STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

In the Matter of Applications 234, 1465, 5638, 5817, 5818, 5819, 5820, 5821, 5822, and 9369, United States of America;	
Applications 6771, 6772, 7134, and 7135, City of Fresno;	Decision No. D 935
Application 6733, Fresno Irrigation District; and	Source: San Joaquin River Counties: Madera and Fresno
In the Matter of Petitions to Change the Point of Diversion and Place of Use under water right License 1986 (Application 23) of United States of America	

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

Nature of the Proceedings

Fifteen applications by three competing applicants to appropriate unappropriated waters of the San Joaquin River and petitions to change point of diversion and place of use under a license were the subject of a hearing before the State Water Rights Board. This decision outlines the issues involved and sets forth the Order of the Board in connection therewith.

Ten of the applications, namely Applications 234, 1465, 5638, 5817, 5818, 5819, 5820, 5821, 5822, and 9369, are by the United States through its Bureau of Reclamation, Region 2, and are in furtherance of the Friant Division of the Central Valley Project. Four of the applications, namely, Applications 6771, 6772, 7134, and 7135, are by the City of Fresno and Application 6733 is by Fresno Irrigation District. Applications of the City and the District are in furtherance of the acquisition of a supplemental water supply for those entities.

The petitions are to effect certain amendments to License 1986 (Application 23) of the United States. License 1986 confirms a right to divert from the San Joaquin River at a point downstream from Friant Dam. The petitions seek to likewise incorporate this right into the Central Valley Project. Three additional petitions submitted during the course of the hearing involving Applications 5638, 7134, and 6733, are also considered herein.

Substance of the Applications

United States

Application 234, filed January 19, 1916, by Robert L. Hargrove on behalf of the then proposed Madera Irrigation District and assigned to the United States on June 15, 1939, is for a permit to appropriate 3,000 cubic feet per second (cfs) by direct diversion between February 1 and October 31 of each year, and 500,000 acre-feet per annum (afa) by storage, to be collected between November 1 of each year and August 1 of the succeeding year, from the San Joaquin River for irrigation and incidental domestic purposes. Point of diversion and storage is at Friant Dam located within the NW¼ of SW¼ of Section 5, T11S, R21E, MDB&M*. The place of use includes 353,000 acres net within a gross area of 4,986,000 acres, the service area of the Central Valley Project within the San Joaquin Valley.

Application 1465, filed September 26, 1919, by J. B. High and J. W. Schmitz on behalf of the then proposed Madera Irrigation District and assigned to the United States on June 15, 1939, is for a permit to appropriate 3,000 cfs by direct diversion between February 1 and October 31 of each year, and 500,000 afa by storage to be collected between November 1 of each year and August 1 of the succeeding year, from the San Joaquin River for irrigation and incidental domestic purposes. Point of diversion and storage is at Friant Dam. The place of use includes 353,000 acres net within the Central Valley Project Service Area.

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* Hereinafter all township and range designations are with reference to Mount Diablo Base and Meridian (MDB&M).

Application 5638, filed July 30, 1927, by the State Department of Finance and assigned to the United States on September 30, 1939, is for a permit to appropriate 5,000 cfs by direct diversion, year-round, and 1,210,000 afa by storage*, to be collected between October 1 of each year and August 1 of the succeeding year, from the San Joaquin River for irrigation, incidental domestic and flood control purposes. Point of diversion and storage is at Friant Dam. The lands to be irrigated include 900,000 acres net within the Central Valley Project Service Area.

Application 5817, filed February 2, 1928, by Miller and Lux, Inc., and assigned to the United States on September 14, 1939, is for a permit to appropriate 300 cfs by direct diversion, year-round, from the San Joaquin River for irrigation purposes. Points of diversion are at Friant Dam and at various points downstream therefrom to and including a point within NE¼ of NE¼ of Section 30, T13S, R15E. The place of use is 37,731.5 acres within the Central Valley Project Service Area.

Application 5818, filed February 2, 1928, by Miller and Lux, Inc., and assigned to the United States on September 11, 1939, is for a permit to appropriate 206 cfs by direct diversion, year-round, from the San Joaquin River for irrigation purposes. Points of diversion are at Friant Dam and at various points downstream therefrom to and including a point located within SE¼ of NW¼ of Section 25, T13S, R15E. The place of use is 27,532.41 acres within the Central Valley Project Service Area.

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* Storage of water was originally contemplated at Temperance Flat dam site and later changed by the United States to Friant Dam prior to advertising. Temperance Flat dam site is located some five miles upstream from Friant Dam.

Application 5819, filed February 2, 1928, by Miller and Lux, Inc., and assigned to the United States on September 14, 1939, is for a permit to appropriate 571.8 cfs by direct diversion, year-round, from the San Joaquin River for irrigation purposes. Points of diversion are at Friant Dam and at various points downstream therefrom to and including a point located within SE¼ of SW¼ of Section 12, T11S, R13E. The place of use is 53,966.5 acres within the Central Valley Project Service Area.

Application 5820, filed February 3, 1928, by Miller and Lux, Inc., and assigned to the United States on September 14, 1939, is for a permit to appropriate 735 cfs by direct diversion, year-round, from the San Joaquin River for irrigation purposes. Points of diversion are at Friant Dam and at various points downstream therefrom to and including a point within SW¼ of NE¼ of Section 19, T13S, R15E. The place of use is 58,796 acres within the Central Valley Project Service Area.

Application 5821, filed February 3, 1928, by Miller and Lux, Inc., and assigned to the United States on September 14, 1939, is for a permit to appropriate 277 cfs by direct diversion, year-round, from the San Joaquin River for irrigation purposes. The points of diversion are at Friant Dam and at various points down-stream therefrom to and including a point within NE¼ of NW¼ of Section 22, T13S, R16E. The place of use is 22,170 acres within the Central Valley Project Service Area.

Application 5822, filed February 3, 1928, by Miller and Lux, Inc., and assigned to the United States on September 14, 1939, is for a permit to appropriate 175 cfs by direct diversion, year-round, from the San Joaquin River for irrigation purposes. Points

of diversion are at Friant Dam and at various points downstream therefrom to and including a point within SW¼ of SE¼ of Section 8, T13S, R17E. The place of use is 14,242.85 acres within the Central Valley Project Service Area.

Application 9369, filed August 2, 1938, by the State Department of Finance, and assigned to the United States on September 30, 1939, is for a permit to appropriate 2,000,000 afa by underground storage between October 1 of each year and August 1 of the succeeding year, from the San Joaquin River for irrigation and incidental domestic purposes. Diversion to underground storage is to be effected at Friant Dam at a maximum rate of 5,000 cfs. The place of use is 900,000 acres within the Central Valley Project Service Area.

City of Fresno

Application 6771, filed August 20, 1930, by the City of Fresno, is for a permit to appropriate 25,000 afa by storage, year-round, from the San Joaquin River for irrigation purposes. Point of diversion is at Friant Dam. The place of use consists of 11,488 acres within T13S, R20E and T14S, R20E. The area to be served is described as city parks and areas proposed to be annexed.

Application 6772, filed August 20, 1930, by the City of Fresno, is for a permit to appropriate 150,000 afa by storage, year-round, from the San Joaquin River for municipal purposes. Point of diversion to storage is at Friant Dam. The place of use is the City of Fresno and contiguous territory.

Application 7134, filed December 5, 1931, by the City of Fresno, is for a permit to appropriate 200 cfs by direct diversion,

between March 1 and September 30, from the San Joaquin River for municipal purposes. Point of diversion is at Friant Dam. Place of use is the City of Fresno and contiguous territory.

Application 7135, filed December 5, 1931, by the City of Fresno, is for a permit to appropriate 40 cfs by direct diversion, between March 1 and September 30, from the San Joaquin River for irrigation purposes. Point of diversion is at Friant Dam. The area to be served is described as city parks and areas proposed to be annexed.

Fresno Irrigation District

Application 6733, filed July 15, 1930, by Fresno Irrigation District, is for a permit to appropriate 750 cfs by direct diversion and 200,000 afa by storage, year-round, from the San Joaquin River for irrigation and incidental domestic purposes. Point of diversion and storage is at Friant Dam. Place of use is within the Fresno Irrigation District then comprising a net irrigable area of 241,300 acres.

Substance of License 1986 - United States

License 1986 (Application 23) was issued to Miller and Lux, Inc. on October 17, 1939. The license confirmed a right to appropriate waters of the San Joaquin River to the extent of 373 cfs by direct diversion from about April 1 to about July 1 of each year, provided, however, that diversion under the license be limited to 44,340 acre-feet in any one year and, further provided, that diversions for the irrigation of uncultivated land shall not exceed 2.5 acre-feet per acre. The point of diversion as authorized

is at the Aliso Canal intake within the NE¼ of NW¼ of Section 22, T13S, R16E, and the uses are for irrigation on 22,170 acres within T11, 12 and 13S, R15 and 16E, and for stockwatering and domestic purposes. On October 30, 1939, License 1986 was assigned to the United States. Petitions seeking authority to change the point of diversion to Friant Dam and at various points downstream from Friant Dam to and including the Aliso Canal intake and to enlarge the gross area of the place of use to 4,986,000 acres within the San Joaquin Valley were filed by the United States on December 20, 1951.

Hearing

Applications 234, 1465, 5638, 5817, 5818, 5819, 5820, 5821, 5822, 6733, 6771, 6772, 7134, 7135, and petitions to change points of diversion and place of use under License 1986 were completed and notices thereof given in accordance with the provisions of the Water Code and the applicable rules and regulations. Numerous written protests were received against approval of the applications and the petitions.

On December 30, 1954, notice of public hearing in the matter was mailed to all interested parties of record. Hearing commenced as scheduled before hearing officers of the State Engineer, predecessor in function of the State Water Rights Board, on April 5, 1955, in Fresno, California, and continued until interrupted by order of the United States District Court, Southern District of California, Northern Division. On May 24, 1955, the Court issued a preliminary injunction restraining continuation of the hearing until further order of the court. A Corrected and

Amended Judgment of that court in Rank v. Krug, No. 685-ND, of May 22, 1957, dissolved the injunction.

Pursuant to notice of July 18, 1957, hearing of the applications and petitions was set before the State Water Rights Board on August 19, 1957, in Sacramento, California, and convened on that date for the purpose of establishing procedures to be followed during the remainder of the hearing. It was determined to set aside the record of the previous hearing and to take evidence anew. The hearing reconvened in Fresno, California, on January 6, 1958, for that purpose and, with numerous recesses for the convenience of the parties, extended through March 20, 1959.

During the course of the hearing, the United States filed a petition to change the purpose of use under Application 5638, and the City of Fresno and Fresno Irrigation District filed petitions to change the points of diversion under Applications 7134 and 6733, respectively.

Certain of those parties filing written protests to one or more of the matters being heard failed to appear at the hearing and offer proof in support thereof. Inasmuch as no good cause therefor has been shown within the time allowed, and it being further evident that the issues raised by these protestants do not alter the disposition of the applications and petitions herein considered, the protests of those parties who failed to appear at the hearing are hereby dismissed in accordance with Section 731* of the rules and regulations of the Board.

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* Section 731. Any party in interest who fails to appear at the appointed hour and place will not be entitled to a further hearing unless good cause for such failure is shown to the Board within five days thereafter, and the lack of such showing of good cause may, in the discretion of the Board, be interpreted as an abandonment of interest in the subject matter of the application.

