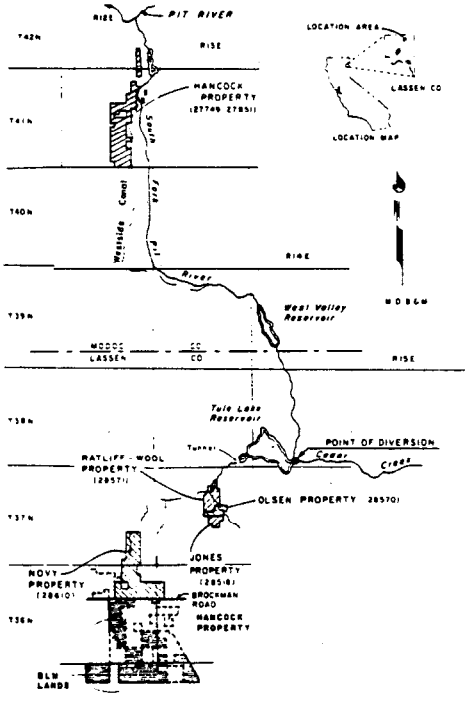
TULE LAKE RESERVOIR SYSTEM AND CEDAR CREEK
LASSEN AND MODOC COUNTY

APPLICATIONS:
27749-27851-28518-28570-28571-28610

DECISION WR- 1618

RESOLUTION NO. 88-36



APRIL 1988

STATE WATER RESOURCES CONTROL BOARD

TABLE OF CONTENTS

		PAGE
1.0	INTRODUCTION	1
2.0	SUBSTANCE OF THE APPLICATIONS	2
2.1	Hancock Applications	2
2.2	Jones Application	3
2.3	Olsen Application	3
2.4	Ratliff and Wool Application	3
2.5	Novy Application	4
2.6	Sharing Agreement	4
3.0	PROTESTS	5
3.1	Protests Against Applications 27749 and 27851	5
3.1.1	PG&E Protest	5
3.1.2	South Fork Irrigation District Protest	6
3.1.3	Mendiboure Protest	6
3.1.4	Fish and Game Protest	6
3.2	Protests Against Application 28518	7
3.3	Protests Against Application 28570	7
3.4	Protests Against Application 28571	7
3.5	Protests Against Application 28610	8
4.0	BACKGROUND	8
5.0	AVAILABILITY OF WATER FOR APPROPRIATION	10
5.1	Hydrological Characteristics of Tule Lake Reservoir	10
5.2	Prior Rights	11

5.2.1 Adjudicated Rights 11

5.2.2 PG&E Rights in the Pit River Watershed 12

5.2.2.1 Hydraulic Continuity 13

5.2.2.2 The Extent to Which PG&E Right Limits the Amount Available for Appropriation 16

5.2.2.3 Delta Outflow 16

5.3 Amount of Water Available 17

6.0 ENVIRONMENTAL AND PUBIC TRUST CONSIDERATIONS 18

6.1 Compliance with the California Environmental Quality Act (CEQA) 18

6.1.1 Mitigation Required 19

6.1.2 No Unmitigated Adverse Impacts 20

6.2 Public Trust Considerations 20

7.0 DISTRIBUTION OF WATER 21

7.1 Beneficial Use 21

7.2 Legal Considerations 22

7.3 Evidence of the Public Interest in the Applications . . . 25

7.3.1 Filing Dates 25

7.3.2 Public Interest Considerations 26

7.3.2.1 Purpose of Tule Lake Reservoir System 27

7.3.2.2 Historical Use 28

7.3.2.3 Relative Needs of the Applicants 29

7.3.2.4 Availability of Alternative Water Sources 30

7.3.2.5 Environmental Considerations 31

7.4 Conclusion Regarding Water Distribution 32

8.0 OVERALL CONCLUSIONS 33

ORDER 34

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Applications 27749 and 27851 of JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY; Application 28518 of BARBARA DEAN JONES; Application 28570 of REX B. and VERONICA OLSEN; Application 28571 of TOM and MARCIA RATLIFF and DON WOOL; Application 28610 of LOWELL L. NOVY	DECISION 1618 SOURCE: Tule Lake Reservoir and Upper Cedar Creek COUNTY: Lassen

DECISION APPROVING APPLICATIONS 28518, 28570, 28571, AND 28610, AND DENYING APPLICATIONS 27749 AND 27851

BY THE BOARD:

1.0 INTRODUCTION

Competing applications having been filed by John Hancock Mutual Life Insurance Company (hereinafter "Hancock"), Barbara Dean Jones, Rex B. and Veronica Olsen, Tom and Marcia Ratliff and Don Wool (hereinafter "Ratliff"), and Lowell L. Novy; a petition for change of place of use having been filed by Hancock for Applications 27749 and 27851; protests having been received; a public hearing having been held on October 23 and 24, 1986; the Board having considered all evidence in the record; the Board finds and concludes as follows:

2.0 SUBSTANCE OF THE APPLICATIONS

2.1 Hancock Applications

Applications 27749 and 27851 of Hancock are for permits to appropriate, respectively, 35,000 acre-feet per annum (afa) by storage from October 1 through June 30 and 20 cubic feet per second (cfs) by direct diversion from April 1 through October 31. Both applications are for the purpose of irrigation and both specify the point of diversion within the NW1/4 of the SE1/4 of Section 33, T38N, R14E, MDB&M.* The place of use is specified in the applications as portions of Sections 2, 11, 12, 14, 15, 22, 23, 26, 27, 34 and 35, T41N, R12E, MDB&M and portions of Sections 26 and 35, T42N, R12E, MDB&M in Modoc County, totalling 2,412 acres. Additionally, Hancock filed a petition for a change of place of use for these applications shortly before the hearing, and requested the addition to the place of use of the following area: Portions of Sections 10, 11, 12, 13, 14, and 15, T35N, R12E; portions of Sections 7, 8, 9, 10, 15, 16, 17 and 18, T35N, R13E; portions of Sections 3, 4, 9, 10, 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35 and 36, T36N, R12E; portions of Sections 5, 6, 7, 8, 17, 18, 19, 29, 30, 31 and 32, T36N, R13E, MDB&M in Lassen County, totalling 15,780 acres, with the maximum area to be irrigated in any one year not to exceed 2,412 acres within the gross places of use which would total 18,192 acres within Lassen and Modoc Counties.

---

* References to Township and Range are to the Mount Diablo Base and Meridian.

