AN	AN	1974	W	W
1944	**BN**	**D**	1975	W	W
1945	AN	AN	1976	C	C
1946	AN	AN	1977	C	C
1947	D	D	1978	W	W
1948	**AN**	**W**	1979	BN	BN
1949	BN	BN	1980	**W**	**AN**
1950	W	W	1981	**D**	**C**
1951	BN	BN	1982	W	W
1952	W	W	1983	W	W
1953	**AN**	**W**	1984	**AN**	**BN**
1954	BN	BN	1985	D	D
1955	BN	BN	1986	**AN**	**BN**
1956	W	W	1987	C	C
1957	BN	BN	1988	C	C
1958	W	W	1989	BN	BN
1959	**D**	**C**	1990	**D**	**C**
1960	D	D	1991	D	D
1961	**C**	**D**	1992	C	C
1962	**BN**	**AN**	1993	**AN**	**W**
1963	**AN**	**W**	1994	C	C
1964	D	D	1995	W	W
1965	**W**	**AN**	1996	**AN**	**W**

As stated earlier, in addition to using a different data set and a different water year type classification index, EID calculated minimum, median, and maximum end-of-the-month lake levels for each water year type within the period of record, as opposed to average lake levels. Figures 2-6 depict the minimum, median, and maximum lake levels for each year for Caples Lake. As depicted in Figures 2-6, if the same data set and water year type classification index are used, historic median end-of-the-month lake levels are almost identical to historic average lake levels. For purposes of comparison, Figures 2-6 also show the lake level requirements imposed by Decision 1635. Generally, historic average lake levels are higher than the lake levels required by Decision 1635 during the summer recreational season, particularly in critical and dry years.

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FIGURE 2
CAPLES LAKE - CRITICAL YEAR
E.O.M. Lake Level Commitment

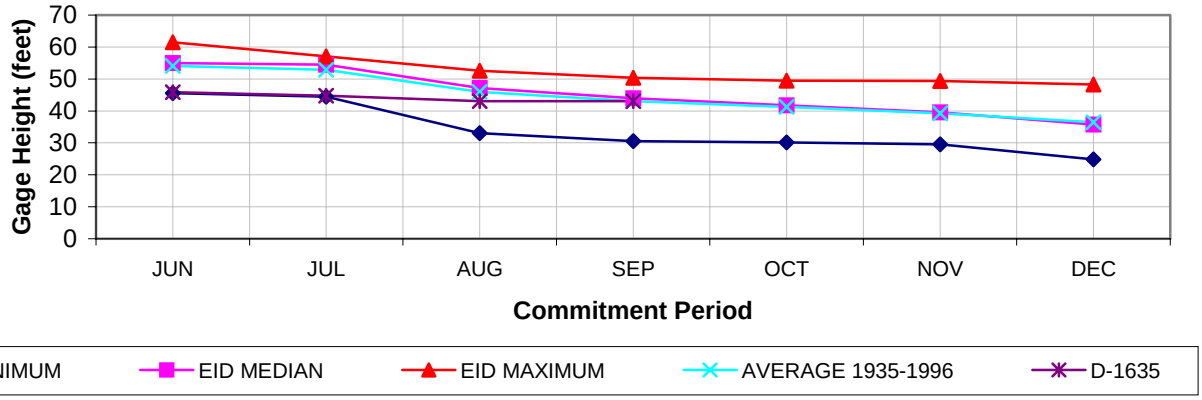

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FIGURE 3
CAPLES LAKE - DRY YEAR
E.O.M. Lake Level Commitment

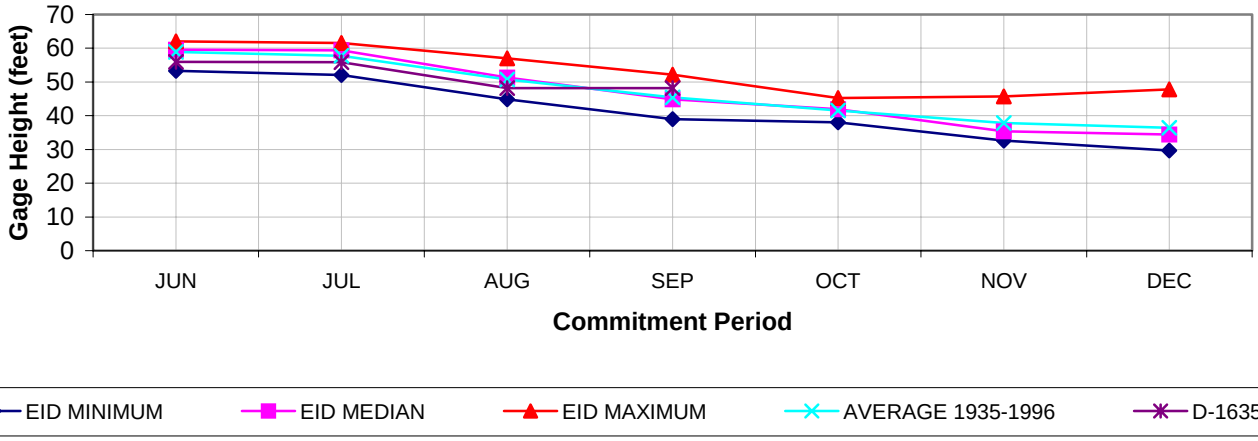


FIGURE 4
CAPLES LAKE - BELOW NORMAL YEAR
E.O.M. Lake Level Commitment

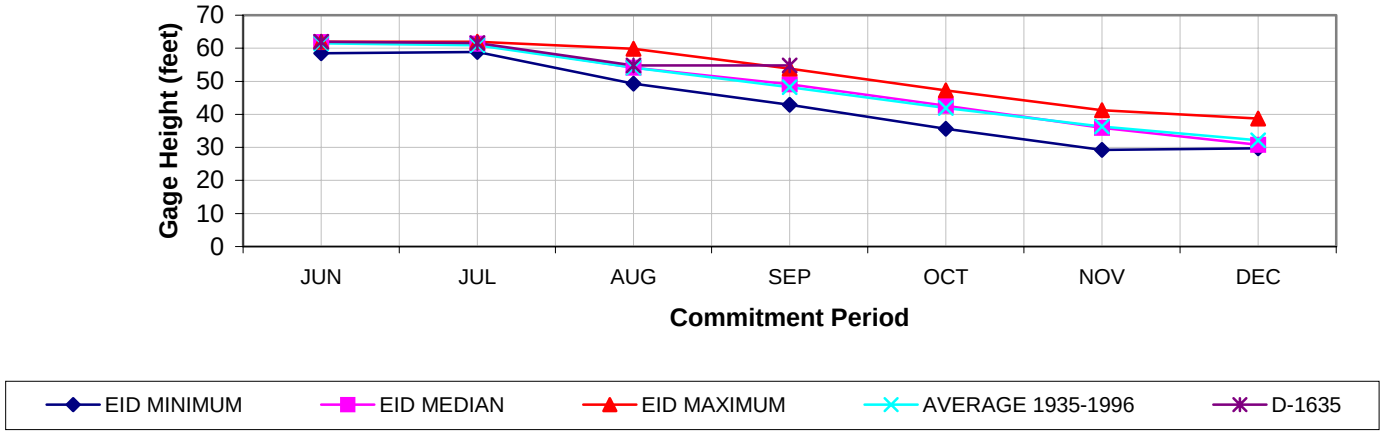


FIGURE 5
CAPLES LAKE - ABOVE NORMAL YEAR
E.O.M. Lake Level Commitment

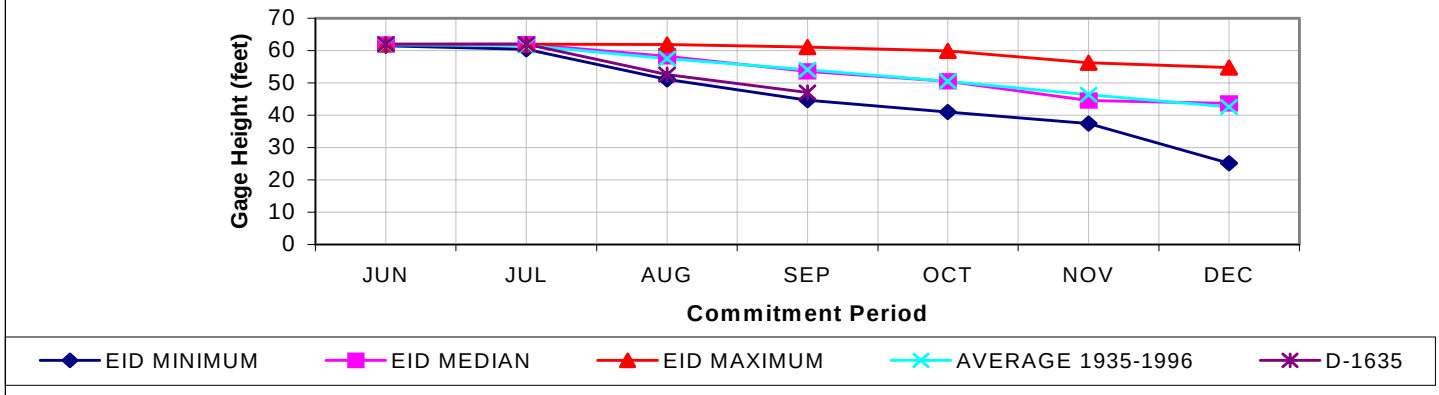
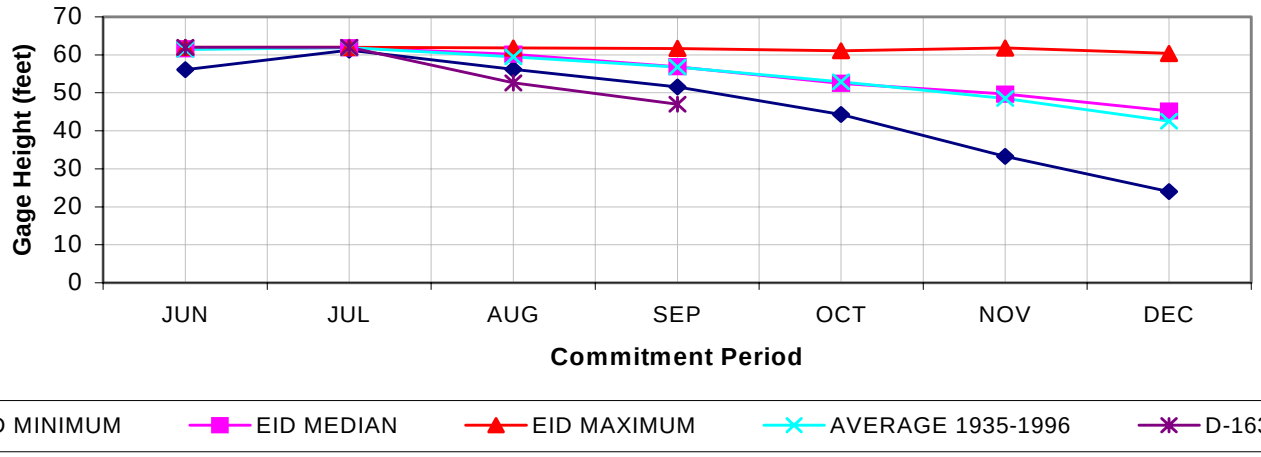


FIGURE 6
CAPLES LAKE - WET YEAR
E.O.M. Lake Level Commitment



7.4 EID's Commitment to Operate So That Median Lake Levels Remain at or near the Historic Median Has the Potential to Adversely Affect Recreational Uses

While the SWRCB required El Dorado to keep end-of-the-month lake levels for Caples Lake at or above the historic average, EID has committed to maintaining lake levels above the historic minimum, and to maintaining median lake levels, as reviewed at five year intervals, at or near the historic median. This operational commitment affords EID considerable flexibility, but is not necessarily representative of historic operations, and will not necessarily afford adequate protection to recreational uses at the lakes.

The commitment to operate so that median lake levels, as opposed to average lake levels, will remain at or near the historic median, means that lake levels could be drawn down to the historic minimum for a given year type on a regular basis, so long as lake levels remain just above the historic median for an equal number of years. Maintaining a median lake level means only that actual lake levels must be above and below the median an equal number of times; the distance of actual lake levels from the median does not

matter.[13] If the lakes were operated in this manner, average lake levels could decrease significantly, as compared to the historic average.

7.5 New Lake Level Requirements for Caples Lake, Silver Lake, and Lake Aloha

In order to ensure that recreational uses at Caples Lake, Silver Lake, and Lake Aloha are protected, EID should be required to maintain end-of-the-month lake levels above the historic minimum, and to maintain average lake levels, as reviewed at five-year intervals, at or above the historic average. This requirement is the same as EID's Lake Level Operational Commitment except that we will require EID to maintain average lake levels that are at or above the historic average, as opposed to median lake levels that are at or near the historic median. The purpose of this modification is to prevent average lake levels from declining over time.

The lake level requirements should apply from June through October at Caples Lake, from September through October at Silver Lake and from June through September at Lake Aloha. (Recreational uses at Silver Lake will be protected through Labor Day, September 3, by the requirement, consistent with EID's commitment, that no releases be made from Silver Lake prior to Labor Day for consumptive use, power production, rediversion, or other purposes, excluding non-discretionary releases.) Although historically PG&E would continue to draw-down Caples Lake after Labor Day and begin to draw-down Silver Lake after Labor Day, the record contains evidence that the recreational season at the lakes lasts until mid-October. (SCLDF Ex. 95-NR, pp. 1, 3; SCLDF Ex. 95-BP-5, pp. 1-2, 4, 6; SCLDF Ex. 95-TB-1, p. 2; R.T. pp. 186-187, 190; Draft EIR, vol. I, pp. 4-103 – 4-131, 4-143-151.) Extending minimum lake level requirements for Caples Lake and Silver Lake through October will ensure that EID's

[13] We take official notice of the definition of the term "median," contained in the Civil Engineering Reference Manual: "The median is the point in the distribution which divides the total observations into two parts containing equal number of observations. It is not influenced by the extremity of scores on either side of the distribution. The median is found by counting up (from either end of the frequency distribution) until half of the observations have been accounted for." (Professional Publications, Inc., Civil Engineering Reference Manual (5th ed. 1989) p. 1-26.)

operation of Project 184 will not have a greater impact to recreational uses after Labor Day than PG&E's operation of the project did historically.

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Tables 5, 6 and 7 summarize the new minimum end-of-the-month lake levels for Caples Lake, Silver Lake, and Lake Aloha, respectively.