Appearances were made in the proceedings as follows:

Party	Representative
State Department of Fish and Game	Wilmer W. Morse, Attorney
Madera Irrigation District	Ralph M. Brody, Attorney David E. Peckinpah, Attorney Charles F. Hamlin, Attorney
Chowchilla Water District Warren Ocheltree Clarice A. Ocheltree Mansel Ocheltree Althea A. Ocheltree Jerold Ocheltree Hazel O. Ocheltree Phillip Albonico Jane E. Albonico Lyon McKinney Vera McKinney Arnold Sallaberry Marjorie Sallaberry	Denslow Green, Attorney
City of Fresno Tranquillity Irrigation District Garfield Irrigation District	Claude L. Rowe, Attorney
Tulare Irrigation District Lower Tule River Irrigation Dist. Exeter Irrigation District Terra Bella Irrigation District Porterville Irrigation District Delano-Earlimart Irrigation Dist. Stone Corral Irrigation District	Kenneth A. Kuney, Attorney
Miller and Lux, Inc.	Vincent J. McGovern, Attorney
San Luis Canal Company Firebaugh Canal Company Columbia Canal Company	J. E. Woolley, Attorney
Central California Irrigation Dist.	James A. Cobey, Attorney William W. Coshow, Attorney William J. Adams, Attorney
Orange Cove Irrigation District Saucelito Irrigation District Lindsay-Strathmore Irrigation Dist. Lindmore Irrigation District Tea Pot Dome Water District	Robert E. Moock, Attorney

Party	Representative
United States of America Bureau of Reclamation	John K. Bennett, Assistant Regional Solicitor, Department of the Interior
Southern San Joaquin Municipal Utility District	J. O. Reavis, Attorney
State Department of Water Resources	Mark C. Nosler, Attorney A. E. Kuiper
Shafter-Wasco Irrigation District Ivanhoe Irrigation District	William B. Mitchell, Attorney J. Thomas Crowe, Attorney
James Irrigation District	Richard L. Shepard, Attorney
J. Frank Martin, et al. Walter V. Englund, et al.	Chester R. Andrews, Attorney Carl H. Hobe
International Water District	William C. Crosslands, Atty.
Di Giorgio Fruit Corporation	V. P. DiGiorgio, Attorney Alvin J. Rockwell, Attorney John M. Naff, Jr., Attorney
Arvin-Edison Water Storage District North Kern Water Storage District	Claude F. Baker, Attorney
Kern County Land Company	Robert Edmondson, Attorney
Union Properties, Inc.	Walter M. Gleason, Attorney
Banta-Carbona Irrigation District	J. Allan Hall
Pacific Gas and Electric Company	C. H. Horton
Fresno Irrigation District	Galen McKnight, Attorney W. H. Stammer, Attorney
San Joaquin River Riparian Owners Association	J. E. Cobb
Edna L. Gianelli West-Wilhoit Company Francis H. Saunder Eva Lewis Saunder Frank A. West Alfred S. Ferguson John C. Kelley Ralph Lucas Dorothea F. Raab Leo Fallman	George B. Raab John A. Wilson, Attorney

Party	Representative
Edna Fallman Mary Bixler Stanton Estate Zeta A. Moran J. William Lund George E. Moran Helen T. Moran Reclamation Districts 548, 773, 2024, 2028, 2029, 2033, 2037, 2038, 2039, 2042, 2044, 2058 and 2062 Union Island Reclamation Districts 1 and 2	George B. Raab John A. Wilson, Attorney
Delta Water Users Association	Robert T. Monagan John A. Wilson, Attorney
Aquatic Resources Committee Salmon Unlimited Committee Northern California Seafood Institute	John Gilchrist
Golden Gate Sports Fisheries Association	Edmund Koahlhauf
Fish Cannery Workers and Fisherman's Union San Francisco Bay Area	George Issel
Sportsmen's Post No. 99 of the American Legion Tyee Club	Herbert Jacobson
Associated Sportsmen	John Van Assen
G. W. Philpott	In pro per

Watershed

Source streams of the San Joaquin River rise in glacial lakes at elevations in excess of 10,000 feet, draining a 50-mile crest length of the western slope of the Sierra Nevada. The main stem of the San Joaquin River is formed by the junction of the North and Middle Forks some 15 miles westerly of the crest of the Sierras and flows thence southwesterly approximately 60 miles to its debouchment from the foothills near the town of Friant where Friant Dam forms Millerton Lake. The river continues below Friant Dam in a westerly course about 50 miles to Mendota Pool. The San Joaquin River is joined at Mendota Pool by Fresno Slough from the south. Here the river turns abruptly northward and meanders in a general northwestly direction some 110 miles along the trough of the San Joaquin Valley to the Sacramento-San Joaquin Delta, where its waters commingle with those of the Sacramento River to jointly issue into Suisun Bay and the Pacific Ocean.

Major tributaries draining the Sierras and contributing to the San Joaquin River on its northward journey from Mendota Pool are the Fresno, Merced, Tuolumne, Stanislaus and Calaveras Rivers. Intermittent contributions of minor magnitude are made to the San Joaquin River downstream from Mendota Pool by water-courses draining the easterly slope of the Coast Range plus return irrigation water from areas served by the Delta-Mendota Canal of the United States and by the Merced Irrigation District.

Of primary concern is the watershed area of about 1,633 square miles above the valley floor controlled by Friant Dam. All of this portion of the San Joaquin River watershed is located within

Fresno and Madera Counties and is bounded on the north by the watersheds of the Merced and Fresno Rivers and on the south by that of the Kings River. Elevations vary from 13,157 feet at Mt. Ritter and 13,568 feet at Mt. Goddard to a stream bed elevation of about 300 feet at Friant Dam. The watershed is extremely rugged in character and the formation of the higher portion is largely granitic. Much of the basin below the timber line is forest covered. Melting snows in the headwaters maintain perennial river flows.

Proposed Plan of the United States for Use of San Joaquin River Water

The proposed plan of the United States on the San Joaquin River is essentially the same as that formulated by the State of California as a feature of the Central Valley Project (RT 840*).

The plan contemplates that all existing water rights on the San Joaquin River below Gravelly Ford, some 37 river miles below Friant Dam, will be acquired either by purchase or by providing a substitute water supply from the Sacramento River through the Delta-Mendota Canal. Certain water rights from Friant Dam to Gravelly Ford are to be satisfied by releases from Millerton Lake. Water not within one of the foregoing classifications, to the extent it can be controlled, will be appropriated under the applications of the United States before the Board in these proceedings (RT 780).

The United States anticipates that in about one year out of four, releases over and above those required to meet "Friant

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* RT 840 designates page 840 of the reporter's transcript of the hearing.

to Gravelly Ford" requirements will be made from Millerton Lake to provide space for flood control. The remaining inflow to Millerton Lake will be stored and/or diverted to the Madera and Friant-Kern Canals (RT 781, 821).

Construction of Friant Dam commenced in 1939 and was completed in 1947 at a cost of $21,895,410. The dam is 320 feet high and 3,488 feet long on top. Millerton Lake formed by the dam has a capacity of 20,460 acre-feet at the center line of the river outlets; 92,700 acre-feet at the center line of the Madera Canal outlets; 125,630 acre-feet at the center line of the Friant-Kern Canal outlets and 520,500 acre-feet at the top of the spillway drum gates (RT 781-783).

Construction of Madera Canal was started in 1940 and is substantially complete. The headworks of the canal are in the right or north abutment of Friant Dam. The canal capacity as now constructed is 1,000 cfs. However, structures across the canal have been constructed to accommodate a flow of 1,500 cfs to facilitate future enlargement, if such an increased flow should prove necessary. The canal is 36 miles long and extends northward to the Chowchilla River. The estimated cost of the canal is $3,416,401, of which $3,367,901 had been expended to June 30, 1957. Water was first diverted to the canal on June 4, 1944. Steadily increasing deliveries have been made annually since that time with 246,871 acre-feet having been delivered in the first eleven months of 1958 (RT 783, 784, USBR 16B)*.

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* USBR 16B refers to Exhibit 16B of the United States introduced into evidence at the hearing.

Construction of Friant-Kern Canal commenced in 1945 and likewise is substantially complete. The headworks of the canal are in the left or south abutment of the dam. The canal has a design capacity of 4,000 cfs and is 153 miles long, extending southward to the Kern River. Structures across the canal have been designed to provide for a flow of 5,000 cfs. There is some testimony to the effect that 5,000 cfs may be conveyed through the canal by reducing the freeboard to a narrow margin. The estimated cost of the canal is $61,260,472, of which $60,764,876 had been expended through June 30, 1957. The first water was diverted into the canal on March 22, 1949. Generally increasing deliveries to water users have been made annually since that time, with an annual maximum delivery to date of 1,579,671 acre-feet in 1956 (RT 784, USBR 16B).

The gross area of the place of use designated in the applications of the United States comprises 4,986,000 acres and includes the City of Fresno and Fresno Irrigation District. However, the focal element of the plan of the United States is the delivery of water under long-term water service contracts for purposes of irrigating 802,843 gross acres within the established limits of certain districts along the Madera and Friant-Kern Canals (RT 819, 1245, 1266-72, USBR 19A).

The entities to be served extend from Arvin-Edison Water Storage District on the south near Bakersfield to Chowchilla Water District on the north near Chowchilla (USBR 18A, 18B, and 19A). The anticipated maximum aggregate deliveries under the long-term contracts in any one year will be 2,150,000 acre-feet, with

750,000 acre-feet thereof being a Class 1* supply and 1,400,000 acre-feet being a Class 2** supply (RT 808, USBR 19A).

A list of those entities holding executed long-term water service contracts for delivery of Class 1 and Class 2 water is set forth in Table 1. All contracts provide that the effective period thereof shall be for forty years, commencing with the year in which the initial delivery of water is made thereunder (USBR 4, 5, 6).

Formal execution of a 40-year long-term water service contract providing for the annual delivery of 40,000 acre-feet of Class 1 water and the maximum annual delivery of 340,000 acre-feet of Class 2 water to the Arvin Edison Water Storage District awaits the execution of a contract between the Storage District and certain Kern River interests for an exchange of Kern River waters for San Joaquin River water (RT 1835-1841, A-E 16, USBR 19A).

Studies are also in progress looking toward the execution of a long-term contract for water service to the Gravelly Ford Water Association from the Madera Canal for a maximum annual delivery of 14,000 acre-feet of Class 2 water (USBR 19A).

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* "Class 1" water is that supply which can be considered dependable in practically every year with deficiencies only in occasional very dry years (RT 874). Under a study performed by the United States based upon a recurrence of hydrological conditions during the 58-year period 1897 through 1954, deficiencies in the Class 1 supply would have occurred only in years such as 1924, 1929, 1930, 1931, and 1934 (RT 1308-11 and USBR 24 and 25). Deficiencies in those years would have been 36, 4, 8, 45 and 11 per cent, respectively.

** "Class 2" water is that water in excess of Class 1 and accordingly is much less dependable as to its quantity and time of occurrence (RT 875). It will be available primarily during the spring and early summer months (USBR 24 and 25).