2.2 Jones Application

Application 28518 of Barbara Dean Jones is for a permit to appropriate 4 cfs by direct diversion from April 1 through October 31 and 1120 afa by storage from October 1 through June 30. The total to be taken by direct diversion and storage is not to exceed 2620 afa. The purposes of use are irrigation and stockwatering, the point of diversion is within the NW1/4 of the SE1/4 of Section 33, T28N, R14E, MDB&M, and the place of use is specified as portions of Sections 22 and 23, T37N, R13E, MDB&M in Lassen County, totalling 280 acres.

2.3 Olsen Application

Application 28570 of Rex B. and Veronica Olsen is for a permit to appropriate 2.003 cfs by direct diversion from January 1 through December 31 and 165.5 afa by storage from January 1 through December 31. The total to be taken by direct diversion and storage is not to exceed 165.5 afa. The purposes of use are irrigation (April 1 to November 1) and stockwatering, the point of diversion is within the NW1/4 of the SE1/4 of Section 33, T38N, R14E, MDB&M, and the place of use is portions of Sections 14 and 15, T37N, R13E, MDB&M in Lassen County totalling 143 acres.

2.4 Ratliff and Wool Application

Application 28571 of Tom and Marcia Ratliff and Don Wool is for a permit to appropriate 5.008 cfs by direct diversion from January 1 through December 31 and 1465.5 afa by storage from January 1 through December 31. The total to be taken by direct diversion and storage is

not to exceed 1465.5 afa. The purposes of use are irrigation (April 1 to November 1) and stockwatering, the point of diversion is within the NW1/4 of the SE1/4 of Section 33, T38N, R14E, MDB&M, and the place of use is portions of Sections 3, 10, 15 and 16, T37N, R13E, MDB&M in Lassen County totalling 1107 acres.

2.5 Novy Application

Application 28610 of Lowell L. Novy is for a permit to appropriate 12 cfs by direct diversion from April 1 through October 31 and 9700 afa by storage from October 1 through June 30, for irrigation and stockwatering. The total to be taken by direct diversion and storage is not to exceed 9700 afa. The point of diversion is within the NW1/4 of the SE1/4 of Section 33, T38N, R14E, MDB&M, and the place of use is portions of Sections 2, 10, 11 and 12, T36N, R12E; Section 7, T36N, R13E; Sections 26 and 35, T37N, R12E, MDB&M in Lassen County, with 2,810 acres to be irrigated within a total of 3,342 acres.

2.6 Sharing Agreement

At the hearing, applicants Jones, Olsen, Ratliff, and Novy presented an agreed apportionment of unappropriated water among themselves. Under the agreement, Jones would have 7 percent, Olsen would have 3.5 percent, Ratliff would have 27.5 percent, and Novy would have 62 percent of the available unappropriated water. Assuming that 4500 afa is available, the appropriations would be: Jones, 315 afa; Olsen, 157.5 afa; Ratliff, 1237.5 afa; and Novy, 2790 afa. These amounts, plus the decreed rights, would provide enough water in the places of

use to supply the following total acre-feet per acre in the places of use: Jones, 1.25 acre-feet per acre; Olsen, 1.96 acre-feet per acre; Ratliff, 1.69 acre-feet per acre; Novy, 1.17 acre-feet per acre.

3.0 PROTESTS

Twenty-one protests were accepted against approval of the applications. Two protests were dismissed.

3.1 Protests Against Applications 27749 and 27851

Protests were filed against each of Applications 27749 and 27851 of Hancock by Pacific Gas and Electric Company, (hereinafter "PG&E"), South Fork Irrigation District, and Pierre Mendiboure et al., based on injury to prior rights. The State Department of Fish and Game (hereinafter "Fish and Game") protested based on adverse effects on the public interest and the environment.

3.1.1 PG&E Protest

PG&E's protest is based on existing appropriative and riparian rights to divert water from the Pit River for power purposes. Because upper Cedar Creek appears to have been a tributary of the Pit River before the dam and other works at Tule Lake Reservoir were constructed in about 1910, PG&E believes it has a prior right to use certain waters of Cedar Creek that were not allocated to pre-1914 water right holders in the 1986 adjudication of the rights to use the waters of the Tule Lake Reservoir System. PG&E has found by experience that its maximum claimed rights are satisfied when the flow at the Canby Gage Station

near Canby, California on the Pit River equals or exceeds 300 cfs. Therefore, PG&E argues that the applicant should be authorized to divert water under these applications only when the flow at the Canby Gage Station exceeds 300 cfs, and that at other times the applicant should be required to siphon water over the dam for PG&E's use.

3.1.2 South Fork Irrigation District Protest

South Fork Irrigation District's protest was based on injury to its prior rights to store water from West Valley Creek in West Valley Reservoir under existing appropriative rights. The District withdrew this protest after Hancock agreed to update an existing agreement with the District.

3.1.3 Mendiboure Protest

Pierre Mendiboure's protest was based on injury to prior rights in the Madeline Plains. Additionally, the Mendiboure protest questioned whether the public interest would be served in allowing Hancock to divert water to a location outside the Madeline Plains and also questioned the reasonableness of the proposed Hancock use.

3.1.4 Fish and Game Protest

Fish and Game's protest was based on possible injury to fishery resources in Tule Lake Reservoir, including Sacramento perch and channel catfish, because of excessive drawdown of stored water. Fish and Game withdrew its protest against Hancock's applications after Hancock agreed to recognize and maintain a minimum pool of 6190 acre-feet in Tule Lake Reservoir.

3.2 Protests Against Application 28518

Protests were filed against Application 28518 of Barbara Dean Jones by Lowell Novy, Hancock, PG&E, Fish and Game, and Ratliff. The protests of Novy, Hancock and Ratliff were based on their competing applications to appropriate water. The PG&E protest and the Fish and Game protest were on the same bases as are discussed in findings 3.1.1 and 3.1.4 above. Before the hearing, Jones entered into a cooperative agreement with Novy and Ratliff which effectively nullified their protests.

3.3 Protests Against Application 28570

Protests were filed against Application 28570 of Rex B. Olsen by Lowell Novy, Hancock, and PG&E. Novy's and Hancock's protests were based on their competing applications to appropriate water. Novy's protest was nullified by the sharing agreement reached before the hearing, between Olsen, Novy, Ratliff, and Jones. (See Paragraph 2.6, above.) PG&E's protest was on the same basis as discussed in finding 3.1.1 above.