TABLE 5
Caples Lake
End-of-the-Month Lake Level Operational Requirements

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
June	Average: 54.1 Minimum: 45.6	Average: 58.9 Minimum: 53.3	Average: 61.5 Minimum: 58.5	Average: 61.8 Minimum: 61.5	Average: 61.4 Minimum: 56.1
July	Average: 52.9 Minimum: 44.5	Average: 57.8 Minimum: 52.1	Average: 60.9 Minimum: 58.9	Average: 61.6 Minimum: 60.4	Average: 61.9 Minimum: 61.3
August	Average: 46.0 Minimum: 33.0	Average: 50.8 Minimum: 44.9	Average: 54.2 Minimum: 49.3	Average: 57.5 Minimum: 51.1	Average: 59.5 Minimum: 56.2
September	Average: 43.0 Minimum: 30.5	Average: 45.4 Minimum: 39.0	Average: 48.2 Minimum: 42.9	Average: 54.0 Minimum: 44.7	Average: 56.8 Minimum: 51.5
October	Average: 41.3 Minimum: 30.1	Average: 41.5 Minimum: 38.0	Average: 41.9 Minimum: 35.6	Average: 50.5 Minimum: 41.0	Average: 52.9 Minimum: 44.3

TABLE 6
Silver Lake
End-of-the-Month Lake Level Operational Requirements

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAG (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
September	Average: 11.3 Minimum: 6.3	Average: 9.6 Minimum: 4.6	Average: 10.4 Minimum: 6.9	Average: 11.3 Minimum: 6.0	Average: 12.0 Minimum: 7.8
October	Average: 7.4 Minimum: 3.0	Average: 5.8 Minimum: 1.3	Average: 5.1 Minimum: 2.3	Average: 5.6 Minimum: 0.8	Average: 6.8 Minimum: 0.7

TABLE 7
Lake Aloha
End-of-Month Lake Level Operational Requirements

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
June	Average: 18.3 Minimum: 16.2	Average: 19.6 Minimum: 18.1	Average: 19.5 Minimum: 18.2	Average: 19.5 Minimum: 17.2	Average: 18.1 Minimum: 14.3
July	Average: 11.0 Minimum: 5.0	Average: 15.2 Minimum: 10.1	Average: 17.1 Minimum: 15.3	Average: 18.8 Minimum: 16.6	Average: 19.2 Minimum: 14.6
August	Average: 6.6 Minimum: 5.0	Average: 7.6 Minimum: 5.0	Average: 9.9 Minimum: 5.2	Average: 12.2 Minimum: 7.3	Average: 14.2 Minimum: 8.4
September	Average: 6.0 Minimum: 5.0	Average: 5.7 Minimum: 5.0	Average: 6.8 Minimum: 5.0	Average: 7.6 Minimum: 5.0	Average: 8.1 Minimum: 5.0

7.6 Reservation of Jurisdiction

The SWRCB will continue to reserve jurisdiction to revise these requirements or to promulgate new requirements to assure the maintenance of lake levels consistent with historical operations.

In addition, we will reserve jurisdiction to modify the lake level requirements imposed by this order in light of new information concerning the recreational impacts associated with various lake levels. It bears emphasis that the lake level requirements developed in Decision 1635, and revised by this order, are intended to prevent operational changes that could adversely impact recreational uses at the lakes. The record in this proceeding contains little or no evidence of what lake levels are optimal for various recreational uses, or evidence of the particular lake levels at which recreational uses would be impacted. Accordingly, the SWRCB was unable to develop lake levels based on a balancing of the need to enhance and protect recreational uses, the need for power generation, and EID's need for new water supplies. The lake level requirements imposed by this order will not necessarily ensure that optimal lake levels will be maintained at all times for purposes of recreation. Rather, we have developed lake level requirements designed to reflect

PG&E's historic operation of the lakes, in response to protestants' fears that historical operations would change.

The record contains some, limited information concerning the recreational impacts associated with particular lake levels at Silver Lake. According to the 1999 EIR, the boat launch at Kay's Silver Lake Resort and the floating boat dock at Kit Carson Lodge on Silver Lake will not be fully functional when lake levels are drawn down below 18.2 feet, as measured by the gage on the dam. (Draft EIR, vol. I, pp. 4-104 – 4-107.) The boat dock at Kit Carson Lodge is not functional at all when levels drop below 16.2 feet, and the boat launch at Kay's Resort is not functional at all when levels drop below 12.9 feet. Finally, Bart Bird, a witness for the 49er Council of the Boy Scouts of America, testified that access to Silver Lake near Camp Minkalo is impaired when lake levels reach roughly 10.5 feet. (R.T., pp. 201-203.)

These impacts to recreational facilities may take place during September and October consistent with the lake level requirements imposed by this order, but these impacts took place during those months historically. The frequency evaluations contained in Appendix 3 show that lake levels remained above 18.2 feet in September and October only once during the entire period of record, in a wet year. Lake levels remained above 12.9 feet infrequently, particularly in October. In addition, the limited amount of information in the record does not provide a sufficient basis for imposing lake levels requirements that depart from historic operations. In order to properly balance competing considerations, we would need more information regarding the impacts associated with particular lake levels to other recreational uses and facilities, and to EID's water supply. (For instance, the EIR indicates that a decrease in lake levels actually enhances recreational uses in certain locations by exposing beaches. (Draft EIR, vol. I, pp. 4-110 – 4-111, 4-121).)

It also merits note that the issue of the appropriate lake levels to protect recreational uses will be addressed in the ongoing FERC relicensing proceeding for Project 184. (See Draft EIR, vol. I, p. 1-9 – 1-10.) Water quality certification from the SWRCB under

section 401 of the Clean Water Act is required in connection with the new project license. Depending on the information in the record for the relicensing proceeding, the SWRCB may impose more protective lake level requirements as a condition of the water quality certification for the project. Conversely, if the new project license requires significantly higher releases from the lakes during the recreation season, EID might be required to draw lake levels down below the minimum levels set by this order.

7.7 Reporting Requirements

As stated earlier, EID has committed to preparing a compliance report every five years, and to making available on or about May of each year an Operating Plan that includes projected lake levels. We will require EID to prepare a compliance report every five years that demonstrates compliance with EID's Lake Level Operational Commitment, as modified by this order. In the years when the report is prepared, the report should be submitted along with the annual Progress Report by Permittee that EID will be required to submit. We will also require EID to make its Operating Plan available on EID's web site and at EID's offices.

In order to develop the information necessary to determine whether the SWRCB should exercise its reserved jurisdiction to consider whether the lake level requirements should be modified in light of new information concerning the recreational impacts associated with particular lake levels, we will require EID to submit information concerning recreational impacts as part of its annual reporting requirement.

8.0 MANDATORY CEQA FINDINGS AND OTHER ENVIRONMENTAL AND PUBLIC INTEREST ISSUES

In this section, we address environmental and public interest issues, based on the new EIR which was certified by EID, as lead agency under the California Environmental Quality Act (CEQA), on July 12, 1999, and make new findings as required by CEQA.

For the purpose of considering whether to approve EID's petition for partial assignment of Application 5645, the SWRCB is a responsible agency under CEQA. (See Pub.

Resources Code, § 21069.) For each significant environmental effect identified in the EIR for this project, we must make one or more of the following findings: (1) changes have been required in the project that mitigate or avoid the significant effect, (2) such changes are within the responsibility and jurisdiction of another public agency and have been or can and should be adopted by that agency, or (3) specific economic, legal, social, technological, or other considerations make the mitigation measures identified in the EIR infeasible. (Pub. Resources Code, §§ 21002.1, 21081; Cal. Code Regs., tit. 14, §§ 15091, 15093.)

In Decision 1635, the SWRCB made the findings required by CEQA based on an EIR and Supplemental EIR (hereafter EIR) that had been certified by EDCWA on October 23, 1995. (D 1635, pp. 129-131.) The 1995 EIR was prepared by EDCWA, as the lead agency, in cooperation with EID. The project analyzed in the EIR included the petition for partial assignment of Application 5645 that is the subject of this proceeding.

Amador County, the Department of Fish and Game, and a coalition comprised of Alpine County, environmental groups, and local homeowners associations challenged the adequacy of the 1995 EIR under CEQA. In *County of Amador et al*. v. *El Dorado County Water Agency et al.* (1999) 76 Cal.App.4th 931 [91 Cal.Rptr.2d 66], which was decided after the SWRCB adopted Decision 1635, the Third District Court of Appeal held that the EIR was inadequate. The Court held that the EIR was inadequate because the project analyzed in the EIR was based on the population forecasts contained in an unadopted general plan, and because the EIR did not adequately describe existing environmental conditions and the historic operations of Project 184. (*Id.*, 76 Cal.App.4th at pp. 949-956 [91 Cal.Rptr.2d at pp. 77-82].)

While the CEQA litigation was pending, EID began working on the new EIR, which was certified on July 12, 1999. On July 28, 1999, EDCWA requested the SWRCB to admit the 1999 EIR into the administrative record in this proceeding. By letter dated September 15, 1999, the SWRCB notified the parties to this proceeding of EDCWA's request and provided the parties with an opportunity to object. The SWRCB received no

timely objections, and on October 29, 1999, Hearing Officer James M. Stubchaer accepted the 1999 EIR into the administrative record.

8.1 Parts of the Project Subject to SWRCB Approval

The project analyzed in the 1999 EIR includes EID's acquisition, permanent repair, and operation of Project Number 184, and acquisition of 17,000 acre-feet of new water rights pursuant to El Dorado's petition for partial assignment of Application 5645. The impacts addressed in this order are those identified in connection with El Dorado's acquisition of new water rights. The EIR divides these impacts into four categories: growth inducing impacts, impacts from diverting and distributing 17,000 acre-feet of water, impacts from constructing water delivery facilities, and cumulative impacts.

8.2 Growth-Inducing Impacts

The EIR identifies measures to mitigate significant growth inducing impacts in the following areas: aesthetic resources, air quality, biological resources, cultural resources, energy and mineral resources, geology and soils, hazards, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation/circulation, and utilities and service systems. For the most part, EID recommends that El Dorado County adopt mitigation measures to address growth-inducing impacts.

Similarly, the SWRCB concluded in Decision 1635 that El Dorado County was the agency primarily responsible for land use planning, approving development consistent with the county's general plan, and mitigating the effects of development within the county. (D 1635, p. 131.) Except as otherwise provided below, we find that implementing the mitigation measures identified in the 1999 EIR to address growth-inducing impacts is within the primary responsibility and jurisdiction of El Dorado County, and the County can and should adopt the mitigation measures identified.

One of the growth inducing impacts identified in the EIR is a potential significant impact to aquatic habitat due to increased treated wastewater discharge. EID owns and operates three wastewater treatment plants in El Dorado County. Two of those would treat wastewater resulting from the use of the additional 17,000 af of water. EID is either in the process of or has completed upgrading both of the plants to accommodate for anticipated growth in the County. The increased capacity is expected to accommodate increased demand for the next 10-14 years at the El Dorado Hills plant and 10-15 years at the Deer Creek plant, depending on the rate of development. (Draft EIR, vol. II, p. 8-34.[14])

The 1999 EIR acknowledges that EID's plants will be operated consistent with the waste discharge requirements and national pollutant discharge elimination system (NPDES) permits issued by the Central Valley Regional Water Quality Control Board (CVRWQCB). (*Ibid*.) Compliance with the NPDES permits will protect the beneficial uses of receiving waters that are designated in the Water Quality Control Plan for the Central Valley Region, Sacramento River and San Joaquin River Basins (1998) (basin plan). Nonetheless, EID concludes that increased treated wastewater discharge will have a potentially significant unavoidable impact to wildlife and aquatic habitat.

In order to mitigate this impact, we will require EID to comply with the terms of the NPDES permits for the wastewater treatment plants and any subsequent permits issued by the CVRWQCB. In addition, we will require EID to prepare and submit to the CVRWQCB a mitigation plan designed to ensure that increased wastewater discharges will not unreasonably affect wildlife and aquatic habitat. EID will be required to implement any mitigation measures that the CVRWQCB determines are feasible. With these mitigation measures, the designated beneficial uses of receiving waters will be protected. We find that the benefits of El Dorado's water supply project outweigh any remaining impacts to wildlife and aquatic habitat.

[14] As stated in footnote 10, *supra*, the 1999 Final EIR is comprised of the 1999 Draft EIR, responses to comments, text changes to the DEIR, and a mitigation monitoring program.

In Decision 1635, the SWRCB expressed concern regarding another significant growth inducing impact that was identified in both EIRs for this project: the impact to eight threatened or endangered plant species that are found chiefly in gabbro soil formations in western El Dorado County, within the proposed place of use. (Decision 1635, pp. 116-123.) The SWRCB concluded that it would be inappropriate to include conditions in El Dorado's permit to mitigate this impact because El Dorado County was primarily responsible for authorizing development within the County and the County had adopted policies to protect the plant species in its General Plan. (*Id*. at pp. 122-123.) The SWRCB stated, however, that without the County's policies, it was doubtful that the SWRCB could grant El Dorado the appropriative water rights that it sought. (*Id*. at p. 122.) In particular, the SWRCB relied on General Plan Objective 7.4.1 and subsequent policies, which provided among other things for the establishment of four preserve sites.

Since the SWRCB adopted Decision 1635, El Dorado County's General Plan has been invalidated as the result of a CEQA challenge. (See Draft EIR, vol. II, p. 8-4.) Accordingly, the policies that the SWRCB relied upon to protect the threatened and endangered plant species are no longer in effect. In order to ensure that the plant species are protected, we will require that a new General Plan be in place that contains policies that are equally or more protective than the policies that were contained in the previous General Plan, before water may be diverted under El Dorado's permit, except to the extent that water is delivered to a development project that is approved consistent with the previous General Plan. We will also require EID to cooperate with the County in establishing preserve sites for the plant species, a mitigation measure identified in the 1999 EIR.

8.3 Impacts from Diverting and Distributing 17,000 Acre-Feet of Water

In connection with the diversion of 17,000 afa, the 1999 EIR identifies potential significant adverse impacts to fishery habitat in the Lower American River below Folsom Dam and to the Nimbus Salmon and Steelhead Hatchery as a result of elevated water temperatures.

These impacts will be partially mitigated by including Term 91 in El Dorado's permit. Under Term 91 conditions, when the USBR or DWR is releasing stored water in order to protect water quality in the Delta, El Dorado will not be permitted to divert natural flow. Term 91 will not, however, affect El Dorado's ability to redivert at Folsom Reservoir water released from storage in Lake Aloha, Caples Lake, or Silver Lake.

Temperature impacts also will be partially mitigated by reducing El Dorado's water use through implementation of EID's Urban Water Management Plan and Water Conservation Plan, a mitigation measure identified in the 1999 EIR. Implementation of those plans will be required as a condition of El Dorado's permit.

Under the circumstances of this case, we conclude that any remaining temperature impacts should be mitigated by the USBR. The USBR should be primarily responsible for mitigating temperature impacts because the majority of the water stored in Folsom Reservoir by the USBR is appropriated under rights junior to EID's. It is also appropriate to require the USBR to bear greater responsibility than EID for mitigating temperature impacts and maintaining suitable fish habitat below Folsom Reservoir because CVP facilities prevent anadromous fish from reaching upstream habitat. (See Decision 1644, pp. 31-33 [discussing obligation under public trust doctrine to maintain suitable conditions for fish downstream of dams and reservoirs to mitigate for loss of fishery habitat that would otherwise be available upstream].)

In operating Folsom Reservoir, the USBR must meet the water quality objective for temperature set forth in the Water Quality Control Plan for the Central Valley Region, Sacramento River and San Joaquin River Basins (1998) (basin plan). The USBR cannot alter water temperatures in the lower American River in a manner that adversely affects beneficial uses, including fish habitat. (*Id*. at p. II-2.00, table II-1, p. III-8.00.) The USBR's compliance with the water quality objective for temperature contained in the basin plan will ensure that significant temperature impacts to the fishery habitat in the Lower American River and to the Nimbus Salmon and Steelhead Hatchery do not occur.