TABLE 1

LONG-TERM WATER SERVICE CONTRACTS WITH UNITED STATES

Entity	Contractual Quantities acre-feet (USBR 19A) Class 1	Class 2*	Initial Year of Delivery (USBR 16B)	Date Contract Executed (USBR 4, 5,6 & 20)
Friant-Kern Canal				
Delano-Earlimart I.D.	108,800	74,500	1950	8/11/51
Exeter I. D.	11,500	19,000	1950	11/8/50
Ivanhoe I. D.	7,700	7,900	1949	9/23/49
Lindmore I. D.	33,000	22,000	1950	2/28/49
Lindsay-Strathmore I.D.	30,000	0	1949	8/5/48
Lower Tule River I.D.	61,200	238,000	1950	5/1/51
Orange Cove I. D.	39,200	0	1949	5/20/49
Porterville I. D.	16,000	30,000	1950	1/28/52
Saucelito I. D.	15,300	32,800	1950	2/13/51
Shafter-Wascoe I.D.	50,000	39,600	1957	2/11/55
Southern San Joaquin Municipal Utility Dist.	97,000	50,000	1951	10/18/45
Stone Corral I. D.	7,700	0	1950	12/13/50
Terra Bella I. D.	29,000	0	1950	9/12/50
Tulare I. D.	30,000	141,000	1949	10/18/50
Tea Pot Dome W. D.	7,500	0	--	10/23/58
Subtotal	543,900	654,800		
Madera Canal				
Chowchilla Water Dist.	55,000	160,000	1950	7/5/50
Madera Irrigation Dist.	85,000	186,000	1944	5/14/51
Subtotal	140,000	346,000		
TOTAL	683,900	1,000,800		

* Quantities in table represent maximum contractual amounts. Studies show that the long-time average delivery of Class 2 water will be about 48.6 per cent of the maximum (USBR 24).

A reserve exists for the possible supplementation of Saucelito, Stone Corral, and Lindmore Irrigation Districts' long-term contractual quantities by an annual aggregate amount of 7,490 acre-feet of Class 1 water (USBR 19A). Certain other quantities to be made available by the project have not been committed and are being held in "contractual reserve". These quantities amount to 18,610 acre-feet of Class 1 water each year and a maximum annual quantity of 45,200 acre-feet of Class 2 water (USBR 19A). Thus, the present status of some 750,000 acre-feet of Class 1 water and a maximum quantity of 1,400,000 acre-feet of Class 2 water to be made available annually by the project is as shown in the following tabulation:

	Class 1	Class 2
	acre-feet	
Quantities covered by long-term contracts	683,900	1,000,800
Quantities allocated for delivery under pending long-term contracts	40,000	354,000
Quantities reserved for contractual adjustment, allocated to Saucelito, Stone Corral, and Lindmore Irrigation Districts	7,490	------
Quantities reserved for contractual adjustments but not allocated	18,610	45,200
Total	750,000	1,400,000

In addition to disposing of and making available the foregoing quantities of Class 1 and Class 2 water, the United States has executed contracts with the City of Orange Cove, Fresno County Water Works District No. 18 and the Pacific Gas and Electric Company (USBR 19A).

On February 28, 1956, the City of Orange Cove executed a contract for the delivery from the Friant-Kern Canal of a quantity of water not to exceed 1,400 acre-feet per annum for municipal, industrial and domestic purposes. The contract extends to 1996 (USBR 4).

On August 17, 1956, the Fresno County Water Works District No. 18 contracted for the delivery from the Friant-Kern Canal of a quantity of water not to exceed 150 acre-feet per annum for municipal, industrial and domestic uses. The contract extends to 1996 (USBR 4).

On July 27, 1953, the Pacific Gas and Electric Company contracted for a delivery not to exceed 3,000 acre-feet per annum of Friant-Kern Canal operational surplus water for use in operating a steam electric generating plant near the Kern River. The term of the contract is to extend forty years from 1954, the year in which initial delivery of water occurred (USBR 5).

The United States also proposes to serve water to lands acquired and used by the United States for operation of Friant Dam and Millerton Lake. Portions of the land acquired are administered by California Division of Beaches and Parks as a recreational area. Private lands adjacent to Millerton Lake are also to be served. One contract for the sale of water for this purpose is now being negotiated (RT 808) although the details of the contract were not stated in the record. The record is also silent as to the quantity of water that may be required to serve the uses in the vicinity of Friant Dam and Millerton Lake.

As previously stated, in about one year out of four, releases from Millerton Lake over and above those required to satisfy vested rights along the San Joaquin River between Friant Dam and Gravelly Ford will be made to provide space for flood control. The United States estimates that these releases will average 122,200 acre-feet annually and that, of this quantity, 50,000 acre-feet could be diverted and beneficially used in the vicinity of Mendota Pool. During the time when releases are being made for flood control purposes some capacity will be available in the Madera and Friant-Kern Canals over and above that capacity determined to be necessary to deliver the 750,000 acre-feet of Class 1 water and the 1,400,000 acre-feet of Class 2 water previously mentioned. This additional capacity will be sufficient to divert an average annual quantity of 35,000 acre-feet of flood control releases through the Madera and Friant-Kern Canals (RT 809, 819-821).

By allocating and disposing of the water in the manner described above, the United States anticipates that 98 per cent of the water entering Millerton Lake can be diverted and placed to beneficial use (RT 821,822).

The United States proposes to deliver all water available in conformity with the above-discussed allocation; consummation of delivery to be dependent only upon the rate at which the entities holding long-term contracts can complete the necessary distribution facilities and arrangements for the acceptance of the water to be delivered. This allegedly precludes the reservation of water for the future use of municipalities on a long-term basis (RT 1118-1122, 1245, 1267-1272). No existing or past policy of the United

States has ever contained the provision that consideration in the allocation of water must be given to the so-called "Watershed Protection" statutes, Sections 11460 and 11463 of the Water Code and the so-called "County of Origin" statutes, Sections 10500-10505 (RT 939, 998, 1000 and 1242). These statutes are discussed in later portions of this decision.

Applications to the United States for long-term water service contracts from the Madera and Friant-Kern Canals have been received from numerous entities representing a total area of 1,600,000 acres. Within the near future certain excess interim waters will be available pending consummation of the total deliveries under long-term contracts. The United States proposes to dispose of this interim water by 6-year contractual arrangements with the foregoing applicants, with priority being determined by the date of application for water service. Water will be available to these contracting entities about one year out of six (RT 814, 961, 962).

Project of City of Fresno

Applications 6771, 6772, 7134 and 7135, of the City of Fresno as filed in 1930 and 1931, envisioned a 490,000 acre-foot capacity storage dam on the San Joaquin River in the approximate, if not the exact, location of the present Friant Dam. An earth canal of slightly more than 200 cubic feet per second capacity, located on a contour substantially below the contour of the present Friant-Kern Canal, was to convey both stored and direct diversion waters from the storage dam to the City and surrounding areas. (SWRB 1).

Manifestly, the construction of Friant Dam by the United States foreclosed the possible construction of the project as originally contemplated. No showing was made by the City as to its ability to obtain access to Friant Dam or storage space within Millerton Lake.

The City adduced testimony relative to various potential projects for supplying the City with San Joaquin River water which involved the diversion and/or storage of water at points far upstream from Friant and at points respectively one-half, seven, ten, and seventeen miles downstream from Friant Dam (CF 24, Plate XII). The attention of the City was directed to the fact that, inasmuch as the City's applications proposed diversion by means of a storage dam near Friant, evidence relative to the numerous other projects could not be considered material to the issues being heard unless the City submitted formal petitions requesting the incorporation of such projects under its applications (RT 6282). No petitions were submitted requesting the incorporation of projects for the diversion of water at points upstream from Friant Dam and at the points seven, ten, or seventeen miles downstream and further discussion in connection therewith is therefore unnecessary. No effort has been made by the City of Fresno to amend its Applications 6771, 6772 and 7135.

On November 28, 1958, while the proceedings were in progress a formal petition was submitted by the City pursuant to Section 738 of the Board's rules and regulations, requesting permission to include as an alternate point of diversion under Application 7134 a point located about one-half mile downstream from

Friant Dam, and to amend the application, primarily as to the place of use. According to the petition, and as complemented by oral testimony, the City now plans to appropriate water under Application 7134 by connecting to two or more of the four river outlet pipes which are the lowest discharge facilities at Friant Dam. A 60-inch pipeline would convey water from the Dam to the City. A 240 cubic foot per second pumping plant at a point one-half mile downstream from Friant Dam would pump water from a river sump created by a wing dam on land owned by the City. River water would be pumped through some few hundred feet of connecting pipeline to the 60-inch main line at a point below the River bluff.

The City anticipates that by some arrangement with the United States certain advantage could be had by the City of the pressure head afforded by the storage behind Friant Dam. Details of the proposed connection to Friant Dam were not presented nor is it entirely clear that advantage could be taken of the Friant pressure head and at the same time operate the pumping plant at the alternate point of diversion (RT 6509, 6518, 6525, 6594-6597, 6860-6865, 7041-7046).

Considerable evidence was submitted during the course of the hearing regarding the water requirements of the so-called "Metropolitan Area" of the City of Fresno which the City anticipates will be served through its water system by the year 2000. As envisioned by the City, the "Metropolitan Area" by that date will encompass some 70,300 acres with a population of 525,000 persons including the City of Clovis (CF 24, Plate I). Although the water requirement of the City of Fresno, as presented by the

City and discussed hereinafter, is based upon the needs of the entire 70,300 acre "Metropolitan Area", the petition submitted on November 28, 1958, to amend Application 7134 indicated that the area to be served will comprise only 69,000 acres and will exclude the area occupied by City of Clovis as it existed at the time of the hearing.

Project of the Fresno Irrigation District

Application 6733 of the Fresno Irrigation District when filed in 1930 envisioned the construction of a 280,000 acre-foot storage dam on the San Joaquin River in the vicinity of the present Friant Dam. An earth canal with a capacity of 750 cubic feet per second was to convey water from the storage dam southerly along a contour lower than that occupied by the Friant-Kern Canal but apparently in the same general location as the earth canal initially proposed by the City. The canal was to terminate about 17 miles southwest of Friant Dam by discharging into the then existing Fresno Canal, a major artery of the District's system. From that point water was to be conveyed to the District lands through the then existing canals and laterals of the District (SWRB 1).

As was the case with the City, the construction of Friant Dam by the United States precluded the plan presented in Application 6733 as filed, as a possible means of appropriating water thereunder.

On December 23, 1958, the District filed a petition requesting permission to amend Application 6733 to conform to the evidence presented in its case in chief relative to effecting an appropriation of San Joaquin River water. As previously stated,

Application 6733 is for a permit to appropriate, year-round, 750 cubic feet per second by direct diversion and 200,000 acre-feet per annum by storage. The District now proposes an appropriation by either or both of two alternatives, both of which would utilize Friant Dam and Millerton Lake as a means of accomplishing the direct diversion and collection of the 200,000 acre-feet per annum by storage (SWRB 2).

Under one alternative all or a portion of the 200,000 acre-feet of stored waters would be released from Millerton Lake into the channel of the San Joaquin River. Some 12 miles downstream from Friant Dam these previously stored waters and all or portions of the 750 cubic feet per second to be directly diverted would be pumped from the river through three 275-foot sections of pipeline into an extension of the existing Bullard Canal of the District. From this point water would be conveyed and distributed to District lands capable of gravity irrigation therefrom.

Under the other alternative, waters would be released from storage and/or diverted directly into the Friant-Kern Canal and conveyed therein some 25 miles to be discharged through the Friant-Kern Canal wasteway into the Kings River. Less than one-half mile downstream from the wasteway the water would be diverted into the Kings River headworks of the District's Fresno Canal and conveyed to lands capable of gravity irrigation therefrom (SWRB 2).

Fresno Ground Water Unit

Description

In discussing the positions of the City of Fresno and the Fresno Irrigation District reference is had herein to the area described as the Fresno Ground Water Unit. The Unit is the 258,560 acre area within the exterior boundaries of the Fresno Irrigation District (RT 8001). Limited on the east by the low-lying foothills of the Sierras, the Unit extends from the San Joaquin River on the north to the Kings River and the Consolidated Irrigation District boundary on the south. The westerly boundary extends generally parallel to and several miles easterly of Fresno Slough. At its remotest point the Unit is some 30 miles distant from Friant Dam. Included within, and circumscribed by the Unit, near its center, is the City of Fresno (FID 2).