3.4 Protests Against Application 28571

Protests were filed against Application 28571 of Ratliff by Lowell Novy, Hancock, and PG&E. Novy's and Hancock's protests were based on their competing applications to appropriate water. Novy's protest was nullified by the sharing agreement reached before the hearing, between Ratliff, Novy, Jones and Olsen. PG&E's protest was on the same basis as discussed in finding 3.1.1 above.

3.5 Protests Against Application 28610

Protests were filed against Application 28610 of Lowell L. Novy by Hancock, Ratliff, PG&E, and Fish and Game. Hancock's and Ratliff's protests were based on their competing applications to appropriate water. Ratliff's protest was nullified by the sharing agreement reached before the hearing, between Ratliff, Novy, Jones, and Olsen. PG&E's protest and Fish and Game's protest were on the same bases as are discussed in findings 3.1.1 and 3.1.4 above.

4.0 BACKGROUND

The Tule Lake Reservoir and the upper reach of Cedar Creek are part of an existing irrigation system constructed for the Madeline Plains north of Brockman Road in the early 1900s. Originally, the construction included a 16-feet high, 1100-feet long earth dam that prevented downstream flow in Cedar Creek, a gated tunnel through a ridge into the Madeline Plains watershed, and an earthen ditch leading from the tunnel to the Madeline Reservoir. The gated tunnel is on the opposite side of the reservoir from the dam.

Tule Lake Reservoir itself is a shallow geological sink, filled with water. With the dam, its maximum capacity is 35,000 acre-feet. Geological evidence indicates that the site of Tule Lake Reservoir historically was a marsh area in a small watershed. Before the dam was built, the sink had no outlet until it was full enough to spill into the Pit River watershed.

The Madeline Reservoir is a part of the Tule Lake Reservoir System to which rights were adjudicated in the 1986 Decree. It regulates water from Tule Lake Reservoir into the surface water irrigation system that serves the Madeline Plains. From Madeline Reservoir, water is released into two irrigation canals, the East Side Canal and the West Side Canal. The East Side Canal serves the lands of applicants Jones, Olsen, and Ratliff. The West Side Canal serves the lands of applicants Ratliff and Novy and other holders of adjudicated water rights from the Tule Lake and Madeline Reservoirs.

The rights to the use of water from Tule Lake Reservoir System have been adjudicated twice. In 1953 the Lassen County Superior Court entered a decree in the case of Williams, et al. v. Laras, et al., Case No. 7360. In 1953 the court allotted a yield of 3190 acre-feet of water per annum from Tule Lake Reservoir, and imposed an annual holdback of 3190 acre-feet as carryover for the following year in case no water was stored during the intervening winter. This represented all of the water the system was assumed to yield reliably.

In 1986 the Lassen County Superior Court entered a second decree, in the Matter of the Determination of the Rights of the Various Claimants to the Waters of Tule Lake Reservoir System in Lassen County, California, Superior Court No. 17327. In the 1986 decree only 2820 afa was found to be held under current rights by claimants. Rights in the balance of the water had passed into the hands of landowners who did not use their rights, and the rights could not be traced to current water users. Therefore, water was available for appropriation.

Before the Board announced that water was available for appropriation, Hancock filed Applications 27749 and 27851. After the Board announced in the Order of Determination that unappropriated water was available, Jones, Olsen, Ratliff, and Novy filed Applications 28518, 28570, 28571, and 28610, respectively. These applicants are referred to collectively as the Jones-Novy applicants. Since all six applications compete for the same water, they were heard together at a Board hearing on October 23 and 24, 1986.

5.0 AVAILABILITY OF WATER FOR APPROPRIATION

5.1 Hydrological Characteristics of Tule Lake Reservoir

Three hydrological analyses were before the Board during the hearing. They were prepared by (1) the Board's staff as part of the investigation of Tule Lake Reservoir for the Tule Lake Reservoir System Adjudication upon which a decree was entered by the Lassen County Superior Court in February 1986 (Case No. 17327), (2) the engineer for Hancock, using independent data, and (3) the engineer for Jones, Olsen, Ratliff, and Novy (hereinafter the "Jones-Novy applicants") using the data developed by the Board's staff for the adjudication. All three of the hydrologies are estimated, because no known records exist of historical inflows or outflows for Tule Lake Reservoir before 1977.

The watershed of Tule Lake Reservoir occupies about 80 square miles, including the drainage for upper Cedar Creek and several small

ephemeral streams which drain directly into the reservoir. The elevation of the watershed ranges from 5500 feet to 8000 feet.

The capacity of Tule Lake Reservoir is 35,000 acre-feet. The reservoir has a surface area of 2,500 acres, and loses approximately 4,500 acre-feet to evaporation annually. The physical minimum pool of the reservoir is 3000 acre-feet and the adjudication minimum pool is 6190 acre-feet, which includes a 3190 acre-feet carryover requirement for use of the adjudicated right holders in a year after inadequate flow has occurred.

The three hydrologies before the Board differ in the amounts of mean annual runoff and reservoir yield. The hydrology proposed by Hancock's engineer is the most likely estimate of the three. Further, the engineer for the Jones-Novy applicants agreed during the hearing that the Hancock analysis was reasonable and could be used in this proceeding. The Hancock estimates of inflow are based on runoff factors developed from the South Fork Pit River above the Jess Valley gage. The estimates correlate very well with reported spills from Tule Lake Reservoir. Consequently, we will use the Hancock estimates of inflow to determine the amount of water available for appropriation from Tule Lake Reservoir.

5.2 Prior Rights

5.2.1 Adjudicated Rights

In February 1986 a decree was entered by the Lassen County Superior Court in the second adjudication of the rights to the waters of the

Tule Lake Reservoir System. The decree describes the water rights that existed in 1986. Rights existed to use a total of 2820 afa, under pre-1914 water rights. Additional water, while it apparently was being used without right in the Madeline Plains before the second adjudication commenced, was legally available for appropriation. One protestant, Pierre Mendiboure, protested on the basis that any newly approved appropriations should not impair his prior rights under the decree. We agree with Mr. Mendiboure that the rights described in the 1986 decree are senior to all subsequent water rights from the Tule Lake Reservoir System, and should not be impaired by the Board's granting appropriative rights to applicants herein. We will include a condition in the Order herein which will subject the use of water under new permits to all prior rights.