The SWRCB has no reason to believe that the USBR will not meet the temperature objective. The 1999 EIR notes that the USBR plans to undertake several measures to mitigate for the impacts of diversions from Folsom Reservoir on water temperatures in the Lower American River, including the installation of a temperature control device at Folsom Dam and operation of Folsom Reservoir consistent with a Coldwater Pool Management Model. (1999 Draft EIR, vol. II, pp. 8-93 – 8-95.) To the extent that temperature impacts are not fully mitigated by the conditions imposed on El Dorado and by the USBR's compliance with the water quality objective for temperature, we find that the advantages of El Dorado's project outweigh the disadvantages because the project will provide a dependable supply of water for inbasin uses.

8.4 Impacts from Construction of Water Delivery Facilities

The EIR identifies measures to mitigate significant impacts from construction of the facilities for the delivery of water from Folsom Reservoir in the following areas: aesthetics, air quality, botanical resources, wildlife resources, aquatic resources, cultural resources, energy and mineral resources, geology and soils, hazards, hydrology and water quality, land use planning, noise, and recreation. The EIR analyzes the potential impacts from a programmatic view because the final design of the facilities is not complete and the specific location of the facilities is unknown. Additional surveys and project-level review under CEQA will be required.

Except as otherwise provided below, we find that implementing the mitigation measures identified in the 1999 EIR to address the impacts due to construction of the facilities is within the primary responsibility of EID, and EID can and should adopt the mitigation measures identified.

One of the construction impacts identified in the EIR is to botanical and wildlife resources. In Decision 1635, the SWRCB developed conditions 22 and 23 to mitigate impacts to botanical and wildlife resources. (D 1635, pp. 131, 140.) Likewise, we will include updated versions of these special permit conditions and the standard endangered species term in order to mitigate impacts to botanical and wildlife resources.

Operation of a pumping facility at Folsom Reservoir may result in entrainment of fish in Folsom Lake, a potential significant impact to aquatic resources. EID has agreed to mitigate this impact by installing a fish screen that meets the fish screening criteria of the California Department of Fish and Game. (DEIR, vol. II, pp. 8-108 – 8-109.) We find that adoption of this mitigation measure will reduce the environmental impact to a less than significant level, and will require El Dorado to comply with this mitigation measure as a condition of its permit.

In the area of hydrology and water quality, the EIR concludes that construction activities could result in significant impacts due to erosion, turbidity, sedimentation, and impacts to ground water quality. We will require EID to implement the mitigation measures outlined in the EIR (see Draft EIR, vol. II, pp. 8-116 – 8-117), as well as any additional measures outlined in the project-level EIR. In addition, we will require EID to comply with standard terms 100 and 208, and to obtain any necessary approvals from appropriate federal and state agencies, including the CVRWQCB, and abide by the terms of any approvals designed to minimize construction impacts to water quality and hydrology. We find that with these mitigation measures the construction impacts to hydrology and water quality will be reduced to a less than significant level.

8.5 Cumulative Impacts

Cumulative impacts are summarized in Table 2-1 of the EIR. The EIR identifies significant cumulative impacts in the following areas: water supply and hydrology, fisheries and aquatic habitat, terrestrial habitats and wildlife, recreation, power supply, aesthetics/visual resources, water quality, and cultural resources. The EIR states that EID will continue to implement its Urban Water Management Plan and Water Conservation Plan, but that the impacts remain unavoidable and significant.

The cumulative impacts to water supply and hydrology are identified as an increased risk of deficiencies to CVP and SWP contractors. Power supply impacts are identified as a potential to decrease CVP load capacity and available energy.

Cumulative impacts in the area of fisheries and aquatic habitat include potential impacts to: lower American River fish habitat, warm-water fish species in Folsom Reservoir, upper and lower Sacramento River fisheries, warm-water fish at Clair Engle Reservoir, Delta fisheries, and Sacramento splittail. These impacts may occur as a result of changes in water temperatures, flow regimes, and habitat suitability. Cumulative impacts to terrestrial habitat and wildlife include impacts to near-shore vegetation and the associated wildlife community.

Recreational impacts may occur to the lower Sacramento River, lower American River, and Folsom Reservoir. Other impacts due to changes in flows and hydrologic regimes are: visual/aesthetics impacts on the American and Sacramento Rivers during high use months, water quality impacts in the Sacramento River and Delta and in the water diverted from Folsom Reservoir, and impacts to cultural resources.

The Water Quality Control Plan for the Central Valley Region, Sacramento River and San Joaquin River Basins, and the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (basin plans) designate water quality objectives to protect beneficial uses of water in the Sacramento River basin, the American River basin, and the Bay-Delta Estuary. To a large extent, the cumulative impacts described above are to flow-dependent resources, including fish habitat and recreation, that are designated beneficial uses in the basin plans, which are protected by water quality objectives.

For Folsom Reservoir, the applicable basin plan contains objectives to protect recreation, habitat for warm and cold water fisheries, warm water fisheries spawning, and wildlife habitat. From Folsom Dam to the Sacramento River, objectives are in place to protect recreation, fresh water habitat for warm and cold water fish species, migration and spawning of fish species, and wildlife habitat. Objectives are in place to protect recreation, freshwater habitat, migration and spawning for fisheries, and wildlife habitat on the Sacramento River from Shasta Dam to the “I” Street bridge. The applicable basin

plan also contains salinity standards and river flow and delta outflow requirements to protect fisheries in the Bay-Delta Estuary.

The SWRCB will require El Dorado to comply with Term 91, and we will require EID to continue to implement its Urban Water Management Plan and Water Conservation Plan. To the extent that cumulative impacts are not fully mitigated by these measures, the USBR should be primarily responsible for mitigating the impacts, in conformance with the basin plans, for the reasons discussed in section 8.3, *supra*. Finally, to the extent that any cumulative impacts are not fully mitigated by the conditions imposed on El Dorado and by the USBR's compliance with basin plan standards, we find that the advantages of El Dorado's project outweigh the environmental disadvantages because the project will provide a dependable supply of water for inbasin uses.

9.0 THE PETITION FOR RECONSIDERATION OF THE LEAGUE TO SAVE SIERRA LAKES, ET AL. SHOULD BE DENIED

9.1 Introduction

The League raises a number of issues in its petition for reconsideration. Some of these issues are addressed in the preceding sections of this order. The remaining issues raised by the League lack merit, for the reasons discussed below, and the League's petition for reconsideration should be denied.

9.2 The Lake Level Requirements Imposed by Decision 1635, and Modified by this Order, Are Appropriate and Proper

The League makes a number of arguments concerning the lake level requirements set forth in Decision 1635. The League states that Decision 1635 mischaracterized the League's position, and the League is not satisfied with the historic operations of the lakes, or with maintaining lake levels as high as possible through Labor Day. The League claims that historic operations have harmed recreational uses, and lake levels should remain as high as possible throughout the recreation season, which extends beyond Labor Day. In support of its statement that Decision 1635 mischaracterized its position, the League cites to two declarations submitted by witnesses for Alpine County in August, 1996 in response to the draft decision.

As El Dorado notes in its response to the League's petition for reconsideration, the majority of the witnesses for the parties jointly represented by the Earthjustice Legal Defense Fund appeared to have been concerned primarily with the possibility that El Dorado would change the way the lakes were operated, and the witnesses did not object to the way the lakes had been operated historically. (E.g., SCLDF Ex. BB, p. 2; SCLDF Ex. NR, p. 8; R.T., vol. III, p. 91.) In addition, the objections to historic operations that Alpine County's witnesses made in their declarations, which were submitted after the hearing record was closed, were different from the witnesses' testimony during the hearing, at which point the County had no position on the way the lakes had been operated historically. (R.T. vol. II, pp. 219-221.)

More importantly, as explained in section 7.6, *supra*, the record in this proceeding contains little or no evidence of what lake levels are optimal for various recreational uses, or evidence of the particular lake levels at which recreational uses would be impacted. Accordingly, the SWRCB was unable to develop lake levels based on a balancing of the need to enhance and protect recreational uses, the need for power generation, and EID's need for new water supplies. Rather, we have developed lake level requirements designed to reflect PG&E's historic operation of the lakes, in response to protestants' fears that changes in historic operations would adversely affect recreational uses. As discussed in section 7.6, we will reserve jurisdiction to modify the lake level requirements imposed by this order in light of new information concerning the recreational impacts associated with various lake levels.

The League also argues that Decision 1635's lake level requirements are inadequate because they did not protect recreational uses at Lake Aloha, or protect recreational uses at Caples Lake and Silver Lake after Labor Day. The League alleges that the end-of-the-month lake level requirements at Caples Lake allow the lake to be drawn down to levels that create navigational hazards, expose a mud "bath tub" ring, and impair boating access. Finally, the League contends that recreational uses at Caples Lake are not adequately protected because lake levels can be drawn down to the end-of-the-month

minimum for August at the beginning of the month, leaving just a short period of time when recreational uses are protected.

As described in section seven, *supra*, we have revised the lake level requirements to include protections for Lake Aloha, and to extend protections for Caples Lake and Silver Lake beyond Labor Day. The League's contention that the permissible lake levels for Caples Lake will create navigational hazards, expose a bathtub ring, and impair boating access is not supported by any evidence in the record. If in the future new information is brought to the SWRCB's attention that indicates that this is the case, the SWRCB may consider revising the lake level requirements pursuant to its reserved jurisdiction.

9.3 The SWRCB's Treatment of EID's Water Use Under Claimed Pre-1914 Appropriative Water Rights Was Appropriate and Proper

The League faults the SWRCB for failing to take action to rectify EID's alleged unlawful diversion of water for consumptive use under PG&E's claimed pre-1914 appropriative water rights, which were transferred to EID in 1999. The League claims to have submitted unrefuted evidence that the EID's continuing water use is unlawful. Like PG&E, the League also mischaracterizes Decision 1635 as having determined that EID's water use is unlawful. The League alleges that EID's water use has injured public trust resources and the interests of the League by drawing down the lakes and reducing flows in the SFAR.

As explained earlier, Decision 1635 did not make any determination regarding the validity of PG&E's claimed pre-1914 appropriative rights because the issue had not been noticed for hearing or fully addressed by the parties. Similarly, the question whether EID's current water use adversely impacts the League's interests or public trust resources in the SFAR was not an issue properly before the SWRCB in this proceeding.

In order to address whether the EID's water use is covered by pre-1914 appropriative rights, by this order we require EID to file a report setting forth the legal basis for delivering 15,080 afa through the El Dorado Canal for consumptive use. As for the

League's claim that EID's water use has adversely affected lake levels, we have determined that the updated lake level requirements imposed by this order will protect recreational uses at the lakes. Although the lake level requirements are not a condition of EID's claimed pre-1914 appropriative rights, presumably the District will conform to the requirements as a condition of the exercise of the post-1914 appropriative rights conferred by this order. Finally, the flows needed to protect public trust resources in the SFAR is an issue that is being addressed in the relicensing proceeding that is currently pending before FERC.

9.4 The SWRCB Correctly Determined that Water Is Available for Appropriation November 1 through July 31

The League contends that the SWRCB's water availability analysis was flawed in several ways. As set forth in section five, *supra*, we find that water is available for appropriation by EID from November 1 through July 31 of the following year, and the season of diversion authorized in Decision 1635 was correct. We address the League's arguments below.

First, the League takes issue with the statement contained in Decision 1635 that average monthly gaged flows in the SFAR near Kyburz range from an October minimum of 51 cfs to a May maximum of 1,174 cfs. The League correctly notes that, according to Table 5-2 of Decision 1635, average monthly flows in October are 31 cfs, not 51 cfs, and average monthly flows in August and September are 17.7 cfs and 18.1 cfs, respectively. This issue is irrelevant to the question of water availability, however, because the season of diversion authorized in Decision 1635 was November 1 through July 31.

The League's second argument confuses the issue of water availability and the issue of whether El Dorado should be permitted to redivert water released from storage. Other than requiring that end-of-the-month lake levels be met, Decision 1635 did not limit when El Dorado may redivert at Folsom Reservoir the water El Dorado releases from storage in the lakes. The League reasons that allowing El Dorado to redivert previously stored water during August, September, and October is inconsistent with the SWRCB's

determination in previous decisions and orders that the SFAR is fully appropriated during those months, and conflicts with the goal of maintaining historic lake levels.

The SWRCB's determination that the SFAR is fully appropriated during August, September, and October means that natural flow is unavailable for direct diversion or diversion to storage. It does not mean that water previously diverted and stored cannot be rediverted and used. Any impact to the lakes that might otherwise occur as a result of the rediversion of water released from storage will be prevented by the lake level requirements. We recognize that, whereas PG&E may have abandoned any water released from storage in the lakes after running the water through Project 184, El Dorado will be permitted to redivert that water at Folsom Reservoir. Other water users cannot compel El Dorado to continue to abandon previously stored water, however, or claim legal injury if the water is no longer made available to them. (Order WR 98-01, pp. 5-6.)

The League's third argument is that the SWRCB failed to take into account the minimum flows that EID must meet below Kyburz under the FERC license for Project 184. The analysis set forth in section five, *supra*, takes those flow requirements into account, and indicates that water is available for appropriation from the SFAR from November 1 through July 31.

The League's final argument on the issue of water availability is that El Dorado should be required to contribute toward the maintenance of water quality objectives in the Bay-Delta through imposition of Term 91. For the reasons explained in section four, *supra*, we have concluded that Term 91 should be included in El Dorado's permit.

9.5 Downstream Storage Did not Merit SWRCB Consideration

The League contends that the SWRCB abdicated its responsibilities under the public trust doctrine because it failed to consider the environmentally superior alternative of requiring El Dorado to store water in Folsom Reservoir, Sly Park Reservoir, or in a new reservoir that would have to be constructed, instead of in the lakes. As El Dorado noted in its response, the League does not cite to any evidence in the record in support of the

assumption that downstream storage is available, or that it would be environmentally superior. In fact, the 1999 EIR concluded that storage in Folsom Reservoir was not a feasible alternative because Folsom Reservoir lacks adequate storage capacity. (DEIR, vol. II, p. 10-9.) The EIR also noted that no facilities exist that connect the SFAR system to Sly Park Reservoir, which is located in the Cosumnes River watershed, and the delivery of water from the SFAR to Sly Park Reservoir would require substantial new construction. (*Id.* at p. 10-6.) We conclude that downstream storage was not a viable alternative that required our consideration.

9.6 Instream Flow Incremental Methodology Studies Were Not Warranted

The League asserts that the SWRCB should not have rejected the United States Fish and Wildlife Service's and the Department of Fish and Game's (DFG) recommendations that El Dorado be required to conduct instream flow incremental methodology (IFIM) studies in order to determine what flows are necessary to protect fish and other aquatic resources in the SFAR and its tributaries.

In Decision 1635, the SWRCB dismissed DFG's protests on the basis that Project 184 would continue to be operated as it had been historically. The League argues that this conclusion is inconsistent with the SWRCB's conclusion that the term historical operations was confusing and parameterless, and the SWRCB's imposition of lake level requirements. The League overlooks the fact that the SWRCB's lake level requirements were designed to ensure that the lakes would in fact be operated as they had been historically.