Virtually the entire water supply utilized within the Unit not derived from direct precipitation is imported from the Kings River through the Fresno Irrigation District System (FID 9). The lands within the Unit overlie a single ground water basin wherein free and unconfined ground water levels generally exist (RT 7968, 8890). Portions of the imported supply not consumed by evapotranspiration from vegetation and soil percolate downward through the soil, thus effecting partial recharge of the ground water basin. It is from this ground water basin that the City pumps the entire supply served through its water distribution system (CF 24). Fresno Irrigation District's direct diversions of Kings River water are also supplemented by pumping from this common ground water basin by individual owners (RT 8007).

Supplemental Requirements of Fresno Ground Water Unit

Incontestable evidence supports the contention of both the City and the District as to existing deficiencies in water supply. This deficiency is most graphically illustrated by the severe and sustained drop in ground water levels throughout the Unit in recent years indicating a continuous mining of water stored in the underground water basin comprising the Fresno Ground Water Unit (FID 7). The serious nature of the situation is unquestioned. Obtaining a supply to overcome present deficiencies will not long provide a solution to the problem inasmuch as the deficiencies are increasing at an ever increasing rate as new demands on the supply develop. Eventually new water sufficient to meet the present overdraft on the Unit and provide for its ultimate development must be forthcoming if the economy of the area is to flourish.

The "Metropolitan Area" proposed to be served by the City in the year 2000, and which includes and surrounds the City, is centrally located within the Fresno Ground Water Unit. Some 55,359 acres of the "Metropolitan Area" are also within Fresno Irrigation District and to that extent the future service areas of the two entities overlap (RT 9630).

Witnesses for the City presented a comprehensive report as to the City's future needs and testified that by the year 2000, some 152,000 acre-feet of new surface supply will be required annually to serve the needs of the "Metropolitan Area", that the City will have the entire burden of serving that area to the exclusion of the District, and that the District's Kings River water supply will then be adequate for the District's remaining requirements

(RT 3726, 3856, 3969, CF 24, p. 46). It therefore follows that upon the basis of the testimony presented on behalf of the City the ultimate requirement for a new surface water supply for the Fresno Ground Water Unit will be about 152,000 acre-feet per annum.

According to evidence presented by the District, present ground water supplies from the Fresno Ground Water Unit plus water available from the Kings River will be inadequate in the amount of 86,000 acre-feet per annum in meeting ultimate requirements within the District (FID 3, Sheet 11). The District further estimates that the present requirements of lands situated within the Ground Water Unit but excluded from the District are some 17,900 acre-feet per year (RT 8970). Although the District presented no evidence as to the ultimate requirements of this excluded area, we do not believe that its ultimate requirements will vary sufficiently to materially change the estimated overall requirements of the Ground Water Unit. Therefore, the ultimate supplemental requirement of the Ground Water Unit as based upon testimony presented by the District may be considered as 86,000 plus 17,900 acre-feet per annum or a total of 103,900 acre-feet per annum. This estimate is some 48,100 acre-feet per year less than the 152,000 acre-feet as deduced from the testimony for the City.

Water Supply

According to United States Geological Survey Water Supply Paper No. 1395 (SWRB 10), the flow of the San Joaquin River passing the stream gaging station now referred to in that exhibit as "San Joaquin River below Friant" some two miles downstream from Friant Dam for the 48 years of record, 1907-1955, has ranged from a minimum of 5.5 cfs to a maximum of 77,200 cfs. The average annual flow during this period, including the diversions to the Madera Canal from 1944 through 1955 and diversions to the Friant-Kern Canal from 1949 through 1955, has been 2,307 cfs, equivalent to about 1,670,000 acre-feet.

However, a discussion of the water supply of the San Joaquin River is incomplete without reference to the regulatory effects upon that supply by the reservoirs that have been constructed in the upper watershed for hydroelectric power purposes. Developments for power purposes commenced in the upstream watershed in 1895. The effect of such operations has been to reduce the flow during the winter and spring months and to increase the flow during the summer and fall months. As new reservoirs have gone into operation, the seasonal regimen of flow of the River at the Friant gaging station has been materially and progressively altered (RT 514; USBR 61, p. 10).

Estimated monthly mean flows of the San Joaquin River that would have passed the Friant gaging station during the 1922 through 1951 period under natural conditions, that is, in the absence of Millerton Lake and all upstream power reservoirs are set forth in Table 2 as determined from USBR 57. Also shown in

Table 2 are the medians* of the corresponding monthly mean flows and the minimum monthly mean flows that would have occurred in each of the months of the year, within that same 30-year period.

TABLE 2

ESTIMATED FULL NATURAL FLOW OF SAN JOAQUIN RIVER AT FRIANT FOR PERIOD 1922-1951 BY MONTHS

Month	Flows in Cubic Feet per second		
	Monthly Mean	Median of Monthly Mean	Minimum Monthly Mean
January	875	710	237
February	1699	1350	351
March	2101	1791	418
April	3985	3970	1589
May	6900	6735	2377
June	5850	5188	586
July	2265	1925	260
August	626	533	150
September	247	242	87
October	267	201	81
November	549	272	104
December	907	561	135
Mean Annual	2189	----	----

Mammoth Pool Reservoir with a proposed net storage capacity of 120,000 acre-feet is now being constructed in the upper San Joaquin River watershed by Southern California Edison Company.

* Median as used herein represents a flow so chosen in a given month of a series of years that the flows during the same month of one-half of the years are greater and one-half of the years are less than the median.

When this reservoir is completed and in operation, the seasonal regimen of flow of the River will be further altered. Estimates of the monthly mean flows of the San Joaquin River that would have entered Millerton Lake with Mammoth Pool and all other upstream reservoirs in operation during the recurrence of hydrological conditions as existed during the 1922 through 1951 period are set forth in Table 3. Also shown are the medians of the corresponding monthly mean flows and the minimum monthly mean flows that would occur under the same hypothetical conditions.

TABLE 3

ESTIMATED MONTHLY FLOW OF SAN JOAQUIN RIVER AT FRIANT DURING PERIOD 1922-1951 HAD UPSTREAM EXISTING PROJECTS AND MAMMOTH POOL BEEN IN OPERATION
(As determined from CF 57)

Month	Flows in Cubic Feet per second		
	Monthly Mean	Median Monthly Mean	Minimum Monthly Mean
January	1308	1115	654
February	1995	1601	744
March	2355	2078	376
April	2997	3023	864
May	3914	3200	1078
June	4074	3281	1023
July	2478	2257	1036
August	1869	1862	993
September	1714	1681	996
October	1080	1047	597
November	1045	872	685
December	1239	1005	632
Mean Annual	2172	----	----

Unappropriated Water

Section 1375 of the Water Code provides that as a prerequisite to the issuance of a permit to appropriate water there must be unappropriated water available to supply the applicant.

The United States adduced evidence, based on alternative assumptions, that on the average unappropriated water exists in the San Joaquin River to the extent of 256,400, 302,090, 5,600 or 25,000 acre-feet per annum (RT 538-546, 642, 1446-1452, 2247).

Fresno Irrigation District adduced evidence that on the average at least 579,900 acre-feet per annum of unappropriated water exists (RT 8380, FID 13A).

City of Fresno adduced evidence that the average annual amount of unappropriated water is 675,823 acre-feet (RT 7386).

The applicants' estimates of unappropriated water for any given year vary considerably from the quantities as cited above. Their estimates are based upon a wide variation of assumptions as to the extent of prior rights for upstream power development and as to the requirements of downstream prior rights. None of the estimates assume an allocation of unappropriated water for the satisfaction of any of the applications herein considered. Based upon conservative assumptions, the Board finds that there is, on an average, at least 250,000 acre-feet per annum of unappropriated water and during wet years the quantity of unappropriated water exceeds 2,000,000 acre-feet.

Analysis of Position of the Department of Fish and Game

The position of the State Department of Fish and Game regarding the waters of the San Joaquin River, as summarized from the Department's brief (page 2), is as follows:

1. Prior to the construction of Friant Dam substantial salmon runs existed and procreated on the upper San Joaquin River and these runs have been virtually destroyed.

2. Salmon runs can be re-established and maintained on certain minimum river flows.

3. The flows required to re-establish and maintain the salmon runs will have a greater number of beneficial uses than a similar quantity of water appropriated and used as planned by the applicants.

4. Statutes prohibit the willful and negligent destruction of fish and wildlife and require that the needs of the San Joaquin River watershed, including the requirements for maintenance of fish life, be satisfied before water is exported or exchanged for export as contemplated by the United States.

5. Any destruction of the salmon runs that has resulted from the construction of Friant Dam has been accomplished by the wrongful and unlawful act of storing and diverting water at the dam without a permit to appropriate unappropriated water, and of changing points of diversion upstream without authorization and in violation of downstream rights. Thus the United States cannot take advantage of its own wrong and now claim that salmon runs do not presently exist in the San Joaquin River.

6. Water required for fish life is not subject to appropriation.

7. The State Water Rights Board has the authority and public interest requires that permits issued to appropriate from the San Joaquin River be conditioned subject to maintenance of such minimum flows as required to re-establish and maintain fish life.

Expert witnesses for the Department of Fish and Game testified that it would be necessary to maintain certain minimum flows (F&G 33) at named points below Friant Dam if salmon runs are to be re-established and maintained. Testimony was to the effect that to maintain these flows in a normal year releases through Friant Dam (in addition to the releases to be made by the United States to satisfy the "Friant to Gravelly Ford" prior rights) would amount to 60,233 for the Spring run alone, 49,020 for the Fall run alone, or 77,146 acre-feet to re-establish both Spring and Fall runs (F&G Brief, pp. 18, 27A; F&G 53, 56, 59, 63, 64, 65).

There can be no doubt that the public interest favors re-establishment of salmon runs on the San Joaquin River to the full extent feasible when it can be accomplished without impairment of the primary objective of the Central Valley Project, which, certainly, so far as concerns the Friant Division, is irrigation. There should be no doubt concerning this point since United States v. Gerlach Live Stock Co., 339 U.S. 725 (1950) wherein the United States Supreme Court stated that the Congress had "realistically considered" the Central Valley Project to be a reclamation project.

And, of course, it is fundamental that the primary objective of the Federal reclamation laws is to supply irrigation water to arid and semi-arid lands.

In conformity therewith is Section 9(c) of the Reclamation Project Act of 1939 (Act of August 4, 1939, Ch. 418, 53 Stat. 1187, 43 U.S.C. 485) which authorizes the Secretary of the Interior to furnish water for municipal water supply or "miscellaneous purposes". A fair construction of the quoted language doubtless includes fish requirements, but the last sentence of said Section 9(c) unequivocally subordinates contracts for such requirements to irrigation. It reads as follows:

> "No contract relating to municipal water supply or miscellaneous purposes or to electric power or power privileges shall be made unless, in the judgment of the Secretary, it will not impair the efficiency of the project for irrigation purposes." (Emphasis added.)

At present the basic authority of the Secretary of Interior to afford use of water for fishlife is found in Section 663 of U.S.C.A. entitled "Conservation". This section was enacted in 1934 and amended in its present form in 1946. It now reads as follows:

> "Whenever the waters of any stream ... are impounded, diverted, or otherwise controlled for any purpose whatever by any department or agency of the United States, adequate provision consistent with the primary purposes of such impoundment, diversion, or other control shall be made for the use thereof ... for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon. In accordance with general plans, covering the use of such waters and other interests for these purposes, approved jointly by the head of the department or agency exercising primary administration thereof, the Secretary of the Interior, and the head of the agency exercising administration over the wildlife resources of the State wherein the waters and areas lie, such waters and other interests shall be made available without cost for administration (a) by such state agency, if the management thereof for the conservation

of wildlife relates to other than migratory birds; (b) by the Secretary of the Interior, if the waters and other interests have particular value in carrying out the national migratory bird management program." (Emphasis added.) As amended August 1946, Ch. 965, 60 Stat. 1080.