5.2.2 PG&E Rights in the Pit River Watershed

Pacific Gas and Electric Company (PG&E) claims that it has prior rights to flows from upper Cedar Creek, and that no new diversions should be authorized when the flow past the Canby gage on the Pit River is less than 300 cfs. (PG&E does not claim seniority over the adjudicated rights since the adjudicated rights are earlier in time than PG&E's appropriative rights.)

PG&E's claim is based on an alleged hydraulic continuity between upper Cedar Creek and PG&E's powerhouses on the Pit River. Basically, PG&E asserts that it is a prior downstream water right holder, and that the proposed appropriations will impair PG&E's water rights. Conversely,

the applicants argue that Tule Lake Reservoir has the legal status of a natural lake, and does not have hydraulic continuity with the Pit River watershed.

5.2.2.1 Hydraulic Continuity

The alleged hydraulic continuity upon which PG&E bases its claim to senior water rights has in fact existed only rarely since 1910 when Tule Lake Dam was constructed. The dam contains no outlet pipe to release flows downstream in Cedar Creek. Water could pass the dam from 1910 to 1938 only by spilling over the dam. No evidence is in the record of any spill over the dam between 1910 and 1938, when the reservoir filled and the dam almost failed. Indeed, the circumstantial evidence is that the first spill was in 1938. After the 1938 spill, a spillway was constructed by the water users. Since then, spills have occurred in some of the wettest years. Aside from wet year spills, water from upper Cedar Creek has been in hydraulic continuity with the Pit River since 1910 only by the deliberate diversions of Applicant Hancock and its predecessors since 1977.

As explained above in Paragraph 4.0, Tule Lake Reservoir occupies a natural geological sink. Hydrologically, the sink is the low point of a small watershed, separate from both the Pit River watershed and the Madeline Plains watershed. In wet years the lake may fill and spill over into the Pit River watershed along a watershed boundary that is located at the site of Tule Lake Dam. Effectively, the dam raises the watershed boundary several feet to the spillway, and brings the lake's capacity to 35,000 acre-feet.

Tule Lake Dam serves as a watershed boundary for the Tule Lake watershed, and consequently as a barrier to hydraulic continuity with the Pit River in most years. It has no outlet pipe to the lower reach of Cedar Creek and has never had such a pipe. Further, there is no evidence that the dam has been maintained within the past forty years. With little attention, the dam can be expected to last indefinitely.

We disagree with PG&E's argument that the dam cannot be deemed legally a natural condition because it is regulated by the Division of Dam Safety of the Department of Water Resources. First, the dam predates the jurisdiction of the Division of Dam Safety by a sufficient period to have given it the status of a natural condition before it was regulated. Second, we know of no legal reason to find that the dam's regulatory status alters its status for purposes of water right law.

Tule Lake Reservoir is fed largely by the upper reach of Cedar Creek (hereinafter termed upper Cedar Creek). Upper Cedar Creek flows into Tule Lake Reservoir through a channel that is parallel to the dam and more than 100 feet from the dam. It does not flow against the dam. Rather, it flows toward the shallow sink which is Tule Lake Reservoir. The current course of upper Cedar Creek may be the result of re-channelling the creek to run through a low watershed boundary into Tule Lake. Alternatively, it may be the natural course of the creek. However, the channel's origin is unimportant. What is important is that the current course of the creek is permanent and

long continued, requires no maintenance, and puts upper Cedar Creek in the watershed of Tule Lake, rather than in the watershed of the Pit River, except in the wettest periods when the Tule Lake watershed becomes tributary to the Pit River watershed. The status of upper Cedar Creek as part of the Tule Lake watershed was recognized in 1933 by a predecessor of the Board, the Division of Water Resources, in a report on "Water Supply and Use of Water on South Fork of Pit River and Tributaries". The report was prepared during investigation of the South Fork Pit River for a court reference of a general adjudication of the South Fork Pit River. In the report, it is stated, "an area of about 46 square miles of the watershed of Cedar Creek has been severed from the watershed of South Fork of Pit River by diversion through a low pass into Tule Lake Reservoir".

Until this proceeding, PG&E and other water users on the Pit River have acquiesced in the existence of Tule Lake Dam and the course of upper Cedar Creek into Tule Lake.

Because the course of upper Cedar Creek and the dam are permanent in nature, are long continued, and have been acquiesced in by PG&E and other water users on the Pit River, Tule Lake Reservoir has the legal status of a natural lake in a separate watershed that is only rarely in hydraulic continuity with the Pit River watershed. Chowchilla Farms, Inc. v. Martin (1933) 219 Cal. 1, 25 P.2d 435; Clement v. State Reclamation Board (1950) 35 Cal.2d 628, 220 P.2d 897; Buchanan v. Los Angeles County Flood Control Dist. (1976) 128 Cal.Rptr. 770, 56 Cal.App.3d 757.

5.2.2.2 The Extent to Which PG&E's Right Limits the Amount Available for Appropriation

In periods of hydraulic continuity between the Tule Lake watershed and the Pit River, senior water right holders on the Pit River, including PG&E, have a claim to water originating in upper Cedar Creek and other streams in the Tule Lake watershed. However, in such periods ample flow is available in the Pit River from all of its tributaries to satisfy PG&E's claim to 300 cfs at the Canby gage. Therefore, PG&E would have no use for the spills from the Tule Lake watershed even when they occurred. Since PG&E would have no use for the water during the periods of hydrologic continuity, it would be unreasonable under Calif. Const. Art. X, § 2, to require the bypass of flows for PG&E's benefit if adequate flows existed to fill and spill from Tule Lake Reservoir absent diversions under the applications herein.

5.2.2.3 Delta Outflow

On public policy grounds, PG&E argues that upper Cedar Creek should not be found to have been severed from the Pit River watershed, because the water can be used to achieve water quality standards in the Sacramento-San Joaquin Delta. However, because upper Cedar Creek and Tule Lake Reservoir are not in hydraulic continuity with the Pit River watershed except in the wettest periods, the contribution to the Delta from upper Cedar Creek and the Tule Lake Reservoir would be insignificant and extremely infrequent. Additionally, we have no evidence that such releases would be beneficial. Consequently, we have no reason at this time to require releases for this purpose.