Furthermore, requiring El Dorado to conduct IFIM studies is not warranted as part of this proceeding because the issue of what instream flows are necessary to protect fish and other aquatic resources in the SFAR is being addressed in the ongoing FERC relicensing proceeding for Project 184. Developing appropriate instream flows will entail a complex balancing of the need for flows in the SFAR against the amount of water needed to remain in the upper lakes in order to protect the lakes' biological and recreational resources. Requiring El Dorado to conduct IFIM studies in this proceeding would be

duplicative and an inefficient use of the resources of the SWRCB and other interested parties.

9.7 The SWRCB Did Not Approve a Different Project from the Project Analyzed in El Dorado's EIR

The League contends that the project approved by the SWRCB in Decision 1635 was different from the project analyzed in El Dorado's EIR because the SWRCB imposed lake level requirements. The League contends that the lake level requirements constitute substantial changes in the project, substantial changes in circumstances, and new information, that require a subsequent or supplemental EIR pursuant to Public Resources Code section 21166.

The League's contention is incorrect for several reasons. First, the lake level requirements did not constitute a change in the project. For purposes of CEQA the term "project" is defined as "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

> ". . .
>
> © An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies."

(Pub. Resources Code, § 21065.) In this case, the project before the SWRCB is El Dorado's application for new appropriative water rights. The lake level requirements are conditions of approval designed to ensure that approval of the application will not adversely impact recreational uses at the lakes. The lake level requirements are not themselves part of the project.

Second, conditions of approval setting requirements to avoid or mitigate adverse environmental impacts do not ordinarily require subsequent or supplemental environmental documentation. Even substantial changes in the project or in the circumstances under which the project is undertaken do not require a subsequent or supplemental EIR unless the changes or the changes in circumstances "involve[ ] new

significant environmental effects or a substantial increase in the severity of previously identified significant effects . . . ." (Cal. Code Regs., tit. 14, § 15162, subds. (a)(1) & (a)(2); see *id.* § 15163, subd. (a)(1); see also *id.* § 15382 ['Significant effect on the environment' means a substantial, or potentially substantial adverse change . . ."].) The lake levels requirements are set to avoid adverse change, and they do not involve significant new adverse impacts.

Finally, the League's contention in this regard is moot because, after the League submitted its petition, another EIR was prepared and circulated which included lake level requirements. EID incorporated its Lake Level Operational Commitment into the description of the project contained in the 1999 EIR. In this order, we have reviewed the 1999 EIR and are updating the lake level requirements imposed in Decision 1635 consistent with the Lake Level Operational Commitment.

9.8 The SWRCB Did Not Have a Duty to Consult Under the California Endangered Species Act

The League argues that the SWRCB had a duty to consult under the California Endangered Species Act (CESA) in order to prevent the "extirpation" of rare, threatened, and endangered plant species. As discussed in section 8.2, *supra*, Decision 1635 discussed the potential for El Dorado's acquisition of new water rights to have secondary growth-inducing impacts to plant species within the proposed place of use that had been listed as threatened or endangered under CESA. (D 1635, pp. 116-123.) The SWRCB concluded that it would be inappropriate for the SWRCB to impose mitigation measures in order address these impacts because El Dorado County is the primary agency responsible for land use planning and discretionary approval of development projects, and the County had included policies in its General Plan to protect the plant species in question. (*Id.* at pp. 122-123.)

The League asserts that CESA imposes an independent duty on the SWRCB, not the County, to engage in consultation and mitigate the potential indirect impacts to the plant species. This assertion is incorrect for two reasons. First, although CESA formerly

required consultation with the Department of Fish and Game regarding potential impacts to threatened or endangered species, this requirement applied only to the lead agency under CEQA. (Former Fish & G. Code, §§ 2090, 2065, repealed by Stats. 1993, ch. 337, § 1.) Second, and more importantly, the CESA consultation requirement is no longer in effect. The requirement sunset on January 1, 1999, in accordance with the provisions of former Fish and Game Code section 2097.

The League also questions the SWRCB's conclusion that the policies in the County's General Plan will ensure that the plant species are protected. The League claims that evidence submitted by El Dorado County Taxpayers for Quality Growth (EDCTQG) demonstrates that the County is approving development that will destroy habitat needed by the species for survival. Contrary to the League's claim, the EDCTQG did not submit evidence that supports the allegation that the County is approving or will approve development that will destroy critical habitat. Most of the evidence introduced by the EDCTQG was not accepted into evidence. The SWRCB took official notice of five of the EDCTQG's exhibits, but did not accept the exhibits into evidence for purposes of making findings. (R.T., vol. IV, pp. 183, 185-187, 204-205.) And even if the exhibits in question had been accepted into evidence, they do not support the League's allegation that the County is approving or will approve development that will destroy critical habitat. The League has not pointed to any evidence that contradicts the SWRCB's conclusion that the policies contained in the County's General Plan will ensure that the plant species will be protected.

9.9 Article XA, Section 3 of the California Constitution Has No Effect on El Dorado's Petition for Partial Assignment of Application 5645

The League argues that El Dorado's diversions from the SFAR will violate article XA, section 3 of the California Constitution because it will harm resources protected under the California Wild and Scenic Rivers Act (Pub. Resources Code §§ 5093.50-5093.70), by reducing flows downstream of Folsom Reservoir.

Section 8 of article XA of the California Constitution specifies that article XA is of no force or effect unless Senate Bill 200 of the 1979-80 Regular Session (S.B. 200) is enacted and takes effect. S.B. 200, which would have authorized a Peripheral Canal, passed by the Legislature and was signed by Governor Brown (Stats. 1980, ch. 632. p. 1723), but before it could take effect opponents gathered enough signatures to require that the bill be submitted to the voters. At the primary election held June 8, 1982, the voters rejected S.B. 200. (See Historical and Statutory Notes, 68A West's Ann. Wat. Code (1992 ed.) foll. §§ 11108 to 11110, p. 352; see generally Cal. Const. art. II, §§ 9 & 10 [(setting forth the power and effect of a referendum].) Because S.B. 200 never took effect, article XA of the California Constitution never took effect.

Even if article XA had taken effect, it would not be violated by El Dorado's diversions. Section 3 of article XA would have provided, in pertinent part: "[n]o water shall be available for appropriation by storage in, or by direct diversion from, *any of the components* of the California Wild and Scenic Rivers System . . . ." (Emphasis added.) The Lower American River below Nimbus Dam and segments of the North Fork American River are components of the California Wild and Scenic Rivers System, but the SFAR is not. (Pub. Resources Code, § 5093.54.) El Dorado's project does not involve diversion from a component of the California Wild and Scenic Rivers System, within the meaning of section 3.

Similarly, El Dorado's project will not violate the California Wild and Scenic Rivers Act itself. The Act prohibits the construction of diversion facilities on rivers or segments of rivers designated as components of the California Wild and Scenic River System, unless the Secretary of the Resources Agency makes specified findings. (Pub. Resources Code, § 5093.55.) Since the SFAR is not a designated component of the System, this provision does not apply to El Dorado's project.

9.10 Decision 1635 Reserves Sufficient Water for Future Local Uses

The League complains that Decision 1635 reserved just 200 acre-feet of water from Silver Lake and Caples Lake to meet future consumptive water demands within Amador

and Alpine Counties. The League asserts that this reservation is inadequate to meet the counties' future needs, and the SWRCB should have reserved a total of 600 acre-feet.

The League misconstrues Decision 1635. Decision 1635 recognized that, under county of origin statutes, El Dorado's right to use water originating in Amador or Alpine County pursuant to the partial assignment of state filed Application 5645 would be junior in priority to any rights to the water developed within those counties. (D 1635, pp. 30-31, 87, 126.) The SWRCB developed a permit term consistent with the county of origin statutes, which provides that all the water appropriated under El Dorado's permit is subject to the rights of Amador and Alpine County to obtain appropriative rights to use water originating in the counties to the extent necessary for development within the counties. (*Id*. at p. 133.) The protection afforded under the county of origin statutes is not limited to a particular quantity of water that may be developed in the county of origin, and the SWRCB's permit term was not so limited.

The county of origin statutes do not confer upon Amador or Alpine County the right to use the storage capacity in Silver Lake and Caples Lake. During this proceeding, however, El Dorado stated that it would not object to reserving some storage capacity in the lakes in order to accommodate existing and future consumptive uses in the vicinity of the lakes. (D 1635, pp. 89-90.) Accordingly, the SWRCB required El Dorado as a condition of its permit to make available up to 200 acre-feet of storage capacity in each of the lakes for existing and future uses in the immediate vicinity of the lakes. (*Id.* at p. 133.) The limitation on the amount of storage capacity that El Dorado must provide to water users within the counties of origin does not necessarily limit the amount of water development that may take place in the counties pursuant to county of origin protection statutes.

The League also states that the SWRCB should have granted the applications of Amador County and Alpine County to appropriate for purposes of recreational uses the water currently stored in Silver Lake and Caples Lake. In Decision 1635, the SWRCB denied these applications because the counties had no physical control over the operation of the

lakes, which at the time were operated by PG&E. (D 1635, pp. 86-87.) (When Decision 1635 was adopted, El Dorado had no more control over the lakes than Amador or Alpine County, but El Dorado had entered into an agreement with PG&E to purchase Project 184, giving rise to the expectation that El Dorado would acquire the requisite measure of control. (*Id*. at p. 127.))

In its petition for reconsideration, the League argues only that the counties should be given the same opportunity as El Dorado to acquire physical control over operation of the lakes. The League does not refute the SWRCB's finding that the counties lack control over the lakes, or give any indication that the counties have a reasonable expectation of obtaining such control. In fact, now that EID has acquired Project 184, the counties' ability to obtain control over operation of the lakes may have diminished.

9.11 Decision 1635 Explained the Basis for Concluding that Approving El Dorado's Petition for Partial Assignment of Application 5645 Was Consistent with the State Water Plan and the Regional Water Quality Control Plan

The League contends that Decision 1635 failed to explain the basis for concluding that approving El Dorado's petition for partial assignment of Application 5645 was consistent with the State Water Plan and the Regional Water Quality Control Plan. Contrary to the League's contention, the SWRCB explained the basis for these conclusions in sections 14.0 through 14.4 of the decision. (D 1635, pp. 123-125.)

9.12 El Dorado Provided Sufficient Information in Support of Its Petition for Partial Assignment of Application 5645

The League's final argument is that El Dorado failed to provide sufficient information concerning the amount of water to be diverted at each point of diversion, the maximum rate of diversion, the duration of the diversions, or the measures necessary to mitigate impacts. This argument is based on a 1993 letter from Hearing Officer James Stubchaer to counsel for El Dorado concerning El Dorado's original applications and petition for partial assignment of Application 5645. The concerns raised in Mr. Stubchaer's letter

have since been resolved by additional information submitted by El Dorado during this proceeding.

10.0 CONCLUSION

In conclusion, we agree with the USBR, the SWC, Westlands, and the League that El Dorado should be required to curtail diversions when natural and abandoned flows in the Delta watershed are insufficient to meet water quality objectives in the San Francisco Bay and Sacramento-San Joaquin Delta Estuary and other inbasin entitlements. Accordingly, Decision 1635 should be modified to require El Dorado to comply with Standard Permit Term 91.

In addition, the lake level requirements imposed by Decision 1635 should be revised to incorporate EID's Lake Level Operational Commitment, subject to certain modifications as described in section 7, *supra*. The remaining issues that were raised in the petitions for reconsideration filed by the USBR, PG&E, and the League lack merit and as to those issues the petitions should be denied. Except for the modifications described above, we find that Decision 1635 was appropriate and proper and should be affirmed.

To avoid confusion, rather than specifying changes to the conditions of approval of El Dorado's petition for partial assignment of Application 5645 that were set forth in Decision 1635, we will replace the relevant section of Decision 1635 with a new section that includes all of the conditions of approval, as revised. In addition to changes consistent with the preceding sections of this order, the conditions of approval are updated to include new standard permit terms, to reflect the fact that EID has acquired Project 184 from PG&E, and to extend certain deadlines in light of the fact that almost five years have passed since the SWRCB adopted Decision 1635.

11.0 ORDER

IT IS HEREBY ORDERED that, except as otherwise provided below, Decision 1635 is affirmed and the petitions for reconsideration of the USBR, PG&E and the League are denied.

IT IS FURTHER ORDERED THAT the section of Decision 1635 approving El Dorado's petition for partial assignment of state filed Application 5645(8) and specifying the terms and conditions of approval, beginning on page 133 and ending on page 142, is deleted and replaced with the following:

IT IS ORDERED that 180 days from the effective date of this order, EID shall submit a written report to the SWRCB setting forth the legal basis under which 15,080 afa of water is diverted into the El Dorado Canal and supplied to EID for consumptive use from the South Fork American River, Lake Aloha, Caples Lake or Silver Lake. The report shall be accompanied by proofs necessary to support any and all claims of right including the nature of each right, when each right was initiated and perfected and for what amounts and purposes, the chain of title for each right, and proof that the amount claimed under each right has been maintained by continuous diversion and use.

IT IS FURTHER ORDERED THAT El Dorado's petition for partial assignment of state filed Application 5645(8) is approved and a permit shall be issued to El Dorado, subject to the following standard permit terms and special conditions. Any portion of El Dorado's petition for partial assignment of Application 5645(8) not expressly approved by this order is denied.

1. All water appropriated under this permit is subject to the county of origin preferences as required by Water Code sections 10505 and 10505.5. Any water appropriated under this permit is subject to the right of Amador and Alpine Counties to obtain appropriative rights to water necessary for their development from the water originating in their respective counties. This reservation does not and cannot grant water right applicants in the counties of origin the right to divert and use water directly diverted or diverted to storage at Echo Lake, Lake Aloha, Caples Lake or Silver Lake under any rights that El Dorado Irrigation District (EID) may have acquired from Pacific Gas and Electric Company.

Permittee shall make up to 200 afa of storage available in Silver and Caples Lakes for existing and future uses in the immediate vicinity of the lakes in the counties of origin, without cost to applicants in the counties of origin.

2. The purposes and places of use for the water appropriated under this permit shall be limited to domestic, municipal, and irrigation within the authorized place of use.

3. The place of use is located within the Townships 8 through 11 North, inclusive, and Ranges 8 through 13 East, inclusive, as defined in Application 5645; and within the service area of EID (excluding service zones 9, 14, and 15) and lands being within Township 12 North and Ranges 9 and 10 East, as delineated on the maps entitled "El Dorado County Water Agency and El Dorado Irrigation District Place of Consumptive Use," and "Lands within El Dorado Irrigation District" on file with the State Water Resources Control Board (SWRCB).