Prior to the amendment of 1946 this section was cast upon somewhat similar lines but was substantially narrower and weaker in its protection to wildlife, but insofar as it related to existing structures contained similar language as the 1946 amendment, "opportunity shall be given to the Fish and Wildlife Service to make such uses of the impounded waters ... as are not inconsistent with the primary use of the waters ...". In relation to future projects its essential provision was that "the Fish and Wildlife Service shall be consulted, and before such construction is begun ..., when deemed necessary, due and adequate provision, if economically practicable, shall be made for the migration of fishlife from the upper to the lower and from the lower to the upper waters of said dam by means of fish lifts, ladders, or other devices." (Emphasis added.) Act of March 10, 1934, Ch. 55, Sec. 3, 48 Stat. 401.

The so-called Grasslands Development Authorization, Act of August 27, 1954, reauthorizes the Central Valley Project and adds thereto as an additional project objective "the use of the waters thereof for fish and wildlife purposes, subject to such priorities as are applicable" under prior authorization acts (Sec. 1, 68 Stat. 879; 16 U.S.C. 695d - 695j). There appears nothing in the body of this act relevant to the situation before us as it contains no further reference to fishlife.

There certainly is nothing in Federal law requiring a priority for fishlife over irrigation, but quite the contrary, as

the foregoing review of that law demonstrates. Consideration is now given to state law on the subject.

Water Code Sections 106 and 1254 provide as follows:

> "106. It is hereby declared to be the established policy of this State that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation."

> "1254. In acting upon applications to appropriate water the board shall be guided by the policy that domestic use is the highest use and irrigation is the next highest use of water."

These sections are clear and precise that domestic and irrigation uses are preferred over all others necessarily including water for fish life; nor does the Water Code contain any provisions which are inconsistent therewith. On the contrary, Section 11226 of the Water Code provides:

> "11226. Friant Dam shall be constructed and used primarily for improvement of navigation, flood control, and storage and stabilization of the water supply of the San Joaquin River, for irrigation and domestic use, and secondarily for the generation of electric power and other beneficial uses."

Counsel for the Department of Fish and Game in his brief cites Water Code Sections 12581 and 12582. They provide as follows:

> "12581. In studying water development projects, full consideration shall be given to all beneficial uses of the State's water resources, including irrigation, generation of electric energy, municipal and industrial consumption of water and power, repulsion of salt water, preservation and development of fish and wildlife resources, and recreational facilities, but not excluding other beneficial uses of water, in order that recommendations may be made as to the feasibility of such projects and for the method of financing feasible projects."

> "12582. Fish and wildlife values, both economic and recreational, shall be given consideration in any flood control or water conservation program. In the design, construction, and operation of projects, when engineering and economic features of the project make it practicable, adequate provisions shall be made for the protection of

migratory fishes, and the designs for structures and facilities required for such protection shall be prepared in cooperation with the United States Fish and Wildlife Service and the California Department of Fish and Game." (Emphasis added.)

The foregoing sections of the Water Code afford no support to the case for the Department of Fish and Game. Construction of the Central Valley Project is practically completed and in operation, except for certain new additions thereto, such as the Trinity Division now under construction, the San Luis Project not as yet authorized, and possibly others in the planning stage. Therefore the bearing of these sections upon the present situation before the Board is restricted to that portion of Section 12582 providing that "In the ... operation of projects, when engineering and economic features of the project make it practicable, adequate provisions shall be made for the protection of migratory fishes...". The question then is, under this statute, based on the record before this Board, do "engineering and economic features" of the Central Valley Project "make it practicable" to afford adequate provisions "for the protection of migratory fishes" below Friant Dam?

Counsel for the Department of Fish and Game contends, as we are given to understand (Brief, p. 40) that releasing water through Friant Dam for the re-establishment and maintenance of the salmon runs would result in no financial loss to the United States. Counsel contends that his theory of "no loss" can be accomplished by substituting for irrigation use along Madera and Friant-Kern Canals (prevented by the application of the Fish and Game by-pass schedules), delivery of an equivalent amount of irrigation water down the San Joaquin River to the vicinity of Mendota Pool where

there is a demand at least equal to the flows necessary for salmon runs in the river.

To analyze such a theory we must look to the purpose for which each major feature of the Central Valley Project was constructed, particularly as it relates to those of the Friant Division in conjunction with the Tracy Pumping Plant and Delta-Mendota Canal.

These latter features, namely the Tracy Pumping Plant and Delta Mendota Canal, were constructed to eliminate the former use of San Joaquin River water in the Mendota Pool area thereby making such water available for delivery elsewhere. The basic plan of exchanging San Joaquin River water for water from the Sacramento River to meet the requirements in the Mendota Pool area was originally conceived as part of the State Water Plan. Except during the initial development period, it was contemplated by the State that practically all of the conservable flow at Friant would be stored and/or diverted into the Madera and Friant-Kern Canals. No water was to be committed for the purpose of preserving fish life in the river below Friant Dam (Division of Water Resources Bulletins 25 and 29, USBR 34 and SWRB 8). The State Water Plan, except for the Trinity River diversion*, was approved and adopted by the Legislature in 1941 (Stats. 1941, Ch. 1185; Water Code Sec. 10,000). The record shows (USBR 55) that numerous entities which are in need of supplementary water for irrigation which now can only be served from the Madera or Friant-Kern Canals are desirous of obtaining a water supply from the United States. Thus, to

* The exception of the Trinity River diversion was enacted by Stats. 1945, Ch. 329, Sections 1 and 2.

require that a portion of the San Joaquin River water be delivered to the Mendota Pool area for irrigation purposes in order to accommodate maintenance of fish life would, in effect, negate, to the extent of the flows requested, the purpose for which costly features were provided, would act as a bar to the operation of the project to its full potential, and would be contrary to the purpose for which the project was conceived.

Although counsel for the Department made a forceful and skillful presentation on its behalf, the evidence is overwhelming that the salmon fishery on the San Joaquin River upstream from the junction with the Merced River is now virtually extinct. The construction and operation of Friant Dam has had little or no effect upon the salmon runs which historically commenced their migratory journey upstream from the Pacific Ocean into the San Joaquin headwaters during the fall months. Those runs were substantially eliminated prior to the commencement of construction of Friant Dam (RT 11098, 12875). Friant Dam has been primarily responsible for the elimination or destruction of those salmon runs in the San Joaquin River above the mouth of the Merced River which formerly commenced their migratory journey upstream during the spring months (RT 11909).

Regrettable as these facts may be, the sense of urgency has been removed in that failure to take action at this time will not destroy any existing runs nor prevent a possible later re-establishment thereof.

The salmon industry as a whole has not suffered because of the loss of the runs in the San Joaquin River above the mouth of

the Merced River. The ocean commercial catch of salmon, although fluctuating, shows an increasing trend (F&G 95). The ocean sports fishery related to salmon has also expanded greatly in recent years since the advent of Friant Dam (RT 13090, 14017, TPD 13). Operation of salmon hatcheries by the United States, constructed at the time Shasta Dam on the Sacramento River and Folsom Dam on the American River were built (RT 13177), probably had an effect on this increase. The fact that no such hatchery was incorporated at Friant Dam is some evidence that none was deemed necessary at that time. The destruction of the recreational aspects of salmon fishing above the mouth of the Merced River is compensated for in large part by Millerton Lake in that its extensive facilities have created a great new recreational activity including fishing, boating, swimming, water skiing, and associated activities (RT 14039, 14044, 14090).

Further, with the introduction of San Joaquin River water into areas on both sides of the San Joaquin River between Friant and Mendota Pool, the ground water levels within those areas will be elevated, occasioning an increased flow of ground water to the San Joaquin River in that reach (RT 10943, 13900). The increased flow thus produced may be of significance in future efforts to re-establish the salmon runs.

In view of the foregoing the Board concludes that to require the United States to by-pass water down the channel of the San Joaquin River for the re-establishment and maintenance of the salmon fishery at this time is not in the public interest and accordingly, the protests of the Department of Fish and Game to the subject applications are dismissed.

Englund and Martin, et al.

Some eighty protestants designated herein as Englund and Martin, et al. are allegedly landowners in what is known as the "Friant to Gravelly Ford" reach of the San Joaquin River. Among other things, Englund and Martin, et al. argue that a diminution in flow of San Joaquin River occasioned by the operation of the Friant Dam has resulted in a lowering of ground water levels beneath their lands. They urge that the United States should be required to take certain action to remedy or eliminate the continued lowering of the ground water.

The record is not clear as to the location or locations of some of the parcels of land allegedly owned by each of the individual protestants. It is clear, however, that the bulk of the lands involved are situated within the boundaries of the "Lee Line" (CF 16) as that term is described in the proceedings of Rank v. Krug, No. 685-ND, United States District Court, Southern District of California, Northern Division. The "Lee Line" embraces lands along both sides of the San Joaquin River below Friant Dam which the trial court determined are supplied by water percolating from the River. According to the Court, this supply would be impaired by operation of Friant Dam in the manner proposed by the United States and the Court's judgment makes certain provisions for the protection thereof.

Although the judgment in the above-cited case is pending on appeal, this Board may assume that the final judgment will protect the rights within the "Lee Line" to the extent that such

protection is warranted and action by this Board relative to lands so situated is and shall be properly limited to providing that any permits issued pursuant to this decision contain appropriate conditions requiring that the permits conform to the final judgment.

Those certain protestants designated as Englund and Martin, et al. whose lands are not situated within the "Lee Line" are geographically remote from the San Joaquin River. The evidence does not sustain a finding that regulation of the River at Friant Dam with the consequent diminution of flows downstream therefrom has any perceptible effect upon the ground water conditions underlying their lands. Other arguments raised by them either have no bearing on these proceedings or are beyond the jurisdiction of this Board to consider.

The protests of Englund and Martin, et al. are hereby dismissed subject only to the conditions hereinabove mentioned.

Alluvial Cone of the San Joaquin River

In its written protest dated March 19, 1952, against the approval of the applications of the United States, the City of Fresno alleged that approval of those applications would " ... irreparably injure the percolating water supply from the San Joaquin River to protestant's wells used for Fresno City Municipal water supply". A similarly worded protest was filed by the City against the granting of petitions to change the point of diversion and place of use under License 1986 of the United States.

During the hearing, the City of Fresno amplified this element of its protest against the applications of the United States and alleged, in effect, that water percolates through the bed and banks of the San Joaquin River into the open upper ends of underground "aquifers", the ends of which are located on the San Joaquin River between a point five miles downstream from Friant Dam at the lower edge of Ledger Island and a point some 6.4 miles farther downstream near Lane's Bridge (RT 3773), and that river water percolates through the aquifers to the City's wells. It was further argued that diversion at Friant Dam by the United States has resulted in a diminution of downstream river flows with a consequent decrease in the volume of percolation through the aquifers thereby adversely affecting the vested rights of the City to these percolating waters (RT 2466).

The City of Fresno does not press this phase of its protest in its brief. In fact, no reference is made in the brief to injuries allegedly incurred in the afore-described manner. However, counsel for the City stated during oral argument that this

element of the City's protest has not been abandoned (RT 17009).