5.3 Amount of Water Available

There are several existing demands for the waters of Tule Lake Reservoir and upper Cedar Creek. Satisfaction of the existing demands is required by the 1986 Decree. The existing demands include adjudicated water rights totalling 2820 acre-feet and a minimum pool of 6190 acre-feet which is composed of dead storage of 3000 acre-feet plus 3190 acre-feet of carry-over storage for (1) the use of the adjudicated water right holders during a year in which inadequate runoff has occurred to supply the adjudicated water rights, and (2) public trust uses of the water in Tule Lake Reservoir. In order to protect the minimum pool and the adjudicated water rights a storage level (hereinafter referred to as a "protection level") must be set above which water may be appropriated from the reservoir. We have selected a protection level of 13,510 acre-feet. Under this protection level, the minimum pool would be encroached upon because of the new appropriations in only seven percent of the years if permits are issued for 4500 acre-feet. This is an acceptable short-term impact occurring in dry years. If the protection amount were raised to 18,000 acre-feet, there would be no impact on the minimum pool. However, this would reduce by approximately half the number of years in which water would be available for appropriation, making the water supply unreliable and promoting a less efficient use of the water. The ordered protection level will provide the most benefit for all of the beneficial uses dependent on the waters of the reservoir.

Considering the amounts necessary to satisfy existing demands on the reservoir and the evidence in the record regarding inflow to the reservoir in most years, we find that 4500 afa is available for appropriation.

Hancock also requested a 4500 acre-feet carryover supply for the following year after each annual appropriation. This is based in part on the existence of a similar carryover for the decreed right holders. The decreed carryover reservation is the result of an agreement among all of the water right holders in 1945, and was continued by the 1953 Decree. No evidentiary reasons either similar to those for the decreed rights or adequate to show a need for a further carryover are available in our record, and the requirement of a carryover would reduce the frequency when 4500 afa is available. Therefore, we will not require an additional carryover of 4500 afa for irrigation use in the following year.

6.0 ENVIRONMENTAL AND PUBLIC TRUST CONSIDERATIONS

6.1 Compliance With the California Environmental Quality Act (CEQA)

The Board has prepared a final environmental impact report (EIR) in accordance with the CEQA (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (14 Cal.Admin.Code Section 15000 et seq.).

At the hearing on these applications the draft EIR was available in the files of these applications, and the files were introduced and

accepted in evidence as State Water Resources Control Board Exhibit 1. A revised draft EIR was subsequently prepared and circulated to the parties. Comments were evaluated and responses were prepared and included in the final EIR. The resulting final EIR is hereby accepted and included in the hearing record as part of State Water Resources Control Board Exhibit 1.

6.1.1 Mitigation Required

The Board has reviewed and considered the information contained in the EIR prior to approving the projects, and has placed terms and conditions on the operation of the approved projects to mitigate the significant environmental impacts as follows:

1. To mitigate potential adverse impacts to sandhill crane nesting habitat within the place of use of Application 28570 (Rex B. Olsen and Veronica Olsen), the area identified in the EIR as sandhill crane nesting habitat will be limited to the existing use, irrigated pasture, as long as sandhill cranes are listed by the Department of Fish and Game as a threatened or endangered species.

2. To mitigate adverse impacts to wildlife as a result of increased water use and possible changes in water use in the Novy place of use under Application 28610, the permittee will be required, at least six months before converting lands from pasture to alfalfa, to consult with the Department of Fish and Game and make an agreement with the Department of Fish and Game to carry out any

mitigation measures. We will reserve jurisdiction to require any necessary additional terms and conditions to ensure that mitigation is carried out.

3. To mitigate adverse impacts of fish and wildlife populations and habitat as a result of drawdown of Tule Lake Reservoir below the minimum pool level (6190 acre-feet), we will establish a protection level for the reservoir. Appropriations approved herein would be authorized only to the extent water in excess of the protection level were available in the reservoir in the spring before the irrigation season. A protection amount of 13,510 acre-feet or more combined with a total appropriation limited to 4500 acre-feet will produce no significant impact to the fish and wildlife populations and habitat that are dependent on the minimum pool. This protection level also will protect prior water rights defined in the 1986 Decree, which include carryover storage for drought protection. Consequently, the protection level will be 13,510 acre-feet.

6.1.2 No Unmitigated Adverse Impacts

The terms and conditions placed on the permits to be issued herein mitigate or avoid the specified adverse environmental impacts of the approved projects.

6.2 Public Trust Considerations

The terms and conditions imposed on the approved projects under CEQA to mitigate the adverse environmental impacts identified in the EIR

will protect public trust uses of the water. The terms and conditions are feasible and are reasonable under Article X, Section 2 of the California Constitution.

7.0 DISTRIBUTION OF WATER

As we found in part 5.3 above, 4500 afa is available for appropriation from Tule Lake Reservoir and upper Cedar Creek in most years. During the hearing, both the Jones-Novy applicants (Jones, Ratliff and Wool, Olsen, and Novy) and Hancock presented evidence that at least this amount is available for appropriation. Likewise, each set of applicants argued that it should be granted the full 4500 afa.

7.1 Beneficial Use

An equal division between the two sets of applicants would result in a duty of water of one acre-foot per acre or less in the proposed places of use. This supply would be available in about 78 percent of the years. In other years, less water would be available.

The parties all argue that they can irrigate their lands adequately with 2 acre-feet per acre. This is a minimal amount. If all of the available 4500 afa were allocated to one set of applicants, it would be barely adequate for the purposes of use. To benefit the water users, the water should not be spread so thinly that it fails to support the intended uses of the water. Rather, the uses of water should be beneficial under all the circumstances. See Water Code §§ 100, 1240, 1241, and 1375(c). Consequently, we will allocate the entire available yield to one set of applicants.

7.2 Legal Considerations

The legal question herein is, what are the powers and obligations of the Board when it considers competing applications for the same water, and inadequate water is available for all proposed uses?