4. No water shall be diverted under this permit until permittee has installed devices, satisfactory to the SWRCB, that are capable of measuring instantaneous flow diverted daily from Folsom Reservoir, to be reported annually in operation reports to the SWRCB. The report shall include daily and monthly quantities reported in acre-feet diverted from Folsom Reservoir, and the quantity in acre-feet released from and remaining in each of Caples Lake, Silver Lake and Lake Aloha at the end of each month. The report shall also, on a monthly basis, account for any water diverted from Folsom Reservoir under any other rights, including contracts with the U.S. Bureau of Reclamation (USBR) or others. Streamflows above and below the El Dorado Canal diversion at Kyburz and quantities diverted into the El Dorado distribution headworks shall also be included in these annual reports. The following gages are approved to be used for measuring water released from Caples Lake, Silver Lake, and Lake Aloha, and for computing water available for direct diversion from Folsom Reservoir:

GAGE NAME	USGS IDENTIFICATION NUMBER	TYPE OF RECORD
CAPLES LAKE	USGS 11436900 EID A5 (aka PG&E A5)	RESERVOIR STAGE RECORDER ON CAPLES LAKE
CAPLES LAKE OUTLET NEAR KIRKWOOD	USGS 11437000 EID A6 (aka PG&E A6)	RATED STREAMFLOW RECORDER BELOW CAPLES LAKE OUTLET
SILVER LAKE	USGS 11435900 EID A8 (aka PG7E A8)	RESERVOIR STAGE RECORDER ON SILVER LAKE
SILVER LAKE OUTLET NEAR KIRKWOOD	USGS 11436000 EID A9 (aka PG&E A9)	RATED STREAMFLOW RECORDER BELOW SILVER LAKE OUTLET
SILVER LAKE LEAKAGE	USGS 11436500	
LAKE ALOHA	EID A1 (aka PG&E A1)	RESERVOIR STAFF GAGE ON LAKE ALOHA
PYRAMID CREEK AT TWIN BRIDGES	USGS 11435100 EID A40 (aka PG&E A40)	RATED STREAMFLOW GAGE RECORDER REPRESENTING OUTFLOW FROM LAKE ALOHA
SOUTH FORK AMERICAN RIVER NEAR KYBURZ (RIVER ONLY)	USGS 11439500 EID A12 (aka PG&E A12)	RATED STREAMFLOW GAGE BELOW EL DORADO DIVERSION DAM
SOUTH FORK AMERICAN RIVER NEAR KYBURZ (TOTAL FLOW)	USGS 11439501 EID A11 (aka PG&E A11)	RATED STREAMFLOW GAGE IN SOUTH FORK AMERICAN RIVER NEAR KYBURZ AND THE EL DORADO CANAL
EL DORADO IRRIGATION DISTRICT DELIVERY	EID A18 (aka PG&E A18)	RATED STREAM GAGE IN EID CANAL MEASURING PG&E DELIVERIES TO EID
FOLSOM LAKE	EID'S EL DORADO HILLS WATER TREATMENT PLANT	PUMPED WATER CALCULATED FROM FLOW METER MEASURMENT

5. The total quantity of water to be diverted to storage at Caples Lake, Silver Lake, and Lake Aloha shall not exceed 32,931 acre-feet per annum.

6. The water appropriated at Lake Aloha shall be limited to the quantity that can be beneficially used and shall not exceed 5,350 acre-feet per annum to be collected from November 1 through July 31.

7. The water appropriated at Caples Lake shall be limited to the quantity that can be beneficially used and shall not exceed 21,581 acre-feet per annum to be collected from November 1 through July 31.

8. The water appropriated at Silver Lake shall be limited to the quantity that can be beneficially used and shall not exceed 6,000 acre-feet per annum to be collected from November 1 through July 31.

9. The total quantity of water to be diverted at Folsom Reservoir in any one year by direct diversion and rediversion of stored water shall be limited to 17,000 acre-feet. This maximum diversion amount represents the total quantity of water stored in Lake Aloha, Caples Lake, or Silver Lake that may be rediverted at Folsom Reservoir under this permit.

10. The total quantity of water to be diverted by direct diversion at Folsom Reservoir in any one year shall be limited to the quantity that can be beneficially used and shall not exceed 15,000 acre-feet per year to be collected from November 1 through July 31. The water that may be directly diverted under this permit shall be limited to water originating in the South Fork American River upstream of the El Dorado Canal diversion near Kyburz. The maximum rate of direct diversion shall not exceed 156 cubic feet per second.

11. The amount authorized for appropriation may be reduced in the license if investigation warrants.

12. To protect Lake Aloha's summer recreational uses, permittee shall not redivert water released from the lake for consumptive use, excluding nondiscretionary releases required by the Federal Energy Regulatory Commission (FERC) license for Project 184 or the State Division of Safety of Dams, unless the following requirements are met. End-of-the-month lake levels must remain above historic minimum levels, and average end-of-the-month lake levels, as reviewed at five-year intervals, must remain at or above historic average levels, as shown in the following schedule:

LAKE ALOHA
End-of-Month Lake Level Operational Requirements

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
June	Average: 18.3 Minimum: 16.2	Average: 19.6 Minimum: 18.1	Average: 19.5 Minimum: 18.2	Average: 19.5 Minimum: 17.2	Average: 18.1 Minimum: 14.3
July	Average: 11.0 Minimum: 5.0	Average: 15.2 Minimum: 10.1	Average: 17.1 Minimum: 15.3	Average: 18.8 Minimum: 16.6	Average: 19.2 Minimum: 14.6
August	Average: 6.6 Minimum: 5.0	Average: 7.6 Minimum: 5.0	Average: 9.9 Minimum: 5.2	Average: 12.2 Minimum: 7.3	Average: 14.2 Minimum: 8.4
September	Average: 6.0 Minimum: 5.0	Average: 5.7 Minimum: 5.0	Average: 6.8 Minimum: 5.0	Average: 7.6 Minimum: 5.0	Average: 8.1 Minimum: 5.0

13. To protect Caples Lake's summer recreational uses, permittee shall not redivert water released from the lake for consumptive use, excluding nondiscretionary releases required by the FERC license for Project 184 or the State Division of Safety of Dams, unless the following requirements are met. End-of-the-month lake levels must remain above historic minimum levels, and average end-of-the-month lake levels, as reviewed at five-year intervals, must remain at or above historic average levels, as shown in the following schedule:

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Caples Lake
End-of-the-Month Lake Level Operational Requirements

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
June	Average: 54.1 Minimum: 45.6	Average: 58.9 Minimum: 53.3	Average: 61.5 Minimum: 58.5	Average: 61.8 Minimum: 61.5	Average: 61.4 Minimum: 56.1
July	Average: 52.9 Minimum: 44.5	Average: 57.8 Minimum: 52.1	Average: 60.9 Minimum: 58.9	Average: 61.6 Minimum: 60.4	Average: 61.9 Minimum: 61.3
August	Average: 46.0 Minimum: 33.0	Average: 50.8 Minimum: 44.9	Average: 54.2 Minimum: 49.3	Average: 57.5 Minimum: 51.1	Average: 59.5 Minimum: 56.2
September	Average: 43.0 Minimum: 30.5	Average: 45.4 Minimum: 39.0	Average: 48.2 Minimum: 42.9	Average: 54.0 Minimum: 44.7	Average: 56.8 Minimum: 51.5
October	Average: 41.3 Minimum: 30.1	Average: 41.5 Minimum: 38.0	Average: 41.9 Minimum: 35.6	Average: 50.5 Minimum: 41.0	Average: 52.9 Minimum: 44.3

14. To protect Silver Lake's summer recreational uses, permittee shall not release water from the lake for consumptive use, power production, or other purposes prior to Labor Day each year, excluding nondiscretionary releases required by the FERC license for Project 184 or the State Division of Safety of Dams. In addition, permittee shall not redivert water released from the lake for consumptive use, excluding nondiscretionary releases required by the FERC license for Project 184 or the State Division of Safety of Dams, unless the following requirements are met. End-of-the-month lake levels must remain above historic minimum levels, and average end-of-the-month lake levels, as reviewed at five-year intervals, must remain at or above historic average levels, as shown in the following schedule:

Silver Lake
End-of-the-Month Lake Level Operational Requirements

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
September	Average: 11.3 Minimum: 6.3	Average: 9.6 Minimum: 4.6	Average: 10.4 Minimum: 6.9	Average: 11.3 Minimum: 6.0	Average: 12.0 Minimum: 7.8
October	Average: 7.4 Minimum: 3.0	Average: 5.8 Minimum: 1.3	Average: 5.1 Minimum: 2.3	Average: 5.6 Minimum: 0.8	Average: 6.8 Minimum: 0.7

15. Conditions 12, 13, and 14 seek to assure that the use of water from Lake Aloha, Caples Lake, and Silver Lake for consumptive use purposes will not have the effect of increasing the releases from the lakes, consistent with the nondiscretionary obligations imposed upon the operations of these lakes by the FERC license for Project 184. Under Water Code section 1394, the SWRCB reserves jurisdiction over this permit, for a period of ten years from the date of this order, to revise these conditions or to promulgate other conditions which may more effectively assure the maintenance of the levels of these lakes as high as possible consistent with historical lake operation. In addition, the SWRCB reserves jurisdiction, for a period of fifteen years from the date of this order or ten years after FERC issues a new license for Project 184, whichever occurs later, to revise these conditions in light of new information concerning the recreational impacts associated with various lake levels.

Either permittee or other interested persons having an interest in how the lakes are operated may petition the SWRCB to revise the schedules or propose other conditions for the maintenance of lake levels. The proponent of such changes shall have the burden of producing evidence to support the requested changes. No changes will be made to these terms without notice to permittee and other interested persons and the opportunity for a hearing.

16. The permittee shall maintain the release, bypass, and lake capacity requirements imposed by the FERC license for Project 184. The SWRCB reserves continuing authority to revise the conditions of this order as the SWRCB may determine to be necessary or appropriate in light of any changes to the release, bypass, lake capacity or related requirements imposed by the FERC license. In addition, the SWRCB reserves continuing authority to adopt conditions to protect inlake and instream beneficial uses of water if permittee ceases the operation of the licensed hydroelectric project. Permittee is required to put the SWRCB on notice at such time as EID commences any proceeding to cease hydropower operations. If EID ceases hydropower operation, permittee shall continue to operate the components of the hydroelectric project as if the FERC license requirements for protecting inlake and instream beneficial uses were still in effect. Permittee shall continue such operations until such time as the SWRCB exercises its reserved jurisdiction and adopts conditions to protect inlake and instream beneficial uses of water. In exercising its reserved jurisdiction, no condition will be adopted without notice to permittee and other interested persons and the opportunity for a hearing.

17. Once every five years, beginning five years from the date of this permit, permittee shall prepare and submit to the SWRCB a compliance report that demonstrates compliance with conditions 12, 13 and 14. In the years when the report is required, it shall be submitted with the annual Progress Report by Permittee.

    Permittee also shall include with the annual Progress Report by Permittee an annual report on lake level impacts to recreational uses at Lake Aloha, Caples Lake, and Silver Lake. The report shall include a qualitative analysis of the recreational impacts associated with the end-of-the-month lake levels for the preceding year. The report shall address, at a minimum, whether the end-of-the-month lake levels affected the following: the usability of boat ramps and docks; swimming access, beaches and angler locations; campgrounds, picnic areas, recreational residences, organized camps, resorts, and marinas; and aesthetic values.

Permittee also shall make an annual Operating Plan available on EID's website and at EID's offices, consistent with EID's Lake Level Operational Commitment, as specified in the 1999 Final EIR for the Acquisition, Permanent Repair, and Operation of the El Dorado Hydroelectric Project and Acquisition of 17,000 Acre-Feet Per Year of New Consumptive Water (1999 EIR).

18. Construction work shall begin within five years of the date of this permit and thereafter be prosecuted with reasonable diligence.

19. Construction work shall be completed by December 31, 2011.

20. Complete application of the water to the authorized use shall be made by December 31, 2020.

21. The SWRCB shall have continuing authority to revoke all or any portion of this permit and the partial assignment of Application 5645(8) if permittee fails to diligently construct and place water to beneficial use in accordance with conditions 18, 19 and 20. All or any portion of the revoked assignment shall return to the SWRCB and be available for the release or assignment to permittee or others consistent with the requirements of Water Code sections 10500, et seq.

22. Progress reports shall be submitted promptly by permittee when requested by the SWRCB until a license is issued.

23. Permittee shall allow representatives of the SWRCB and other parties, as may be authorized from time to time by the SWRCB, reasonable access to project works to determine compliance with the terms of this permit.

24. Pursuant to California Water Code sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water

diverted, are subject to the continuing authority of the SWRCB in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

The continuing authority of the SWRCB may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the SWRCB also may be exercised by imposing further limitations on the diversion and use of water by the permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the SWRCB determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, section 2; is consistent with the public interest; and is necessary to preserve or restore the uses protected by the public trust.

25. The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the SWRCB if, after notice to the permittee and an opportunity for hearing, the SWRCB finds that such modification is

necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the SWRCB finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

26. This permit does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.

27. Permittee shall maintain records of the amount of water diverted and used to enable the SWRCB to determine the amount of water that has been applied to beneficial use pursuant to Water Code Section 1605.

28. No water shall be used under this permit until EID has filed a report of waste discharge with the CVRWQCB pursuant to Water Code section 13260, and the CVRWQCB or SWRCB has prescribed waste discharge requirements or has indicated that waste discharge requirements are not required. Water may be diverted only during such times as all requirements prescribed by the CVRWQCB or SWRCB are being met. No point source discharges of waste to surface water shall be made unless waste discharge requirements are issued by the CVRWQCB or SWRCB.

    No water shall be used under this permit until EID has prepared and the CVRWQCB has approved a mitigation plan that will ensure that increased wastewater discharges from the Deer Creek and El Dorado Hills wastewater treatment plants due to the use

of water under this permit will not unreasonably affect wildlife habitat or aquatic habitat. The plan shall specify potential impacts to wildlife and aquatic habitat and shall identify potential mitigation measures, including but not limited to measures that will ensure that EID will not adversely affect the beneficial uses of receiving waters designated in the Water Quality Control Plan for the Central Valley Region, Sacramento River and San Joaquin River Basins (1995). The plan also shall identify any potential mitigation measures that will offset any impacts that cannot be mitigated or avoided directly, and evaluate the feasibility of all potential mitigation measures identified. As a condition of this permit, EID shall implement the mitigation measures identified in the plan that the CVRWQCB determines are feasible.

29. No water shall be diverted under this permit until El Dorado County has adopted a General Plan that contains policies that are equally or more protective of threatened and endangered plant species than Objective 7.4.1 and the subsequent policies that were contained in the 1996 General Plan, except to the extent that water is delivered to a development project that is approved consistent with the 1996 General Plan.

30. EID shall cooperate with El Dorado County in establishing preserve sites for eight sensitive plant species known as the Pine Hill endemics and their habitats (specifically identified gabbro and serpentine soils).

31. EID shall comply with the El Dorado Irrigation District Urban Water Management Plan (February 26, 1996) and with the Water Conservation Plan for El Dorado Irrigation District (May 4, 1994) Prepared Pursuant to USBR Criteria in Response to the CVPIA, and with subsequent revisions to those plans. EID shall submit a copy of the Urban Water Management Plan and copies of any revisions to either of the plans to the Chief of the Division of Water Rights. Permittee shall include any information necessary to demonstrate compliance with the plans in permittee's annual Progress Report by Permittee.