To determine the substantiality of the facts alleged, due notice must be taken of geologic conditions in the area. In the Sierra Nevada above Friant Dam, waterways of the San Joaquin River and tributaries have remained essentially unchanged throughout recent geologic times. Downstream from the Dam on the valley floor the antecedent channel of the river, pivoting around a point in the general vicinity of the Dam, has swung and shifted back and forth, traveling at least as far north as the City of Madera and as far south as the City of Fresno. Continuously, materials eroded and torn from the Sierras have been deposited, eroded, and redeposited onto the valley floor. Beginning at a point in the vicinity of the Dam and gradually widening to the west, the eroded material has gradually established and built up an alluvial cone over geologic ages. In the vicinity of the City of Fresno, the thickness is some 1000 ft. The vertical thickness of the material deposited tends to feather out towards the mountains and foothills and increases in thickness toward the west (RT 15388-15391).

As the river has emerged from the mountains, gentler slopes in the River channel have caused a decrease in the velocity of flow. Consequently, a sorting action left a predominance of the larger and heavier debris near the mountains with a prevalence of the finer silts and clays occurring farther out on the valley floor (RT 15388).

Establishment of the Kings River cone was concurrent with that of the San Joaquin River. In large part the north boundary of the Kings River cone is contiguous with the south boundary of

the San Joaquin River cone, there being considerable interstratification and interconnection between the two. Between these two large river cones, small streams from the foothill areas such as Fancher, Dog, Redbank and Dry Creeks have established similar but much smaller interstratified alluvial deposits (RT 15391-15393). All of the alluvial cones are interconnected and form a single large ground water basin in hydraulic union.

Usable ground water occurs in the alluvial materials that have been eroded and deposited in the alluvial cones. Relatively impermeable clay beds local in extent are to be found in the San Joaquin River cone between the central portion of the San Joaquin Valley several miles west of the City of Fresno and Friant Dam. These clay beds are lenticular and local in nature and cause semi-confinement but it is clear that interconnection occurs between all the ground water in the area (RT 15392-15395).

Application of irrigation water by the Fresno Irrigation District has established a ground water ridge between the City of Fresno and the San Joaquin River. This ridge, being higher in elevation than either the water level in the river or the ground water table underlying the City of Fresno, constitutes an effective barrier to the movement of ground water through the alluvial materials from the river to the City wells (RT 15395-15399).

Ground water observations instituted in 1921 and continued to date show that no water from the San Joaquin River has reached the underground basin beneath the City of Fresno since that time.

In any event, provisions of the trial court's judgment

in Rank v. Krug(ante p. 42) for protection of lands which allegedly receive percolating water from the San Joaquin River below Friant are designed to include the area occupied by a portion of the City. Since, as previously indicated, permits issued pursuant to this decision will contain conditions requiring that the permits be amended to conform to the final judgment in Rank v. Krug, whatever rights the City may have in this respect will receive adequate protection.

Petitions Relative to License 1986 (Application 23)

The United States requests permission to integrate the right confirmed under License 1986 into the Central Valley Project. To accomplish this objective, petitions have been submitted to change the point of diversion from the Aliso Canal intake to Friant Dam and at various points downstream from Friant Dam to and including the Aliso Canal intake, and to enlarge the gross area of the place of use to 4,986,000 acres within the San Joaquin Valley.

Sections 1701 and 1702 of the Water Code provide as follows:

> "1701. At any time after notice of an application is given, an applicant, permittee, or licensee may change the point of diversion, place of use, or purpose of use from that specified in the application, permit, or license; but such change may be made only upon permission of the Board."
>
> "1702. Before permission to make such a change is granted the petitioner shall establish, to the satisfaction of the Board, and it shall find, that the change will not operate to the injury of any legal user of the water involved."

The City of Fresno protests the approval of the petitions, alleging that irreparable injury will result to the water supply feeding from the San Joaquin River through certain aquifers to the City's wells. The protest of the City should be and is dismissed inasmuch as the position maintained by the City in this regard has been found untenable as discussed in a preceding section of this decision, and furthermore, the City will receive the protection to which it is entitled in the final judgment in Rank v. Krug (ante p. 42).

Protests were also submitted by the Department of Fish and Game against approval of the petitions. For the reasons heretofore discussed, the protests of that Department constitute no bar to the approval of the petitions.

Inasmuch as the Federal Court in the aforementioned action of Rank v. Krug has maintained continuing jurisdiction to prevent injury to those parties within the "Lee Line" as outlined in the discussion on Englund and Martin, et al., approval of the petitions cannot injure those protestants.

Written protests against the approval of the petitions submitted by other entities should be dismissed for failure to appear and/or offer proof in support thereof.

The Board concludes upon consideration of the entire record that the proposed changes will not operate to the injury of any legal user of the water involved and that the petition to change the place of use and the petition to change the point of diversion, insofar as it relates to diversion at Friant Dam should be approved. No evidence is of record regarding any intent of

the United States to divert under License 1986 at points downstream from the Dam and accordingly that portion of the petition should be denied.

Disposition of the Applications

The United States under its subject applications and license seeks to appropriate a total of 11,500 cubic feet per second by direct diversion and 2,800,000 acre-feet per annum by storage for irrigation, domestic, municipal, flood control, and recreational purposes within a designated service area. (USBR Brief p. 91). That service area (SWRB 2) comprising a gross acreage of 4,986,000 acres of the San Joaquin Valley extending from Suisun Bay on the north to the vicinity of Bakersfield on the south includes the proposed service area of the City of Fresno and the Fresno Irrigation District.

The City of Fresno and Fresno Irrigation District collectively seek permits totaling 375,000* acre-feet per annum by storage as well as authority to divert directly some 990 cubic feet per second.

As previously mentioned, one prerequisite for issuance of a permit is that unappropriated water must be available to supply the applicant. Assuming the existence of unappropriated water in the San Joaquin River in the most liberal sense as set forth in a preceding section of this decision ("Unappropriated Water") the evidence clearly shows that all of the applications under consideration cannot be approved. The problem which the

* Fresno Irrigation District in its brief suggested a permit term limiting its intended appropriation to an average of 86,000 acre-feet per annum by storage and/or direct diversion.

Board must therefore consider at this time is to what extent the applications may be approved in the light of the evidence before it and in the public interest as declared by numerous legislative mandates.

Applications of the United States

The Municipal Preference Statute

One of the fundamental principles of the law of appropriation of waters as it was developed prior to enactment of the Water Commission Act (Stats. 1913, Ch. 586) was "first in time, first in right." That is, in the event of shortage, the earlier appropriator was entitled to take water to the full extent of his right before a later appropriator was entitled to any. This principle was carried over into the Water Commission Act which provided that an application made in conformity with the statute gave to the applicant a priority of right as of the date of such application until its approval or rejection. In event of approval thereof and issuance of permit, the priority of right to take and use the amount of water specified would continue in effect until issuance of license or revocation of permit. These provisions are now included in the Water Code, Sections 1450 and 1455. Under the Water Commission Act as originally enacted and before certain amendments were added thereto, which will be discussed later herein, when two or more applications were filed to appropriate water of the same source and there was insufficient water available for all, priorities were fixed by the respective filing dates and the earlier was entitled to the first right to appropriate the available supply. The only

exception to this general rule was that contained in former Section 20 of the Water Commission Act which provided:

> "The application for a permit by municipalities for the use of water for said municipalities or the inhabitants thereof for domestic purposes shall be considered first in right, irrespective of whether they are first in time ...".

This provision is now Section 1460 of the Water Code and is the basis for the contention by the City of Fresno that although the applications of the City are not prior in time to Application 5638 filed by the State Department of Finance in 1927, and subsequently assigned to the United States, nevertheless by reason of the municipal status of the City its applications are prior in right and must therefore be approved.

In support of this position the City also cites Water Code Sections 106 and 106.5 which provide as follows:

> "106. It is hereby declared to be the established policy of this State that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation."

> "106.5. It is hereby declared to be the established policy of this State that the right of a municipality to acquire and hold rights to the use of water should be protected to the fullest extent necessary for existing and future uses, but that no municipality shall acquire or hold any right to waste water, or to use water for other than municipal purposes, or to prevent the appropriation and application of water in excess of its reasonable and existing needs to useful purposes by others subject to the rights of the municipality to apply such water to municipal uses as and when necessity therefor exists."

Were these sections to prevail, reflection will indicate how sweeping might be the effect. Assume a number of cities for example, were to file applications for large amounts of water to be taken from the Delta of the Sacramento and San Joaquin Rivers

for municipal purposes which were in conflict with State plans. We may take official notice that there are a number of State filings awaiting hearing by the State Water Rights Board to appropriate water from the Delta in furtherance of various plans of the State, some of which were filed many years ago. If subsequent municipal applications were to be granted preferential priority over these State filings, it could quite possibly result that present plans for the Central Valley Project and the State Water Plan could not be carried out. So here -- depending on the aggregate amount found available for use under the operation plans of the United States as formulated by its Bureau of Reclamation -- those plans might not be feasible. A question is therefore raised whether such a possible interruption of carefully devised plans having so desirable and even necessary an objective as the development, conservation, and utilization of the water resources of the State, are to be subjected to interference or even frustration by assertion of the municipal preference.

It is fundamental law that when a substantial question is raised respecting the intent of a legislative act, resort should first be had to the terms of the act itself. If the intent sought can be found there, no further search should be made. Reference is therefore required to Water Code, Division 6, Part 2, comprising Sections 10500, 10504, 10505 and 10506. For convenience these sections are set forth in full as follows:

> "10500. The department shall make and file applications for any water which in its judgment is or may be required in the development and completion of the whole or any part of a general or coordinated plan looking toward the development, utilization, or conservation of the water resources of the State.

Any application filed pursuant to this part shall be made and filed pursuant to Part 2 of Division 2 of this code and the rules and regulations of the State Water Rights Board relating to the appropriation of water insofar as applicable thereto.

Applications filed pursuant to this part shall have priority, as of the date of filing, over any application made and filed subsequent thereto. Until October 1, 1959, or such later date as may be prescribed by further legislative enactment, the statutory requirements of said Part 2 of Division 2 relating to diligence shall not apply to applications filed under this part, except as otherwise provided in Section 10504."

"10504. The department may release from priority or assign any portion of any appropriation filed by it under this part when the release or assignment is for the purpose of development not in conflict with such general or coordinated plan. The assignee of any such application, whether heretofore or hereafter assigned, is subject to all the requirements of diligence as provided in Part 2 of Division 2 of this code. 'Assignee' as used herein includes, but is not limited to, state agencies, commissions and departments, and the United States of America or any of its departments or agencies."

"10505. No priority under this part shall be released nor assignment made of any appropriation that will, in the judgment of the department, deprive the county in which the appropriated water originates of any such water necessary for the development of the county."

"10506. Every state department or state officer, upon request of the department, shall furnish any service or assistance in the investigation of the need or feasibility of all or any part of such general or coordinated plan and the cost of construction, operation, and maintenance thereof, of the financing of construction and rates or returns that may be required to operate and maintain all or any part of the plan, of the amortization of bonded or other indebtedness that may be placed on all or any part of the plan for the cost of construction thereof, and shall render any other service which the department deems necessary for the maintenance of any priority in the State for the purposes of all or any part or unit of the plan and the future development and completion of it in the public interest."

The third paragraph of Section 10500, first sentence, provides that "Applications filed pursuant to this part shall have

priority, as of the date of filing, over any application made and filed subsequent thereto". The quoted sentence appears to be clear in meaning and free of reasonable doubt. The general rule is that priority in time is priority in right (Water Code Sec. 1450). The question for decision is whether this general rule is applicable to applications filed as authorized by Water Code Section 10500, or the exception thereto as provided by Section 1460.