Under current law, all new appropriations of water must be acquired in accordance with Division 2 of the Water Code. Water Code § 1225; People v. Shirokow (1980) 162 Cal.Rptr. 30, 26 Cal.3d 396. The Water Code contains a comprehensive scheme for the regulation of appropriative rights by the Board. People v. Shirokow, supra; Water Code § 1200 et seq. This comprehensive scheme includes a provision that requires that the Board reject an application to appropriate water if the proposed appropriation would not best conserve the public interest. Water Code § 1255. Other sections also emphasize the importance of the public interest in approving water right applications. Water Code §§ 1253, 1256, 1257, 1243.5, 1243, 105. Courts have repeatedly recognized the importance of the public interest in the Board's approval of water right permits. See, for example, People v. Shirokow, supra, at 162 Cal.Rptr. 36 ("If the board determines a particular use is not in furtherance of the greatest public benefit, on balance the public interest must prevail."); Bank of America Nat. T. & S. Ass'n. v. State Water Resources Control Board, (1974) 116 Cal.Rptr. 770, 779, 42 Cal.App.3d 198 ("... the primary statutory standard controlling the Board's consideration of applications to appropriate water is the public interest." (citation

omitted)); Johnson Rancho County Water Dist. v. State Water Rights Board (1965) 45 Cal.Rptr. 589, 596, 235 Cal.App.2d 863 ("'Public interest' is the primary statutory standard guiding the Water Rights Board in acting upon applications to appropriate water. (Citing §§ 1253-1256.) The Board is to consider the variety of beneficial uses which the particular water may serve and may subject the appropriation to conditions which will best develop and conserve the water in the public interest." (Citing § 1257.))

The public interest has been applied to determinations between competing applications with differing priorities. In Johnson Rancho County Water District, supra, the Board after a hearing had approved one set of applications in preference to another competing set of applications. Priorities of individual applications in each group overlapped with those in the other group. Because the two projects conflicted physically, only one could be approved. The Board found that the public interest would be served by one of the two projects, but not by the other project. In United States v. Fallbrook Public Utility District (1958) 165 F.Supp. 806, the District Court pointed out that the relative priority dates of applications of parties who were then before the court did not determine which applications would be approved in a water right proceeding before the Board's predecessor; that the public interest would control. In pertinent part, the court stated that it would not decide the priorities of the parties' applications when "a priority date is not determinative of entitlement to a permit." In United States v. State

Water Resources Control Board (1986) 182 Cal.App.3d 82, 227 Cal.Rptr. 161, the Court of Appeal held that the Board has discretion to change the relative priorities of even existing appropriations to protect the public interest. Id., at 182 Cal.App.3d 132, 133. Finally, it has been held that a permit can be given a lower priority than a future appropriation for which no application has yet been filed. East Bay M. U. Dist. v. Dept. of Public Works (1934) 1 Cal.2d 476, 35 P.2d 1027. In East Bay M. U. Dist., the Supreme Court upheld an action of the Board's predecessor in which East Bay MUD's permit for power purposes was made subordinate in priority to future permits for agricultural or municipal uses.

In light of the foregoing, protection of the public interest is clearly the Board's primary consideration in deciding between applications to appropriate water. Under factual circumstances that support a particular action to protect the public interest, the Board may approve one application in preference to another, impose terms and conditions on an appropriation of water, subordinate an appropriation to appropriations with a later application filing date, or take other appropriate actions. Consequently, when all applications cannot be approved or when an issue arises whether one application should have priority over another, the Board must consider whether and under what circumstances each proposed appropriation is in the public interest.

7.3 Evidence of the Public Interest in the Applications

Both Hancock and the Jones-Novy applicants have presented evidence of a need for the full 4500 afa available for appropriation from Tule Lake Reservoir and upper Cedar Creek. Likewise, both groups of applicants expect to be equally efficient in their use of water, applying approximately 2 afa per acre for irrigation.

As we stated above, inadequate water is available for the water needs of both groups of applicants to be served from Tule Lake Reservoir and upper Cedar Creek. Likewise, the available water should be allocated to one group or the other, and not divided.

7.3.1 Filing Dates

Hancock filed its applications to appropriate water in 1983, approximately two years before the Jones-Novy applicants filed their applications. Hancock filed its applications during the course of the adjudication of water rights which led to the 1986 Decree. After the Board adopted its Order of Determination in 1985, the Jones-Novy applicants filed their applications. Subsequently, less than a month before the hearing in this matter, Hancock filed a petition to add its alternative place of use in the Madeline Plains.

The Board did not proceed on the original Hancock applications immediately after they were filed, because the adjudication had not been completed and there was uncertainty as to the availability of water for appropriation. Since there could be no consideration of the

applications until the adjudication was completed, and the Jones-Novy applications were filed between the adoption of the Order of Determination and the entry of the Decree, all the applications were ready to be considered close to the same time, and consideration of them in the same proceeding was appropriate.

By considering them together, the Board does not disregard the earlier original filing dates of the Hancock applications. Rather, the joint consideration gives the Board the best opportunity to ensure that the public interest is served and that the water is put to beneficial use to the fullest extent of which it is capable. This case is unusual factually, and our conclusions herein are based on the specific facts of this case.

7.3.2 Public Interest Considerations

The basic public interest issue is where the water should be put to use. Resolution of this issue will determine which applications should be approved. Three general places of use have been proposed: the Madeline Plains north of Brockman Road (Jones-Novy applications and part of the Hancock change of place of use petition), the Madeline Plains south of Brockman Road (Hancock), and a place of use south of Alturas (Hancock). The latter two places are alternatives. Water would be used in one or the other place in any year, but not in both places.

Several factors should be considered in this case in determining which place of use will best develop, conserve, and utilize in the public

interest the water sought to be appropriated. Water Code § § 1253. These include, not necessarily in their order of importance: (1) the purpose of the Tule Lake Reservoir System, (2) historical use, (3) relative needs of the applicants, (4) the availability of alternative water sources, and (5) environmental considerations.

7.3.2.1 Purpose of Tule Lake Reservoir System

Regarding the first factor, we note that the Tule Lake Reservoir System was constructed in or about 1910 for the purpose of providing an agricultural water supply for that portion of the Madeline Plains north of Brockman Road. The System's physical characteristics include a dam along the watershed boundary between the Tule Lake watershed and the Pit River watershed; a gated tunnel through the hill which separates the Tule Lake watershed from the Madeline Plains watershed; Madeline Reservoir which serves as a regulating reservoir; the East Side Canal running 1.15 miles on the eastern side of Madeline Plains serving the lands of applicants Jones, Olsen, and Ratliff; and the West Side Canal running 15.2 miles on the western side of Madeline Plains serving the lands of applicants Ratliff, Novy, and Hancock as well as other adjudicated right holders. The evidence shows that the System as constructed was intended to serve only that area of the Madeline Plains north of Brockman Road and accessible to the canals. Since the System was constructed to provide a dedicated water supply for the northern Madeline Plains, and that area still needs the water supply, the public interest favors continuing the dedication of the water supply to the northern Madeline Plains within the places of use that can be feasibly served.