32. Prior to the finalization of the route for the pipeline/water delivery system identified in the 1999 EIR, EID shall conduct, in consultation with the Department of Fish and Game (DFG) and the United States Fish and Wildlife Service (USFWS), reconnaissance surveys for state and federally listed threatened and endangered species. The surveys shall, in part, guide the determination of alternatives for the final routes for the pipeline/water delivery system. The survey protocols shall be reviewed and approved by DFG. A final report shall be prepared from the results of the plant/animal surveys. The final report shall include an analysis of the alternative routes considered, and shall identify necessary mitigation and monitoring measures to conserve and protect the species identified to occur within the final routes of the pipeline/water delivery system. The final report shall be submitted to the SWRCB, DFG, and USFWS for review.

33. EID shall implement the following mitigation measures identified in the 1999 EIR. Permittee shall implement those measures summarized in Table 2-1 of the Final EIR that are identified by the following corresponding chapter numbers: 8.2-5, 8.3-1, 8.3-6 & 8.3-7.

34. In accordance with section 1601, 1603, and/or section 6100 of the Fish and Game Code, no work shall be started on the diversion works and no water shall be diverted under this permit until permittee has entered into a stream or lake alteration agreement with DFG and/or DFG has determined that measures to protect fishlife have been incorporated into the plans for construction of such diversion works. Construction, operation, and maintenance costs of any required facility are the responsibility of the permittee.

35. In accordance with Section 6100 of the Fish and Game Code, no work shall be started on the diversion works and no water shall be diverted under this permit until permittee has implemented measures to protect fishlife. Such measures shall include fish screens, or other suitable methods for the prevention of entrainment or impingement of fish, which meet USFWS and DFG criteria. Permittee shall provide

certification that its proposed screening methods meet these criteria. Certification shall be made by USFWS or DFG personnel, a Licensed Civil Engineer, or other suitable professional. Construction, operation, and maintenance of any required facility are the responsibility of the permittee. If the fish entrainment prevention device(s) is(are) rendered inoperative for any reason, all diversions shall cease until such time as the device(s) is(are) restored to service.

36. EID shall implement the mitigation measure summarized in Table 2-1 of the Final EIR that is identified by corresponding chapter number 8.3-13. In addition, EID shall implement any mitigation measures identified as part of the project level environmental review of the pipeline/water delivery system designed to mitigate construction impacts to hydrology or water quality. EID shall submit to the Chief of the Division of Water Rights the environmental documentation for the project level review of the pipeline/water delivery system and documentation of EID's approval of the project, including any mitigation measures adopted by EID. EID shall submit this information with a cover letter indicating that the information is being submitted in conformance with condition 36 of this permit.

37. In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction, EID shall file a report pursuant to Water Code section 13260 and shall comply with all waste discharge requirements imposed by the Central Valley Regional Water Quality Control Board (CVRWQCB), or by the SWRCB.

38. No debris, soil, silt, cement that has not set, oil, or other such foreign substance will be allowed to enter into or be placed where it may be washed by rainfall run-off into the waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area.

39. No construction shall be commenced and no water shall be used under this permit until all necessary federal, state and local approvals have been obtained, including

any necessary approvals from the CVRWQCB. EID shall abide by any approvals designed to minimize construction impacts to water quality or hydrology.

40. Permittee shall enter into a contract with the USBR for the use of Folsom Reservoir. No water shall be diverted under this permit until the contract is executed and a copy delivered to the Chief of the Division of Water Rights.

41. The SWRCB reserves jurisdiction over this permit to change the season of diversion to conform to later findings of the SWRCB concerning availability of water and the protection of beneficial uses of water in the Sacramento-San Joaquin Delta and San Francisco Bay. Any action to change the authorized season of diversion will be taken only after notice to interested parties and opportunity for hearing.

42. No diversion is authorized by this permit when satisfaction of inbasin entitlements requires release of supplemental Project water by the Central Valley Project or the State Water Project.

    a. Inbasin entitlements are defined as all rights to divert water from streams tributary to the Sacramento-San Joaquin Delta or the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the SWRCB for maintenance of water quality and fish and wildlife. Export diversions and Project carriage water are specifically excluded from the definition of inbasin entitlements.

    b. Supplemental Project water is defined as that water imported to the basin by the projects plus water released from Project storage which is in excess of export diversions, Project carriage water, and Project inbasin deliveries.

       The SWRCB shall notify permittee of curtailment of diversion under this term after it finds that supplemental Project water has been released or will be released.

The SWRCB will advise permittee of the probability of imminent curtailment of diversion as far in advance as practicable based on anticipated requirements for supplemental Project water provided by the Project operators.

This term may be modified in accordance with any SWRCB order or decision issued in the future, including but not limited to an order or decision that establishes responsibilities to meet water quality objectives in the Bay-Delta Estuary.

43. Before making any change in the project determined by the SWRCB to be substantial, permittee shall submit such change to the SWRCB for its approval in compliance with Water Code section 10504.5(a).

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on August 16, 2001.

AYE:

NO:

ABSENT:

ABSTAIN:

Maureen Marché
Clerk to the Board

APPENDICES

APPENDIX 1

EID Proposed "Lake Level Operating Commitment"

Silver Lake
End-of-Month Lake Level Operational Range Commitment

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
June	Minimum: 18.7 Median: 21.2 Maximum: 22.0	Minimum: 21.0 Median: 22.0 Maximum: 22.7	Minimum: 22.3 Median: 22.6 Maximum: 22.7	Minimum: 21.9 Median: 22.7 Maximum: 22.7	Minimum: 20.3 Median: 22.6 Maximum: 22.7
July	Minimum: 16.3 Median: 18.5 Maximum: 20.7	Minimum: 18.3 Median: 19.5 Maximum: 20.8	Minimum: 19.6 Median: 20.0 Maximum: 21.5	Minimum: 20.2 Median: 21.4 Maximum: 22.5	Minimum: 20.7 Median: 22.2 Maximum: 22.7
August	Minimum: 11.3 Median: 15.7 Maximum: 17.0	Minimum: 12.6 Median: 16.8 Maximum: 18.3	Minimum: 15.6 Median: 17.2 Maximum: 19.0	Minimum: 17.4 Median: 18.7 Maximum: 21.5	Minimum: 18.0 Median: 19.2 Maximum: 22.5
September	Minimum: 6.3 Median: 12.0 Maximum: 14.5	Minimum: 6.6 Median: 9.6 Maximum: 14.9	Minimum: 6.9 Median: 9.6 Maximum: 15.5	Minimum: 7.4 Median: 11.1 Maximum: 15.5	Minimum: 7.8 Median: 11.1 Maximum: 19.5
October	Minimum: 3.0 Median: 7.1 Maximum: 13.3	Minimum: 3.0 Median: 3.9 Maximum: 12.1	Minimum: 3.0 Median: 3.7 Maximum: 10.2	Minimum: 3.0 Median: 6.1 Maximum: 10.0	Minimum: 3.0 Median: 5.9 Maximum: 22.7
November	Minimum: 1.0 Median: 3.0 Maximum: 12.6	Minimum: 1.0 Median: 3.1 Maximum: 10.1	Minimum: 1.9 Median: 3.1 Maximum: 5.6	Minimum: 1.9 Median: 3.2 Maximum: 12.3	Minimum: 1.9 Median: 3.9 Maximum: 12.4
December	Minimum: 0.9 Median: 3.0 Maximum: 12.5	Minimum: 0.9 Median: 6.0 Maximum: 12.0	Minimum: 0.9 Median: 2.2 Maximum: 4.6	Minimum: 0.9 Median: 3.9 Maximum: 12.3	Minimum: 0.9 Median: 2.4 Maximum: 11.9

Caples Lake
End-of-Month Lake Level Operational Range Commitment

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
June	Minimum: 45.6 Median: 55.0 Maximum: 61.5	Minimum: 53.3 Median: 59.6 Maximum: 62.0	Minimum: 58.5 Median: 61.9 Maximum: 62.0	Minimum: 61.5 Median: 61.9 Maximum: 62.0	Minimum: 56.1 Median: 61.6 Maximum: 62.0
July	Minimum: 44.5 Median: 54.5 Maximum: 57.1	Minimum: 52.1 Median: 59.4 Maximum: 61.6	Minimum: 58.9 Median: 61.4 Maximum: 62.0	Minimum: 60.4 Median: 62.0 Maximum: 62.0	Minimum: 61.3 Median: 61.9 Maximum: 62.0
August	Minimum: 33.0 Median: 47.2 Maximum: 52.6	Minimum: 44.9 Median: 51.3 Maximum: 57.0	Minimum: 49.3 Median: 54.1 Maximum: 59.8	Minimum: 51.1 Median: 58.2 Maximum: 61.9	Minimum: 56.2 Median: 60.2 Maximum: 61.8
September	Minimum: 30.5 Median: 44.0 Maximum: 50.4	Minimum: 39.0 Median: 44.9 Maximum: 52.2	Minimum: 42.9 Median: 49.1 Maximum: 53.8	Minimum: 44.7 Median: 53.6 Maximum: 61.1	Minimum: 51.5 Median: 56.9 Maximum: 61.7
October	Minimum: 30.1 Median: 41.8 Maximum: 49.5	Minimum: 38.0 Median: 41.9 Maximum: 45.2	Minimum: 39.5 Median: 42.6 Maximum: 47.2	Minimum: 41.0 Median: 50.5 Maximum: 59.9	Minimum: 44.3 Median: 52.5 Maximum: 61.1
November	Minimum: 29.5 Median: 39.6 Maximum: 49.4	Minimum: 32.6 Median: 35.4 Maximum: 45.7	Minimum: 35.0 Median: 35.9 Maximum: 41.2	Minimum: 37.4 Median: 44.6 Maximum: 56.2	Minimum: 37.4 Median: 49.7 Maximum: 61.8
December	Minimum: 24.8 Median: 35.8 Maximum: 48.3	Minimum: 29.7 Median: 34.4 Maximum: 47.8	Minimum: 29.7 Median: 30.8 Maximum: 38.7	Minimum: 29.7 Median: 43.7 Maximum: 54.8	Minimum: 29.7 Median: 45.2 Maximum: 60.4

Lake Aloha

End-of-Month Lake Level Operational Range Commitment

MONTH	CRITICAL WATER YEAR E.O.M. STAGE (Gage height, feet)	DRY WATER YEAR E.O.M. STAGE (Gage height, feet)	BELOW NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	ABOVE NORMAL WATER YEAR E.O.M. STAGE (Gage height, feet)	WET WATER YEAR E.O.M. STAGE (Gage height, feet)
June	Minimum: 16.2 Median: 18.4 Maximum: 20.0	Minimum: 18.1 Median: 19.9 Maximum: 20.2	Minimum: 18.2 Median: 19.7 Maximum: 20.0	Minimum: 17.2 Median: 19.7 Maximum: 20.0	Minimum: 14.3 Median: 18.4 Maximum: 20.0
July	Minimum: 5.0 Median: 11.5 Maximum: 16.6	Minimum: 10.1 Median: 14.9 Maximum: 18.2	Minimum: 15.3 Median: 17.1 Maximum: 19.2	Minimum: 16.6 Median: 19.3 Maximum: 20.0	Minimum: 14.6 Median: 19.5 Maximum: 20.0
August	Minimum: 5.0 Median: 5.0 Maximum: 11.5	Minimum: 5.0 Median: 5.0 Maximum: 15.8	Minimum: 5.2 Median: 9.9 Maximum: 13.0	Minimum: 7.3 Median: 11.7 Maximum: 18.2	Minimum: 8.4 Median: 14.3 Maximum: 19.7
September	Minimum: 5.0 Median: 5.0 Maximum: 10.2	Minimum: 5.0 Median: 5.0 Maximum: 9.6	Minimum: 5.0 Median: 6.7 Maximum: 9.3	Minimum: 5.0 Median: 6.7 Maximum: 11.7	Minimum: 5.0 Median: 8.4 Maximum: 16.4

APPENDIX 2

Historic End-of-Month Stage Data

CAPLES LAKE - -HISTORIC END-OF-MONTH STAGE

Source:
EID 1999: EIR - TABLE 3-7

CRITICAL-YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1939	49.5	46.0	37.1	37.5	39.2	42.2	51.3	61.0	61.5	57.1	49.9	48.9
1959	36.7	29.5	24.8	18.6	19.2	20.7	37.1	48.0	55.7	56.0	47.5	43.7
1976	43.8	39.7	33.4	31.1	31.2	31.6	45.2	54.9	56.4	55.1	46.7	44.4
1977	30.1	29.8	29.0	30.5	31.4	33.2	35.4	40.6	46.7	45.4	33.0	30.5
1981	34.4	38.2	45.4	47.6	51.4	53.5	32.9	48.7	55.1	53.4	40.8	37.6
1987	40.2	39.5	34.4	36.3	35.6	36.8	30.7	43.5	45.6	44.5	42.9	41.4
1988	43.2	42.1	39.9	36.7	32.0	36.5	41.4	49.6	53.7	52.3	49.2	44.5
1990	40.3	34.7	28.7	24.6	23.9	25.5	40.1	48.7	54.2	54.1	46.8	42.8
1992	45.1	44.0	44.0	44.0	43.7	44.3	45.0	53.6	54.9	54.9	50.3	46.0
1994	49.2	49.4	48.3	48.7	47.6	47.7	45.9	54.5	56.8	55.7	52.6	50.4
MINIMUM	30.1	29.5	24.8	18.6	19.2	20.7	30.7	40.6	45.6	44.5	33.0	30.5
MEDIAN	41.8	39.6	35.8	36.5	33.8	36.7	40.8	49.2	55.0	54.5	47.2	44.0
MAXIMUM	49.5	49.4	48.3	48.7	51.4	53.5	51.3	61.0	61.5	57.1	52.6	50.4
AVERAGE	41.3	39.3	36.5	35.6	35.5	37.2	40.5	50.3	54.1	52.9	46.0	43.0
DRY-YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1944	44.4	45.7	46.0	44.5	46.2	46.7	38.6	55.6	62.0	61.6	57.0	52.2
1947	41.9	41.1	38.0	37.3	33.3	32.5	42.4	59.8	62.0	60.0	51.0	44.9
1960	38.0	34.2	29.7	25.3	25.8	26.8	30.5	45.2	54.6	53.3	47.0	43.3
1961	43.7	36.5	32.3	26.7	28.7	26.0	33.3	46.2	54.2	52.1	49.5	47.8
1964	39.0	34.7	47.8	51.0	52.1	53.3	47.4	59.8	62.0	60.7	53.3	44.5
1966	38.5	32.6	32.1	32.0	33.9	36.8	41.9	58.6	62.0	60.0	51.3	41.7
1968	44.9	43.4	34.4	34.0	32.2	29.8	35.5	50.6	58.1	56.1	51.7	48.5
1970	38.1	35.4	32.1	33.0	34.0	35.6	43.4	59.6	61.3	59.8	48.5	39.0
1972	45.2	35.1	32.7	34.1	34.9	35.4	27.3	47.0	58.8	59.4	52.4	48.6
1985	39.0	35.2	34.8	36.4	41.0	46.7	36.8	52.9	59.6	58.0	44.9	40.7
1991	43.8	42.3	41.0	38.0	36.1	36.4	27.6	41.0	53.3	54.9	51.8	48.3
MINIMUM	38.0	32.6	29.7	25.3	25.8	26.0	27.3	41.0	53.3	52.1	44.9	39.0
MEDIAN	41.9	35.4	34.4	34.1	34.0	35.6	36.8	52.9	59.6	59.4	51.3	44.9
MAXIMUM	45.2	45.7	47.8	51.0	52.1	53.3	47.4	59.8	62.0	61.6	57.0	52.2
AVERAGE	41.5	37.8	36.4	35.7	36.2	36.9	36.8	52.4	58.9	57.8	50.8	45.4
BELOW NORMAL YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1949	47.2	41.0	35.8	31.3	29.7	30.9	37.2	55.7	62.0	61.7	58.3	53.8
1951	44.3	41.2	38.7	35.3	33.3	31.8	61.1	62.0	62.0	61.3	54.2	49.6
1954	35.6	29.7	26.8	21.2	20.2	19.7	36.2	55.3	61.8	58.9	49.3	42.9
1955	35.6	29.2	37.8	41.8	42.4	43.9	22.7	41.4	58.5	59.0	51.5	44.5
1957	38.9	33.5	30.8	29.8	31.1	32.4	38.9	54.1	61.9	60.6	54.1	49.1
1979	45.5	35.9	25.7	28.3	31.0	32.5	43.4	60.1	61.9	61.4	53.4	49.8