Unless the sentence quoted from Section 10500 were intended to refute the very municipal preference asserted, it would appear that little if any meaning could be attributed thereto. However, the Legislature in adding, long after enactment of Section 1460, the third paragraph of Section 10500 must have intended that applications filed pursuant to Section 10500 be afforded a priority over any applications filed subsequent thereto, including applications filed for municipal purposes. Had that not been the intent, it would have been an extremely simple matter for the Legislature to state in Section 10500 that applications filed pursuant thereto would have priority over <u>any except applications by municipalities</u>. The quoted sentence should accordingly be given meaning as though it read "<u>priority in right</u>".

It remains to locate, if possible, some more direct indication of what the Legislature intended regarding the point here under review. Section 10506 clearly affords that indication in express terms. The section comprises one extremely long sentence, much of which is extraneous to our purpose in referring to it, and it has heretofore been quoted in full. The significant portion for present purposes is fully preserved in the following partial quotation:

"10506. Every state department or state officer, upon request of the department (of Water Resources), shall furnish any service or assistance in the investigation of the need or feasibility of all or any part of such general or coordinated plan ... and shall render any other service which the department (of Water Resources) deems necessary for the maintenance of any priority in the State for the purposes of all or any part or unit of the plan and the future development and completion of it in the public interest." (Emphasis added.)

So directly relevant to the present inquiry is the underscored portion that it suggests foresight on the part of the Legislature respecting the precise question now before us, and a desire in general terms to provide a conclusive answer.

Further, it is expressly stated in Section 10500 that applications filed pursuant thereto shall be for water which "may be required in the development and completion of the whole or any part of a general or coordinated plan looking toward the development, utilization, or conservation of the water resources of the State". Obviously, it would be unreasonable to attribute to the Legislature an intent to allow a municipality by the simple expediency of filing an application to thwart the consummation of a coordinated plan intended for the benefit of all the people of the State. Manifestly, it cannot be said, as a matter of law, that applications by a municipality for domestic and other uses are accorded a superior right over applications filed pursuant to Section 10500.

The record facts afford ample support for the conclusion that any priority established by an application filed pursuant to Water Code Section 10500 is not subordinate to an application by a city, filed subsequent to such State filing. No consideration of

either law or fact has, on the record before us, been called to our attention which would impeach our conclusion that Application 5638 is prior in time and in right to applications of the City of Fresno pursuant to the provisions of Water Code Section 1460. Application 5638 is also prior in time and in right to Application 6733 of Fresno Irrigation District.

However, we are not constrained to resolve the issues before us on the narrow basis provided by a comparative construction of Sections 1460, 10500 and 10505. The rule that conflicting applications shall be determined on the sole basis of statutory priorities has been modified and in large part superseded by an entirely different concept, that of public interest, which is next discussed.

The Public Interest

It is the view of this Board that the requirements of the public interest, as we interpret and apply it to the record before us, is an extremely valuable guide. To such extent is this the case that it indicates to us what our course should be as to the sharply conflicting issues before us for decision. Applicable criteria for our guidance are found in various statutory provisions. It will therefore be of value to set forth at some length various references in the statutes as to what is authorized and required in the public interest.

With warrant we may point to Water Code Section 102 as the keystone of State regulation of acquisition of rights to the use of water. The section reads:

"All water within the State is the property of the people of the State, but the right to the use of water may be acquired by appropriation in the manner provided by law."

That "manner provided by law" is set forth in detail in Water Code, Division 2, Part 2. Together with appropriate portions of Division 1, this comprises the legal sanctions for the functions of the State Water Rights Board concerning the appropriation of water.

Article XIV, Section 3, of the State Constitution, adopted in 1928, declares the new policy of reasonable use of all waters in this State. The first sentence of Section 3 is now codified as Water Code Section 100. It contains two points relevant here. The first is that "the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable", and the second "that the conservation of such water is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare". The concluding sentence of Article XIV, Section 3, is as follows:

"This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained."

In direct context with the immediate foregoing is Water Code Section 1050, which appears in Division 2, Part 2, of that Code. It provides as follows:

"1050. This division is hereby declared to be in furtherance of the policy contained in Section 3 of Article XIV of the Constitution of the State and in all respects for the welfare and benefit of the people of the State, for the improvement of their prosperity and their living conditions, and the board and the department shall be regarded as performing a governmental function in carrying out the provisions of this division."

The effect of this section is to afford protection of the Constitution to the functions authorized by Division 2 of the Water Code as in implementation of Article XIV, Section 3. Here again there is language which is tantamount to an expression of the public interest. The public interest obviously includes the concern of the inhabitants of the State in the acquisition of rights to the use of water and how, where, and for what purposes they are used. This concern is expressly stated in Sections 104 and 105 of the Water Code as follows:

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

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

Under existing case law, so far as these sections concern the functions of this Board, they must be interpreted to refer to unappropriated water. In Meridian Ltd. v. City and County of San Francisco, 13 Cal.2d 425 (1939) the State Supreme Court said: "These excess waters constitute the public waters of the State to be used, regulated, and controlled by the State or under its direction." Sections 104 and 105 indicate in general terms that such control and direction are to be guided by the public interest.

Sections 1253 and 1255 of the Water Code consist in the broadest delegation to any State agency contained in the Water Code respecting the public interest. Note the mandatory language of

both these sections which with reference to the State Water Rights Board provide:

> "1253. The board shall allow the appropriation for beneficial purposes of unappropriated water under such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest the water sought to be appropriated."

> "1255. The board shall reject an application when in its judgment the proposed appropriation would not best conserve the public interest."

In East Bay Municipal Utility Dist. v. Department of Public Works, 1 Cal. 2d 476, 35 Pac. 2d 1027, the Supreme Court fully explored this power now delegated to the State Water Rights Board, upheld it as valid and characterized it as quasi-legislative in nature. Again, in Temescal Water Co. v. Dept. of Public Works, 44 Cal. 2d 90, 280 Pac. 2d 1, the Supreme Court considered the effect of these statutes and declared: "In carrying out its present duty, the department exercises a broad discretion in determining whether the issuance of a permit will best serve the public interest." The following section is directly relevant to exercise of the identical power. It provides as follows:

> "1256. In determining public interest under Sections 1253 and 1255, the board shall give consideration to any general or coordinated plan prepared and published by the Department of Water Resources or any predecessor thereof, looking toward the development, utilization, or conservation of the water resources of the State."

This section encompasses all the relevant reports issued by the former Division of Water Resources and its predecessor organizations as well as the present Department of Water Resources bearing on a "general or coordinated plan ... looking toward the development, utilization, or conservation of the water resources

of the State." A number of such reports are in evidence and are a part of the record before the State Water Rights Board in this proceeding. As adjured by this section this Board has given careful consideration thereto.

The next section is also worthy of consideration. It provides as follows:

> "1257. In acting upon applications to appropriate water, the State Water Rights Board may, where the facts justify, consider the relative benefit to be derived from all beneficial uses of the water concerned including, but not limited to, use for domestic, irrigation, municipal, industrial, preservation of fish and wildlife, recreational, mining and power purposes, and may subject such appropriations to such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest, the water sought to be appropriated."

This Board has also given due consideration, as authorized by this section, to the uses of water therein specified, and also to terms and conditions therein referred to. It has in fact taken very seriously its responsibility to require any appropriation authorized by it to conform to the public interest. Due to the broad scope of these delegations respecting the public interest, it may well be said that in the field of acquisition of rights to the use of water, subordinate always to effective expressions of legislative will, the State Water Rights Board is the guardian of the public interest.

From the foregoing discussion we draw the following conclusions:

1. The public interest is involved in varying degree but to some extent in every application to appropriate the unappropriated waters of the State.

2. The public interest is a beacon light to guide this Board in arriving at each decision made by it.

3. The public interest includes how, where, and for what purposes the water should be used.

4. If the Board finds that a particular application, as shown by the evidence before it, contains any element that does not conform to the public interest, it is the duty of the Board to devise terms and conditions to require the proposed appropriation to conform thereto. If that appears infeasible the Board must deny the application.

In our search for light upon the meaning of the phrase "the public interest", as it should be applied herein, reference is next made to Division 6, Part 3, of the Water Code entitled: "Central Valley Project". Two sections of this part are relevant here. These provide as follows:

> "11125. The public interest, welfare, convenience, and necessity require the construction in the manner provided in this part of a system of works for the conservation, development, storage, distribution, and utilization of water, with incidental generation, transmission, and distribution of electric power which system of works is designated as the Central Valley Project and is specifically approved and authorized."

> "11126. The construction, operation, and maintenance of the project as provided for in this part is in all respects for the welfare and benefit of the people of the State, for the improvement of their prosperity and their living conditions, and the provisions of this part shall therefore be liberally construed to effectuate the purposes and objects thereof."

In the strongest terms so far encountered these sections declare the public interest and welfare require the construction and operation of the Central Valley Project, the Friant Division of which directly concerns the Board and the parties before us.

Nearly $60,000,000 have been expended or obligated by entities along the Madera and Friant-Kern Canals with the objective of applying to beneficial use the quantities of water allocated to those entities under long-term contracts formally executed with the United States (USBR 20A; OCID 7; TBID 1; RT 9533, 10394-10398, 10490, 10494, 10495, and 10549). An additional sum of over $85,000,000 has been appropriated from the Federal Treasury and expended by the United States on Friant Dam and Madera and Friant-Kern Canals, the three principal features of the Friant Division of the Central Valley Project (RT 783, 784).

The narrowest interpretation of the Board's discretion in the public interest would require that a commanding consideration be given to these expenditures. Any action that might substantially impair the investments thus represented should be avoided, if reasonably possible.

We therefore conclude that in the public interest Applications 234, 1465 and 5638 of the United States should be approved in order that the project may function as now envisioned by the United States, subject to certain exceptions. Applications 5817 to 5822, inclusive, and 9369 should be denied for the reasons hereinafter discussed.

Purpose of Use under Application 5638

Application 5638 of the United States filed pursuant to the statute now codified as Section 10500 of the Water Code provides that the uses to which water is to be applied thereunder are "irrigation, incidental domestic, and flood control". A petition

filed with the Board on April 15, 1958, requests that those uses be extended to include "municipal" and to change "incidental domestic" to "domestic" purposes.

The Legislature in adopting Chapter 477, Statutes of 1925, provided for the investigation by the State of California of the possibilities of coordinating the development of the water resources of the State. The results of that investigation are set forth in Division of Engineering and Irrigation, Bulletin No. 12, "Summary Study of the Water Resources of California and a Coordinated Plan for their Development", dated 1927 (USBR 32). Section 4 of said Chapter 477 provides that "It shall be the duty of the division of engineering and irrigation of the department of public works to ascertain ... the amounts of water required for municipal and industrial purposes ...".

Mr. Paul Bailey, a former State Engineer charged with the responsibility of conducting the investigation authorized under Chapter 477, testified that at the time the State Water Plan was being formulated and the various 1927 State filings were prepared, the municipalities were relying on ground water as a source of supply which was supported by return flow from irrigation (RT 16212-16214). Therefore the omission in Application 5638 of provisions for municipal use is no evidence of the lack of intent to provide for municipal requirements under the State Water Plan.

The requested change is thoroughly in keeping with the intent expressed in Sections 10500 and 11126 of the Water Code and should be approved insofar as it relates to irrigation, domestic, municipal, and recreational purposes.

Storage of water or regulation of a stream by the United States for flood control purposes is a continuing paramount power of the United States conferred on it by the Commerce Clause of the United States Constitution and is exercised under Section 7 of Act of Congress of December 22, 1944 (Ch. 665, 58 Stat. 887). For this Board to purport to grant such a right pursuant to the applications of the United States would be most improper. Under applicable case law such a permit term would add nothing to the present statutory power of federal authority, and to the extent it were to purport to limit such power it would clearly be invalid as an invasion of federal power. Application 5638, insofar as it relates to the appropriation of water for flood control purposes should be denied.