7.3.2.2 Historical Use

The second factor to be considered is historical use. Preliminarily, we recognize that the adjudicated water rights of the northern Madeline Plains users are limited to one acre-foot per acre because of the historical designation of water rights. However, this does not mean that more water has not been used in the northern Madeline Plains or that the area has not relied upon the full yield. It means, simply, that someone identified the right officially as one acre-foot per acre, and this right carried through in land titles. The evidence shows that the full yield of the reservoir was used beneficially on the northern Madeline Plains for 67 years, from the time of the project's construction until 1977 when Hancock's predecessor commenced diverting water to its lands near Alturas. While not all of the land in the area was irrigated from the reservoir, we have evidence that the proposed places of use of the Jones-Novy applications have been irrigated from the reservoir to the extent that water has been available to them. Additionally, the evidence shows that the appropriate duty of water is approximately 2 acre-feet per acre in the Madeline Plains and that currently there is unirrigated land in the northern Madeline Plains which historically was irrigated.

Although the exclusive use of water from the System on the northern Madeline Plains has been interrupted since 1977, the intervening period has been one of continual litigation over the use of water from the System, not a settled state of affairs. This is not the sort of

situation under which a new user of water such as Hancock can develop a historical reliance on the diversion of water to another place of use. Consequently, this factor points toward the public interest being best served by continuing the exclusive place of use on the northern Madeline Plains.

Parenthetically, we note that Hancock owns land within its proposed place of use which is in the northern Madeline Plains west of the Novy property. This land constitutes a small fraction of the land in Hancock's proposed place of use in the Madeline Plains. The evidence shows that the Hancock lands north of Brockman Road have not been irrigated since at the latest 1968 or 1969 until 1986, and were not within the irrigation place of use of Tule Lake Reservoir water when the reservoir system was adjudicated in 1986. In 1986 a well was installed which is capable of irrigating these lands. We lack evidence in the record that these lands feasibly can be irrigated from Tule Lake Reservoir or that Hancock has any plans to irrigate them from Tule Lake Reservoir. No such plans were presented at the hearing. Rather, Hancock's witnesses mentioned a plan to irrigate these lands from a new reservoir system being constructed in the southern Madeline Plains.

7.3.2.3 Needs of the Applicants

The third factor to be considered is the needs of the applicants for water in their proposed places of use. The evidence shows that water can be put to beneficial use in any of the three places of use. Since

all of the proposed uses are agricultural, the needs of the applicants are approximately equal.

7.3.2.4 Availability of Alternative Water Sources

The fourth factor to be considered is the availability of alternative water sources. The Hancock place of use south of Alturas has available 788 afa from Bayley Reservoir. In order to irrigate the 2412 developed acres within its proposed place of use, Hancock needs an additional 4036 afa. If the additional water came from Tule Lake Reservoir, an amount would have to be added for ditch losses. Thus Hancock would need 4500 afa from Tule Lake Reservoir. Hancock could obtain alternative water supplies from either ground water or by purchase from other water users or the South Fork Irrigation District. However, the reliability and quantities of alternative supplies are uncertain.

The Hancock place of use in the Madeline Plains has available adequate alternative supplies from ground water and surface water to supply Hancock's needs in that area. Use of these alternative supplies is feasible, and Hancock is proceeding to develop them.

The Jones-Novy applicants have no feasible alternative water supply for agricultural uses. Wells in the northern Madeline Plains are not sufficiently productive to provide water to irrigate crops or pasture. No surface water supply other than the Tule Lake Reservoir System is available for these places of use. A total of 918 afa were allocated to the Jones-Novy applicants in the

1986 Decree. These applicants need the additional yield from Tule Lake Reservoir in order to irrigate their crops and pastures adequately.

7.3.2.5 Environmental Considerations

The fifth and final factor to be considered is the effects on the environment of use of water in the various proposed places of use.

In the Hancock place of use south of Alturas, 1440 acres of antelope winter range have been converted to alfalfa. This provides no winter food source and may adversely impact the antelope, even with mitigation measures.

In the Hancock place of use in the southern Madeline Plains, 14,460 acres are being converted to alfalfa, only 2412 acres of which could be irrigated from Tule Lake Reservoir. The balance would be irrigated from a recently developed ground and surface water supply. The place of use has been used as antelope summer range and as seasonal wetlands habitat for migratory waterfowl. Even with mitigation measures, the change to irrigated cropland may have significant environmental impacts on the waterfowl. However, it is uncertain whether these impacts are attributable to the use of water from Tule Lake Reservoir.

In the Olsen place of use, there will be no unmitigated adverse environmental impact as a result of additional water use. The terms and conditions required for Application 28570 will adequately mitigate the adverse impacts.

In the Ratliff and Wool place of use and in the Jones place of use, there will be no adverse environmental impacts as a result of additional water use.

In the Novy place of use, there is a potential for a significant impact. We will require measures to mitigate the impact if it occurs.

7.4 Conclusion Regarding Water Distribution

Based on the foregoing factual and legal considerations, we find that the public interest will be best served, and the water will be best developed, conserved, and utilized in the public interest by its use in the northern Madeline Plains, under the applications filed by the Jones-Novy applicants, and subject to the terms and conditions discussed herein and set forth in our order. This use of the water is in accordance with the historical purpose of the reservoir system, serves the greatest need because no alternative source of water is available, and continues a historical use which has been relied upon since 1910 except for the recent interruption during which administrative and court proceedings have been conducted. Consequently, we approve Applications 28518 (Jones), 28570 (Olsen), 28571 (Ratliff), and 28610 (Novy), and we deny Applications 27749 and 27851 (Hancock). Since Hancock will not be diverting water to the Alturas place of use, the siphon over the spillway at Tule Lake Reservoir should be removed.

8.0 OVERALL CONCLUSIONS

Based on the foregoing findings and analysis, we conclude as follows:

1. Water is available for appropriation from Tule Lake Reservoir and upper Cedar Creek during most years up to at least 4500 afa.

2. We will not require the permittees to release water into lower Cedar Creek for the benefit of PG&E.

3. There will be no unmitigated adverse environmental impacts as a result of this action.

4. Applications 28570 of Rex B. and Veronica Olsen, 28571 of Tom and Marcia Ratliff and Don Wool, 28610 of Lowell L. Novy, and 28518 of Barbara Dean Jones will best conserve the public interest and should be approved for use in the proposed places of use in the following amounts: Application 28518, 315 afa; Application 28570, 157.5 afa; Application 28571, 1237.5 afa; Application 28610, 2790 afa. All of the permits issued should be of equal priority in accordance with the sharing agreement among these applicants.