1984	42.6	39.7	29.4	28.2	26.1	27.1	52.5	61.2	61.6	61.7	59.8	50.6
1986	42.5	35.4	27.7	22.0	21.2	20.7	49.4	61.9	62.0	62.0	52.3	46.7
1989	44.8	41.2	36.5	33.5	29.7	31.2	48.0	61.3	62.0	61.5	54.6	47.1
MINIMUM	35.6	29.2	29.7	21.2	20.2	19.7	22.7	41.4	58.5	58.9	49.3	42.9
MEDIAN	42.6	35.9	30.8	29.8	29.7	31.2	43.4	60.1	61.9	61.4	54.1	49.1
MAXIMUM	47.2	41.2	38.7	41.8	42.4	43.9	61.1	62.0	62.0	62.0	59.8	53.8
AVERAGE	41.9	36.3	32.1	30.2	29.4	30.0	43.3	57.0	61.5	60.9	54.2	48.2
ABOVE NORMAL YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1937	50.5	44.6	53.0	54.2	54.7	40.2	22.2	49.7	61.6	60.8	55.2	52.7
1940	45.5	42.4	37.8	37.5	35.0	32.3	38.1	59.4	62.0	60.4	55.0	51.7
1941	51.2	47.9	52.0	53.3	44.9	38.9	30.8	56.8	61.5	62.0	60.6	58.5
1943	59.9	56.2	48.8	42.7	38.7	35.8	48.6	61.3	61.9	62.0	61.9	61.1
1945	52.4	54.9	52.5	48.6	44.2	43.8	50.9	59.5	62.0	62.0	58.2	53.6
1946	41.0	39.5	37.1	34.6	34.5	36.2	52.3	61.0	62.0	61.9	54.8	44.7
1962	49.1	40.8	34.8	30.4	41.7	43.8	36.1	50.4	62.0	61.2	51.1	47.4
1965	57.4	50.7	43.7	36.8	31.0	31.1	48.9	56.7	61.9	62.0	61.6	60.6
1971	46.6	37.4	25.1	16.7	11.6	20.1	39.4	53.1	61.5	62.0	58.2	55.3
1973	46.5	52.7	54.8	56.9	56.5	57.3	39.9	60.7	61.9	61.4	56.4	50.4
1980	55.0	42.4	28.4	21.6	20.6	23.9	44.1	57.0	61.8	62.0	59.4	58.4
MINIMUM	41.0	37.4	25.1	16.7	11.6	20.1	22.2	49.7	61.5	60.4	51.1	44.7
MEDIAN	50.5	44.6	43.7	37.5	38.7	36.2	39.9	57.0	61.9	62.0	58.2	53.6
MAXIMUM	59.9	56.2	54.8	56.9	56.5	57.3	52.3	61.3	62.0	62.0	61.9	61.1
AVERAGE	50.5	46.3	42.5	39.4	37.6	36.7	41.0	56.9	61.8	61.6	57.5	54.0
WET YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1935	47.9	36.8	28.6	28.5	30.6	31.8	45.9	59.0	61.9	61.3	56.9	51.5
1936	44.3	34.2	27.3	15.8	16.5	17.5	41.7	55.7	61.6	61.6	57.3	54.0
1938	58.3	57.5	52.0	45.7	41.0	41.0	43.2	54.5	61.8	62.0	60.1	58.4
1942	56.8	57.6	57.8	57.7	49.8	45.1	42.2	55.8	61.9	61.9	61.1	59.7
1948	52.5	51.7	47.1	37.4	31.3	29.8	36.2	50.4	62.0	62.0	59.4	54.3
1950	49.9	61.8	60.4	59.2	59.5	59.6	39.1	57.3	62.0	62.0	56.5	53.9
1952	52.5	47.6	35.3	31.2	28.8	28.7	35.0	57.4	61.8	62.0	60.7	59.4
1953	49.2	37.6	26.0	21.3	20.8	25.5	36.9	46.5	61.8	62.0	58.1	54.5
1956	52.0	46.1	37.5	33.0	33.0	34.6	50.1	59.3	60.9	62.0	60.4	58.7
1958	51.0	36.3	30.4	28.5	27.7	28.1	32.6	46.6	62.0	62.0	61.6	59.1
1963	52.5	54.3	54.0	49.8	44.9	42.3	46.8	58.7	62.0	61.8	56.2	54.6
1967	53.0	42.8	30.1	24.9	25.7	27.8	38.2	49.5	59.3	61.9	59.7	57.1
1969	54.1	46.0	34.5	39.2	40.6	40.8	32.9	60.1	61.4	61.9	60.4	57.1
1974	48.2	33.3	24.0	22.1	22.4	22.4	56.8	60.4	62.0	61.9	61.1	56.0
1975	57.1	57.4	54.5	50.7	44.1	42.5	22.5	43.8	60.7	62.0	60.2	56.8
1978	58.8	54.2	44.4	39.8	38.4	39.4	37.4	54.9	60.3	61.8	59.6	59.4
1982	61.1	58.6	58.4	56.4	51.4	52.0	49.1	54.6	61.2	61.9	61.8	61.7

1983	51.0	54.8	51.6	50.8	50.7	51.2	52.1	54.2	56.1	61.6	61.6	51.8
1993	56.1	53.7	50.9	47.2	43.3	41.7	47.7	61.1	61.6	61.5	60.8	58.7
1995	50.9	46.9	46.0	45.7	49.7	51.6	41.5	50.5	59.7	61.9	61.4	56.9
1996							55.3	60.9	61.5	62.0	58.9	55.3
MINIMUM	44.3	33.3	24.0	15.8	16.5	17.5	22.5	43.8	56.1	61.3	56.2	51.5
MEDIAN	52.5	49.7	45.2	39.5	39.5	40.1	41.7	55.7	61.6	61.9	60.2	56.9
MAXIMUM	61.1	61.8	60.4	59.2	59.5	59.6	56.8	61.1	62.0	62.0	61.8	61.7
AVERAGE	52.9	48.5	42.5	39.2	37.5	37.7	40.4	54.4	61.4	61.9	59.5	56.8

SILVER LAKE - -HISTORIC END-OF-MONTH STAGE
Source:
EID 1999: EIR - TABLE 3-6

CRITICAL-YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1939	12.1	3.3	1.2	2.8	3.8	7.5	20.5	22.7	21.7	19.1	17.0	14.2
1959	3.0	2.7	2.6	2.6	2.6	3.6	17.2	22.7	21.5	19.1	16.7	8.7
1976	7.5	1.7	0.9	0.7	0.6	1.0	12.4	21.1	18.8	16.3	15.0	13.6
1977	5.0	1.0	3.5	5.8	6.5	11.8	10.5	16.7	18.7	16.3	14.3	6.3
1981	5.2	12.6	12.5	12	12.2	13.8	17.9	22.0	21.1	18.1	15.6	12.0
1987	4.4	1.9	2.2	2.4	3.0	8.5	18.1	22.6	21.3	18.5	11.3	7.1
1988	8.7	6.4	4.8	2.4	3.4	13.0	17.5	22.7	22.0	19.3	15.0	12.1
1990	6.7	2.3	1.1	0.1	0.6	5.4	20.5	22.7	21.8	18.6	16.2	12.9
1992	13.3	10.9	9.9	10.3	10.1	12.4	19.7	22.7	21.1	20.7	16.5	14.5
1994	8.2	6.9	5.4	7.7	9.0	12.1	13.1	21.7	20.8	18.3	15.9	11.9
MINIMUM	3.0	1.0	0.9	0.1	0.6	1.0	10.5	16.7	18.7	16.3	11.3	6.3
MEDIAN	7.1	3.0	3.0	2.7	3.6	10.2	17.7	22.6	21.2	18.5	15.7	12.0
MAXIMUM	13.3	12.6	12.5	12	12.2	13.8	20.5	22.7	22.0	20.7	17.0	14.5
AVERAGE	7.4	5.0	4.4	4.7	5.2	8.9	16.7	21.8	20.9	18.4	15.3	11.3
DRY-YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1944	3.9	6.9	7.5	7.6	9.1	7.3	13.4	22.0	22.7	20.8	18.3	9.9
1947	3.3	0.8	1.5	3.6	6.3	7.7	20.7	22.7	22.0	19.3	14.2	4.6
1960	3.2	2.2	1.8	1.8	1.8	3.6	18.0	22.7	21.3	18.6	16.3	8.6
1961	1.3	0.3	0.4	0.6	1.5	2.4	15.4	22.7	21.7	18.8	12.6	5.1
1964	6.0	3.1	12.0	10.2	8.6	10.9	15.0	22.7	22.6	19.7	17.2	9.6
1966	9.2	7.8	6.6	5.8	5.8	10.9	18.7	22.2	21.0	18.3	15.9	11.9
1968	2.0	8.6	9.3	6.4	3.6	6.9	13.9	22.1	21.9	18.5	16.3	6.3
1970	12.1	8.2	5.2	7.3	10.2	12.5	8.7	22.0	22.7	20.6	17.8	14.9
1972	3.5	1.9	6.7	8.4	9.5	10.4	15.4	22.0	22.4	19.5	16.8	7.6
1985	8.4	2.9	5.1	9.7	13.1	13.1	16.0	22.4	21.9	19.7	17.4	12.5
1991	11.3	10.1	6.0	2.0	3.8	7.6	12.6	21.1	22.7	20.5	17.6	14.5
MINIMUM	1.3	0.3	0.4	0.6	1.5	2.4	8.7	21.1	21.0	18.3	12.6	4.6
MEDIAN	3.9	3.1	6.0	6.4	6.3	7.7	15.4	22.2	22.0	19.5	16.8	9.6
MAXIMUM	12.1	10.1	12.0	10.2	13.1	13.1	20.7	22.7	22.7	20.8	18.3	14.9
AVERAGE	5.8	4.8	5.6	5.8	6.7	8.5	15.3	22.2	22.1	19.5	16.4	9.6

BELOW NORMAL YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1949	2.3	2.1	2.2	3.3	4.4	5.5	14.5	22.7	22.7	19.7	17.2	8.3
1951	3.7	4.3	4.6	4.9	5.2	5.9	20.3	22.7	22.5	19.8	17.4	7.6
1954	3.6	3.0	3.1	3.1	3.5	4.5	18.5	22.7	22.7	19.6	17.0	9.6
1955	3.0	1.9	0.8	0.2	0.0	0.0	11.1	19.8	22.5	19.9	17.2	8.4
1957	2.6	1.9	0.8	0.4	0.8	0.0	12.4	22.1	22.7	20.1	15.6	6.9
1979	4.6	3.2	2.0	11.8	12.4	12.5	13.9	20.8	22.7	20.4	17.6	9.6
1984	6.3	4.2	2.4	2.8	2.8	4.2	12.6	21.0	22.3	21.1	18.8	13.3
1986	10.2	3.1	1.0	1.4	1.9	2.6	13.7	17.3	22.6	21.5	19.0	15.5
1989	9.2	5.6	3.2	2.5	2.8	7.8	20.3	21.8	22.5	20.0	15.7	14.3
MINIMUM	2.3	1.9	0.8	0.2	0.0	0.0	11.1	17.3	22.3	19.6	15.6	6.9
MEDIAN	3.7	3.1	2.2	2.8	2.8	4.5	13.9	21.8	22.6	20.0	17.2	9.6
MAXIMUM	10.2	5.6	4.6	11.8	12.4	12.5	20.3	22.7	22.7	21.5	19.0	15.5
AVERAGE	5.1	3.3	2.2	3.4	3.8	4.8	15.3	21.2	22.6	20.2	17.3	10.4
ABOVE NORMAL YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1937	1.1	1.9	3.9	8.3	6.6	5.0	9.8	16.9	22.7	20.8	18.1	10.8
1940	0.8	0.5	3.1	0.8	3.4	5.0	15.1	15.9	22.7	20.3	17.7	6.0
1941	1.9	1.7	5.8	6.6	5.1	5.4	7.8	13.3	21.9	21.8	19.1	8.6
1943	9.5	3.2	4.6	7.3	8.8	11.2	13.6	18.8	22.7	21.8	19.1	14.8
1945	10.0	12.3	12.3	12.1	12.0	12.3	13.8	16.2	22.7	21.4	18.7	11.1
1946	6.1	3.6	3.0	2.5	3.3	9.1	13.9	20.7	22.7	20.5	18.1	14.8
1962	9.7	4.6	5.9	6.0	11.3	11.8	11.9	16.8	22.7	20.7	17.7	7.2
1965	7.4	4.4	3.4	4.1	3.3	8.6	13.0	13.8	22.6	22.0	21.5	15.5
1971	4.5	2.1	0.1	1.0	1.0	8.2	12.5	13.1	22.1	21.7	18.8	12.4
1973	3.0	9.9	8.9	12.0	12.0	12.7	18.3	21.7	22.7	20.2	17.4	7.6
1980	7.2	1.3	0.1	0.0	4.7	7.0	13.8	17.9	22.0	22.5	19.5	15.1
MINIMUM	0.8	0.5	0.1	0.0	1.0	5.0	7.8	13.1	21.9	20.2	17.4	6.0
MEDIAN	6.1	3.2	3.9	6.0	5.1	8.6	13.6	16.8	22.7	21.4	18.7	11.1
MAXIMUM	10.0	12.3	12.3	12.1	12.0	12.7	18.3	21.7	22.7	22.5	21.5	15.5
AVERAGE	5.6	4.1	4.6	5.5	6.5	8.8	13.0	16.8	22.5	21.2	18.7	11.3
WET YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1935	0.9	0.4	0.5	1.4	2.5	6.3	13.0	20.3	22.7	21.0	18.5	8.1
1936	0.7	0.1	0.0	0.0	1.0	3.9	15.5	15.3	22.7	21.2	18.6	9.2
1938	6.5	3.4	0.9	0.9	1.3	7.3	12.6	16.1	22.7	22.7	20.1	10.6
1942	4.6	7.7	9.0	9.5	10.0	10.9	12.3	13.0	21.6	21.9	19.2	11.0
1948	2.3	4.3	6.0	7.9	8.9	10.4	14.0	20.0	22.7	21.2	18.3	8.8
1950	3.5	12.0	9.8	8.5	11.7	14.0	11.1	20.5	22.7	20.7	18.1	10.2
1952	6.0	2.8	0.0	1.8	3.4	5.6	11.5	14.3	22.6	22.7	20.5	15.3
1953	6.4	3.2	0.0	3.2	4.4	9.8	12.4	19.6	22.5	21.7	19.0	13.6
1956	4.6	3.0	1.5	0.4	0.0	0.0	4.5	11.8	22.3	22.4	19.6	11.9

1958	4.1	2.4	2.2	1.1	0.0	3.6	11.2	13.8	22.4	22.2	19.6	11.8
1963	5.9	6.2	5.6	3.5	1.8	4.2	12.4	20.2	22.7	21.0	18.0	8.8
1967	5.1	3.5	2.5	1.8	1.9	5.3	6.8	13.9	20.5	22.6	20.0	8.6
1969	6.2	0.7	0.0	0.0	0.0	6.0	10.3	14.9	22.7	22.6	19.1	11.1
1974	3.5	1.0	1.6	2.5	2.8	4.8	12.8	20.2	22.7	21.6	18.8	7.8
1975	11.1	11.4	7.9	2.7	3.6	5.9	7.3	18.5	22.6	22.2	18.9	10.5
1978	14.1	6.9	2.3	4.9	2.6	7.4	12.9	19.2	22.2	22.4	19.4	15.7
1982	22.7	12.4	11.9	11.9	12.2	12.3	13.7	19.5	22.0	22.7	20.5	19.5
1983	8.0	11.9	11.9	7.6	8.9	12.6	12.4	15.1	20.4	22.7	22.5	13.9
1993	11.6	8.5	4.9	2.4	1.8	4.4	14.0	20.0	22.1	22.1	19.6	15.5
1995	9.1	5.5	9.3	10.9	12.2	12.5	13.9	14.9	20.3	22.5	21.3	15.5
1996							14.0	22.5	22.6	21.1	18.8	14.6
MINIMUM	0.7	0.1	0.0	0.0	0.0	0.0	4.5	11.8	20.3	20.7	18.0	7.8
MEDIAN	5.9	3.9	2.4	2.6	2.7	6.2	12.4	18.5	22.6	22.2	19.2	11.1
MAXIMUM	22.7	12.4	11.9	11.9	12.2	14.0	15.5	22.5	22.7	22.7	22.5	19.5
AVERAGE	6.8	5.4	4.4	4.1	4.5	7.4	11.8	17.3	22.2	22.0	19.4	12.0

LAKE ALOHA - -HISTORIC END-OF-MONTH STAGE
Source:
EID 1999: EIR - TABLE 3-8

CRITICAL-YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1939							14.1	18.6	19.5	16.6	11.5	10.2
1959							11.5	16.8	19.3	11.7	5.0	5.0
1976	5.0	5.0	5.0	5.0	5.0	5.0	12.2	16.6	16.2	5.0	9.9	9.9
1977	5.0	5.0	5.0	5.0	5.0	5.0	5.0	14.1	16.7	6.8	5.0	5.0
1981	5.0	5.0	5.0	12.6	18.8	14.8	13.1	17.7	18.7	6.6	5.0	5.0
1987	5.0	5.0	5.0	5.0	5.0	10.6	5.0	16.9	17.8	11.2	5.0	5.0
1988	6.9	5.0	5.0	5.0	5.0	5.0	12.8	15.6	18.2	13.1	5.0	5.0
1990	5.0	5.0	5.0	5.0	5.0	5.0	14.2	18.2	19.6	13.1	5.0	5.0
1992	5.0	5.0	5.0	5.0	5.0	5.0	14.8	18.5	17.1	10.4	5.0	5.0
1994	5.0	5.0	5.0	5.0	5.0	10.3	14.1	18.6	20.0	15.8	9.6	5.0
MINIMUM	5.0	5.0	5.0	5.0	5.0	5.0	5.0	14.1	16.2	5.0	5.0	5.0
MEDIAN	5.0	5.0	5.0	5.0	5.0	5.0	12.9	17.3	18.4	11.5	5.0	5.0
MAXIMUM	6.9	5.0	5.0	12.6	18.8	14.8	14.8	18.6	20.0	16.6	11.5	10.2
AVERAGE	5.2	5.0	5.0	5.9	6.7	7.6	11.7	17.2	18.3	11.0	6.6	6.0
DRY-YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1944							9.6	17.7	20.0	18.1	8.4	5.0
1947							13.2	19.7	19.7	11.7	5.0	5.0
1960							10.6	14.8	19.9	14.5	5.0	5.0
1961							11.2	16.8	19.9	16.4	12.5	9.6
1964							11.5	13.9	19.5	17.0	9.9	5.0
1966							11.2	18.4	19.9	14.3	5.0	5.0
1968							11.5	15.4	18.1	14.3	5.0	5.0

1970							16.6	17.9	20.2	18.2	15.8	8.4
1972	5.0	5.0	5.0	5.0	5.0	10.7	12.7	17.3	20.0	14.9	5.0	5.0
1985	5.0	5.0	5.0	5.0	5.0	5.0	13.0	17.4	19.4	10.1	5.0	5.0
1991	5.0	5.0	5.0	5.0	5.0	5.0	12.9	16.6	19.1	17.7	6.7	5.0
MINIMUM	5.0	5.0	5.0	5.0	5.0	5.0	9.6	13.9	18.1	10.1	5.0	5.0
MEDIAN	5.0	5.0	5.0	5.0	5.0	5.0	11.5	17.3	19.9	14.9	5.0	5.0
MAXIMUM	5.0	5.0	5.0	5.0	5.0	10.7	16.6	19.7	20.2	18.2	15.8	9.6
AVERAGE	5.0	5.0	5.0	5.0	5.0	6.9	12.2	16.9	19.6	15.2	7.6	5.7
BELOW NORMAL YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1949							12.3	16.8	19.5	16.6	8.4	6.7
1951							9.6	18.6	19.7	17.2	9.9	5.0
1954							11.2	19.1	19.9	16.8	12.5	8.4
1955							13.6	17.7	19.7	16.4	9.2	6.7
1957							11.5	18.1	19.1	18.1	13.0	5.0
1979	5.0	5.0	5.0	5.0	5.0	12.2	12.7	16.3	19.3	17.3	12.1	5.0
1984	8.8	9.8	9.7	5.0	5.0	5.0	12.5	15.7	18.2	19.2	12.6	6.8
1986	9.8	7.5	5.0	5.0	5.0	5.0	17.1	19.9	20.0	17.1	5.8	9.3
1989	5.3	5.0	5.0	5.0	5.0	5.0	14.9	19.9	19.9	15.3	5.2	7.9
MINIMUM	5.0	5.0	5.0	5.0	5.0	5.0	9.6	15.7	18.2	15.3	5.2	5.0
MEDIAN	7.1	6.3	5.0	5.0	5.0	5.0	12.5	18.1	19.7	17.1	9.9	6.7
MAXIMUM	9.8	9.8	9.7	5.0	5.0	12.2	17.1	19.9	20.0	19.2	13.0	9.3
AVERAGE	7.2	6.8	6.2	5.0	5.0	6.8	12.8	18.0	19.5	17.1	9.9	6.8
ABOVE NORMAL YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1937							5.0	17.3	19.3	18.1	9.9	5.0
1940							5.0	17.2	19.7	16.6	9.2	6.7
1941							11.2	17.0	19.3	19.9	11.7	5.0
1943							12.5	18.6	20.0	20.0	12.0	6.7
1945							10.6	12.7	19.9	19.3	12.0	6.7
1946							12.0	16.8	20.0	18.2	11.7	8.4
1962							11.5	17.9	19.7	18.2	15.2	11.5
1965							11.2	13.6	19.9	19.9	18.2	11.7
1971	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	17.2	19.9	11.5	5.0
1973	5.0	5.0	5.0	5.0	5.0	5.0	15.6	15.8	19.2	16.7	7.3	5.0
1980	5.0	5.0	5.0	5.0	5.0	5.0	18.9	20.0	20.0	20.0	15.3	11.6
MINIMUM	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	17.2	16.6	7.3	5.0
MEDIAN	5.0	5.0	5.0	5.0	5.0	5.0	11.2	17.0	19.7	19.3	11.7	6.7
MAXIMUM	5.0	5.0	5.0	5.0	5.0	5.0	18.9	20.0	20.0	20.0	18.2	11.7
AVERAGE	5.0	5.0	5.0	5.0	5.0	5.0	10.8	15.6	19.5	18.8	12.2	7.6
WET YEAR E.O.M. STAGE (gage height - feet)												
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1935							11.5	16.8	19.1	19.1	10.6	5.0

1936							10.6	12.7	17.9	19.1	12.7	9.2
1938							9.6	13.0	17.0	19.9	14.3	11.7
1942							5.0	11.5	14.5	19.1	13.9	6.7
1948							13.6	16.0	19.3	19.9	8.4	8.4
1950							11.2	17.3	19.0	19.3	14.3	8.4
1952							11.5	16.6	18.2	19.9	15.6	5.0
1953							10.9	13.4	18.4	19.5	16.0	9.9
1956							11.5	17.2	19.9	20.0	15.0	8.4
1958							10.9	19.7	19.7	19.7	14.1	6.7
1963							17.0	19.3	19.1	18.6	13.4	5.0
1967							10.9	19.7	19.7	19.5	18.6	16.2
1969							11.2	13.6	18.2	19.9	14.5	5.0
1974	5.0	5.0	5.0	5.0	5.0	5.0	16.5	12.9	18.5	19.8	9.0	5.0
1975	5.0	5.0	5.0	5.0	5.0	10.1	5.0	13.9	16.8	19.3	10.8	5.0
1978	5.0	5.0	5.0	5.0	5.0	5.0	15.3	15.1	16.5	17.9	11.3	5.0
1982	14.3	12.1	11.4	10.9	10.5	10.0	9.8	12.2	17.7	19.9	18.2	16.4
1983	5.9	12.5	5.0	5.0	5.0	5.0	12.7	14.6	14.3	14.6	17.9	14.3
1993	14.4	5.0	5.0	5.0	5.0	5.0	15.9	19.8	20.0	19.8	18.5	16.2
1995	12.2	5.0	5.0	5.0	5.0	5.0	13.2	15.7	17.9	19.9	19.7	16.3
1996							12.8	16.3	19.1	18.8	11.8	5.0
MINIMUM	5.0	5.0	5.0	5.0	5.0	5.0	5.0	11.5	14.3	14.6	8.4	5.0
MEDIAN	5.9	5.0	5.0	5.0	5.0	5.0	11.5	15.7	18.4	19.5	14.3	8.4
MAXIMUM	14.4	12.5	11.4	10.9	10.5	10.1	17.0	19.8	20.0	20.0	19.7	16.4
AVERAGE	8.8	7.1	5.9	5.8	5.8	6.4	11.7	15.6	18.1	19.2	14.2	8.1

D R A F T

APPENDIX 3

Silver Lake: Frequency Evaluation Tables

D R A F T

SILVER LAKE
E.O.M. Lake Level Stage - Frequency Evaluation
CRITICAL WATER YEAR (September & October)

	E.O.M. LAKE LEVEL STAGE (feet)	
CRITICAL-YEAR MEDIAN E.O.M. LAKE STAGE	12.0	7.1
PERCENTAGE OF TIME THAT RECORDED E.O.M. STAGE IS EQUALED OR EXCEEDED	**E.O.M LAKE LEVEL STAGE (feet)**	
	SEP	**OCT**
10%	14.5	13.3
20%	14.2	12.1
30%	13.6	8.7
40%	12.9	8.2
50%	12.1	7.5
60%	12.0	6.7
70%	11.9	5.2
80%	8.7	5.0
90%	7.1	4.4
100%	6.3	3.0

SILVER LAKE
E.O.M. Lake Level Stage - Frequency Evaluation
DRY WATER YEAR (September & October)

	E.O.M. LAKE LEVEL STAGE (feet)	
DRY-YEAR MEDIAN E.O.M. LAKE STAGE	9.6	3.9
PERCENTAGE OF TIME THAT RECORDED E.O.M. STAGE IS EQUALED OR EXCEEDED	**E.O.M LAKE LEVEL STAGE (feet)**	
	SEP	**OCT**
9%	14.9	12.1
18%	14.5	11.3
27%	12.5	9.2
36%	11.9	8.4
45%	9.9	6.0
55%	9.6	3.9
64%	8.6	3.5
73%	7.6	3.3
82%	6.3	3.2
91%	5.1	2.0
100%	4.6	1.3

D R A F T

SILVER LAKE
E.O.M. Lake Level Stage - Frequency Evaluation
BELOW-NORMAL WATER YEAR (September & October)

	E.O.M. LAKE LEVEL STAGE (feet)	
BELOW-NORMALYEAR MEDIAN E.O.M. LAKE STAGE	9.6	3.7
PERCENTAGE OF TIME THAT RECORDED E.O.M. STAGE IS EQUALED OR EXCEEDED	**E.O.M. LAKE LEVEL STAGE (feet)**	
	SEP	**OCT**
11%	15.5	10.2
22%	14.3	9.2
33%	13.3	6.3
44%	9.6	4.6
56%	9.6	3.7
67%	8.4	3.6
78%	8.3	3.0
89%	7.6	2.6
100%	6.9	2.3

SILVER LAKE
E.O.M. Lake Level Stage - Frequency Evaluation
ABOVE-NORMAL WATER YEAR (September & October)

	E.O.M. LAKE LEVEL STAGE (feet)	
ABOVE-NORMALYEAR MEDIAN E.O.M. LAKE STAGE	11.1	6.1
PERCENTAGE OF TIME THAT RECORDED E.O.M. STAGE IS EQUALED OR EXCEEDED	**E.O.M. LAKE LEVEL STAGE (feet)**	
	SEP	**OCT**
9%	15.5	10.0
18%	15.1	9.7
27%	14.8	9.5
36%	14.8	7.4
45%	12.4	7.2
55%	11.1	6.1
64%	10.8	4.5
73%	8.6	3.0
82%	7.6	1.9
91%	7.2	1.1
100%	6.0	0.8

D R A F T

E.O.M. Lake Level Stage - Frequency Evaluation
WET WATER YEAR (September & October)

	E.O.M. LAKE LEVEL STAGE (feet)	
WET YEAR MEDIAN E.O.M. LAKE STAGE	11.1	5.9
PERCENTAGE OF TIME THAT RECORDED E.O.M. STAGE IS EQUALED OR EXCEEDED	**E.O.M. LAKE LEVEL STAGE (feet)**	
	SEP	**OCT**
5%	19.5	22.7
10%	15.7	14.1
14%	15.5	11.6
19%	15.5	11.1
24%	15.3	9.1
29%	14.6	8.0
33%	13.9	6.5
38%	13.6	6.4
43%	11.9	6.2
48%	11.8	6.0
52%	11.1	5.9
57%	11.0	5.1
62%	10.6	4.6
67%	10.5	4.6
71%	10.2	4.1
76%	9.2	3.5
81%	8.8	3.5
86%	8.8	2.3
90%	8.6	0.9
95%	8.1	0.7
100%	7.8	