5. Applications 27749 and 27851 of John Hancock Mutual Life Insurance Company would not best conserve the public interest and therefore should be denied.

6. Conservation of the flow of upper Cedar Creek in Tule Lake Reservoir for use in the northern Madeline Plains for irrigation and for use in the reservoir for protection of fish and wildlife is reasonable and beneficial.

ORDER

IT IS HEREBY ORDERED that Applications 28518, 28570, 28571, and 28610 be approved for irrigation and stockwatering purposes and that permits equal in priority be issued to the applicants subject to prior rights. All of the permits shall contain standard permit terms 6, 9, 10, 11, 12, 13 and 23. Application 28610 shall, in addition, contain standard permit term 29C. (A copy of the Board's standard permit terms is available upon request.)

IT IS FURTHER ORDERED that the quantities of water and the seasons of diversion shall be as follows:

1. For Application 28518, the water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 4.0 cubic feet per second by direct diversion to be diverted from April 1 to October 31 of each year and 315 acre-feet per annum by storage to be collected from October 1 of each year to June 30 of the succeeding year. The total amount of water to be taken from the source shall not exceed 315 acre-feet per water year of October 1 to September 30.

2. For Application 28570, the water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed (1) 2.003 cubic feet per second by direct diversion as follows: up to 2250 gallons per day is to be diverted from January 1 to December 31 of each year for the purpose of stockwatering and up to 2 cubic feet per second is to be diverted from April 1 to October 31 for the purpose of irrigation, and (2) 157.5 acre-feet per annum by storage to be collected from October 1 of

each year to June 30 of the succeeding year. The total amount of water to be taken from the source shall not exceed 157.5 acre-feet per water year of October 1 to September 30.

3. For Application 28571, the water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed (1) 5.008 cubic feet per second by direct diversion, as follows: up to 5000 gallons per day is to be diverted from January 1 to December 31 of each year for the purpose of stockwatering and up to 5 cubic feet per second is to be diverted from April 1 to October 31 for the purpose of irrigation and (2) 1237.5 acre-feet per annum by storage to be collected from October 1 of each year to June 30 of the succeeding year. The total amount of water to be taken from the source shall not exceed 1237.5 acre-feet per water year of October 1 to September 30.

4. For Application 28610, the water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 12.0 cubic feet per second by direct diversion to be diverted from April 1 to October 31 of each year and 2790 acre-feet per annum by storage to be collected from October 1 of each year to June 30 of the succeeding year. The total amount of water to be taken from the source shall not exceed 2790 acre-feet per water year of October 1 to September 30."

IT IS FURTHER ORDERED that in addition to the above-enumerated standard permit terms and conditions, the permits shall be subject to the following terms and conditions:

1. All permits shall be subject to the following:

   a. Permittee shall be responsible for installing and maintaining in Tule Lake Reservoir a staff gage satisfactory to the State Water Resources Control Board, for the purpose of determining water levels and the amount of water held in storage in the reservoir.

   b. Permittee shall be responsible for recording the staff gage reading at the beginning and end of the irrigation season and shall report the readings to the State Water Resources Control Board by December 1 of each year.

   c. Water appropriated under this permit is available only when the amount of water contained in Tule Lake Reservoir at the beginning of the irrigation season (on or before April 1 of each year) is in excess of 13,510 acre-feet. When the amount of water in Tule Lake Reservoir at the beginning of the irrigation season is in excess of 18,010 acre-feet, permittee may divert and use the full amount authorized under this permit. When less than 18,010 acre-feet is in the reservoir, permittee shall divert and use a proportionate share of the amount in the reservoir in excess of 13,510 acre-feet. The proportionate share shall be the percentage allocated to the permittee from the total amount authorized for appropriation under Applications 28518, 28570, 28571, 28610, multiplied by the amount of water in the reservoir in excess of 13,510 acre-feet.

2. The permit on Application 28570 shall be subject to the following term or condition:

   The area in the place of use within the S1/2 of the SW1/4 of Section 15, T37N, R13E, MDB&M identified in the Environmental Impact Report dated January 1988 as Sandhill Crane Nesting Habitat shall be limited to pasture to maintain the existing crane nesting habitat, as long as sandhill cranes are listed by the Department of Fish and Game as threatened or endangered species.

3. The permit on Application 28610 shall be subject to the following term or condition:

   a. Permittee shall avoid or mitigate any adverse impacts to wildlife because of a change from pasture to other crops. At least six months prior to any conversion of lands from pasture grass to alfalfa or other crops in the place of use, the permittee shall consult with the Department of Fish and Game regarding the planned conversion, and shall carry out any measures agreed to by permittee and the Department of Fish and Game to avoid or make insignificant any adverse impacts to wildlife habitat.

   b. The State Water Resources Control Board reserves jurisdiction over this permit to amend the terms and conditions to ensure that any adverse impacts to wildlife habitat because of a change from pasture to other crops is avoided or made insignificant. Action by the Board will be taken only after notice to interested parties and opportunity for hearing.

IT IS FURTHER ORDERED that Applications 27749 and 27851 of John Hancock Mutual Life Insurance Company are denied.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a decision duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 7, 1988.

AYE: W. Don Maughan
Edwin H. Finster
Eliseo M. Samaniego
Danny Walsh

NO: Darlene E. Ruiz

ABSENT: None

ABSTAIN: None

Maureen Marché
Administrative Assistant to the Board

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 88- 36

CERTIFYING FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE TULE LAKE RESERVOIR SYSTEM

WHEREAS:

1. The applicants filed applications 27749, 27851, 28518, 28570, 28571, and 28610 to appropriate water from Cedar Creek.

2. The Board as Lead Agency has prepared and circulated for public review a draft Environmental Impact Report and a revised draft Environmental Impact Report for the applicants' projects.

3. The Board has prepared a final Environmental Impact Report for the applicants' projects.

THEREFORE BE IT RESOLVED THAT:

The State Water Resources Control Board certifies that it has reviewed and considered the final Environmental Impact Report and the final Environmental Impact Report complies with the California Environmental Quality Act.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 7, 1988.

Maureen Marche
Administrative Assistant to the Board