City of Fresno and Fresno Irrigation District

Project operational studies made by the United States show that, excepting those necessary for the satisfaction of prior rights between Friant Dam and Gravelly Ford, no releases would have been made from Millerton Lake in 43 of the 58 years from 1897 through 1954 (USBR 24 and 25). Some releases would be necessary in the other 15 years to make storage space available in Millerton Lake for flood control purposes.

Refinements in the foregoing studies now indicate that much of the water previously thought necessary to release downstream as flood waters may now be diverted to the Madera and Friant-Kern Canals and beneficial use made thereof. Portions of the quantities released can be diverted and beneficially used in the Mendota Pool area (USBR 24 and 25, RT 820-822). Taking this evidence in its

most restrictive sense, Project operations by the United States would consume all water arriving at Friant Dam in about three years out of four.

Thus, at the very most, water would be available to satisfy the applications of the City of Fresno or the Fresno Irrigation District in only one year out of four. During dry periods there would be as many as 14 consecutive years without spill from Millerton Lake (USBR 24). It is concluded that unappropriated waters occurring with such infrequency are insufficient to warrant the issuance of permits to either the City or the District. Issuance of permits is further precluded by failure on the part of either the City or the District to demonstrate during the hearing their ability to obtain storage space in Millerton Lake which now occupies the site proposed by them. Any unappropriated water of the San Joaquin River otherwise available to these entities can only feasibly be placed to beneficial use with the aid of storage facilities. True, witnesses for the City of Fresno testified regarding possible storage sites, but no necessary amendments to its applications were offered. Direct diversion of such remaining flows would be highly impractical. To issue permits under such conditions would only operate as a disservice to the particular permittee by creating an illusion of value in the permits not commensurate with their true worth, and accordingly, the applications of the City and the District should be denied. As a corollary, petitions of these entities seeking to amend their applications need not be considered.

The Board is cognizant of the desire of the City and the District to secure permits in their own names entitling them to take water of the San Joaquin River through their own facilities at the source but conditions dictate otherwise. The Board is of the opinion that it would be subject to severe criticism, and rightly so, to encourage, at least by inference, a permittee to undertake the construction of expensive facilities for the appropriation and diversion of water that would be available to the permittee, at most, one year out of four. Notwithstanding, the Board is not overlooking the needs and legal status of these two entities, and it is convinced that the action taken herein will, when considered in the light of the actual circumstances as found to exist, represent the best interests of the water users therein.

Based on practical considerations we therefore conclude that permits should not issue to either the City of Fresno or to the Fresno Irrigation District. However, there remains for consideration whether there are other means for assuring to these entities an adequate water supply.

County of Origin Act and Watershed Protection Law

We have disposed of the contention advanced on behalf of the City of Fresno based on the municipal preference as set forth in Water Code Section 1460. There remains to consider the preferential status asserted on behalf of the City of Fresno and the Fresno Irrigation District in favor of their applications grounded on Water Code Section 10505, the so-called "County of Origin" Act. Then also, a preferential status is urged by both the City and District grounded on Water Code Sections 11128 and 11460-11463,

referred to as the "Watershed Protection" Law.

We have in this decision heretofore referred in other context to portions of Division 6, Part 2, of the Water Code which contains Sections 10500, 10504, 10505, and 10506. We have also noted that Application 5638 of the United States was assigned to the United States many years ago by the Department of Finance by which it was filed. The assignment was expressly made in furtherance of the Central Valley Project pursuant to the statute now codified as Water Code Section 10504. That assignment contains no condition protecting counties of origin in the water sought to be appropriated pursuant to Section 10505.

Sections 10504 and 10505 provide as follows:

> "10504. The department may release from priority or assign any portion of any appropriation filed by it under this part when the release or assignment is for the purpose of development not in conflict with such general or coordinated plan. The assignee of any such application, whether heretofore or hereafter assigned, is subject to all the requirements of diligence as provided in Part 2 of Division 2 of this code. 'Assignee' as used herein includes, but is not limited to, state agencies, commissions and departments, and the United States of America or any of its departments or agencies."

> "10505. No priority under this part shall be released nor assignment made of any appropriation that will, in the judgment of the department, deprive the county in which the appropriated water originates of any such water necessary for the development of the county."

The unconditional assignment contains the required finding that such assignment would not, in the judgment of the Department of Finance, deprive any county in which the water proposed to be appropriated originates of any such water necessary for the development of the County. It appears reasonable to assume that the Department of Finance, knowing that any rights of water service

the City of Fresno and the Fresno Irrigation District might require from Millerton Lake were even better protected under Water Code Sections 11460-11463, decided to relegate them to protection thereunder pursuant to the fundamental presumption that official duties will be faithfully performed and that it was therefore unnecessary to impose conditions pursuant to Water Code Section 10505. If the City and District are in fact more adequately protected under said Sections 11460-11463, it may reasonably be assumed that such justification was relied upon in making the unconditional assignment. In any event, in view of our conclusion immediately following, it appears unnecessary to decide the point here raised.

Both the City of Fresno and the Fresno Irrigation District are, and always have been, since the formulation of general plans for the Central Valley Project, fairly within the service area of the Central Valley Project. The same is also true with respect to Gravelly Ford Water Association, Tranquillity Irrigation District, and Garfield Water District. All are clearly within the watershed of the San Joaquin River and within the terms of the Watershed Protection Law (Code Sections 11460 et seq.). The record shows that a long-term water delivery contract is in process of negotiation for an adequate water supply for Gravelly Ford Water Association (page 19, ante). As to Tranquillity Irrigation District, we agree with the essential approach thereto of the District's counsel set forth in his brief, page 32, that inasmuch as the District's claim is to a vested right, it is the obligation of the United States to recognize that right under any permits it may

receive. All of these agencies are entitled to the protection, if any is afforded, by Water Code Sections 11460-11463, and 11128. These sections read as follows:

> "11460. In the construction and operation by the department of any project under the provisions of this part a watershed or area wherein water originates, or an area immediately adjacent thereto which can conveniently be supplied with water therefrom, shall not be deprived by the department directly or indirectly of the prior right to all of the water reasonably required to adequately supply the beneficial needs of the watershed, area, or any of the inhabitants or property owners therein."
>
> "11461. In no other way than by purchase or otherwise as provided in this part shall water rights of a watershed, area, or the inhabitants be impaired or curtailed by the department, but the provisions of this article shall be strictly limited to the acts and proceedings of the department, as such, and shall not apply to any persons or state agencies."
>
> "11462. The provisions of this article shall not be so construed as to create any new property rights other than against the department as provided in this part or to require the department to furnish to any person without adequate compensation therefor any water made available by the construction of any works by the department."
>
> "11463. In the construction and operation by the department of any project under the provisions of this part, no exchange of the water of any watershed or area for the water of any other watershed or area may be made by the department unless the water requirements of the watershed or area in which the exchange is made are first and at all times met and satisfied to the extent that the requirements would have been met were the exchange not made, and no right to the use of water shall be gained or lost by reason of any such exchange."
>
> "11128. The limitations prescribed in Section 11460 and 11463 shall also apply to any agency of the State or Federal Government which shall undertake the construction or operation of the project, or any unit thereof, including, besides those specifically described, additional units which are consistent with and which may be constructed, maintained, and operated as a part of the project and in furtherance of the single object contemplated by this part."

A preferential right under these sections is asserted at length in this proceeding on behalf of the City of Fresno and the Fresno Irrigation District. They are supported in this position by some parties and opposed by others.

Normally the issues before us would be presented for decision before the storage and diversion works were constructed, and could have been presented immediately following authorization for construction of the Central Valley Project by the State in 1934. The first federal authorization of the project was in 1935 as a reclamation project pursuant to the Federal Reclamation Laws. This interpretation was 15 years thereafter fully confirmed by the United States Supreme Court in United States v. Gerlach Live Stock Co., 339 U. S. 725 (1950). During the long delay by State and Federal Governments in dealing with the issues now before us, the Federal Government, through its Bureau of Reclamation, has proceeded with construction of the project which was plagued with shortages of labor and materials due to a world war, plus the Korean conflict. During all this period, each session of the Legislature produced one or more resolutions urging more appropriations and faster completion of the project in order to put the water on the land without further delay.

We have heretofore referred to Application 5638, the merits of which are fully explored in the present record. It was originally filed in implementation of the Central Valley Project, and was assigned by the State to the United States expressly in furtherance of that project. As we interpret Water Code Section 10506, the public interest, as revealed in this section (See

quotation at page 53, ante) as well as others, particularly Sections 11125 and 11126 (quoted at page 61, ante) requires us to recognize that the State of California has allowed the Central Valley Project to be developed by the United States with little, if any, effective direction. It is much too late to make any except a minimum of changes in the now proposed developmental program of the United States. Indeed, we believe the public interest clearly so requires.

Under these circumstances it would not partake of good faith, except for compelling reasons of public interest, to reject any essential policy, practice, or operational program adopted by the United States in furtherance of the Central Valley Project.

A number of parties in these proceedings argue that Water Code Sections 11460-11463, and 11128 (heretofore quoted) are vague and uncertain and therefore unenforceable. Further, they argue that application of these sections would amount to retroactive legislation against the operations of the United States. We do not agree with either argument. However, we are not here compelled to struggle with these problems of constitutional law and statutory construction. Such matters can only be finally determined by a court of competent jurisdiction. The limitations imposed by the watershed protection law are not dependent upon administrative action but exist by force of the statute itself. Action by the Board can have no effect upon them.

Without regard to the extent the statute may give rise to valid and enforceable obligations on the part of the United States, the Board is bound to look to all relevant legislative

expressions of policy and to consider them as guides in exercising its discretion to condition permits in the public interest in light of all the facts presently before the Board. Whatever may have been the intent of the Legislature in adopting these statutes we cannot conclude that it was intended thereby to deprive areas such as the City of Fresno and the Fresno Irrigation District of a source of water supply so readily accessible to them as that obtainable from the San Joaquin River. Rather, we believe that the Legislature in adopting "Watershed Protection" Sections 11460-11463 and 11128 and "County of Origin" Sections 10500, 10504 and 10505, was expressing a policy that areas such as the City and the District, both highly developed and well established, located almost at the very outlet-works of Friant Dam, should not incur deficiencies in supply such as they are now suffering while water is transported past them to distant undeveloped lands.

In view of the legislative policy thus impliedly expressed; in view of efforts expended by the City and the District to obtain water from the San Joaquin River, and in view of the unquestioned overdraft within the Fresno Ground Water Unit, it is concluded that the public interest requires that waters of the San Joaquin River be made available to the City and District as hereinafter set forth, provided such action will not jeopardize investments made pursuant to long-term contracts already executed with the United States.

The position of the United States is not in conflict with the conclusion here expressed (RT 15892, U.S. Brief p. 83):

"... policy-wise, the Bureau will, to the extent it can do so compatibly with project operations, functions, and purposes, satisfy watershed and area of origin needs and uses; ...".

Surpluses of Water Available Under Proposed Plan of United States

All long-term water service contracts executed between the United States and the numerous entities here involved contain the provision that the United States shall not contract to deliver in excess of 800,000 acre-feet of Class 1 water in any one year (USBR 4, 5, 6), but studies by the United States indicate that the reasonable yield of Class 1 water is 750,000 acre-feet per year. Long-term water service contracts formally executed prior to the submission of briefs in these proceedings cover an aggregate Class 1 water supply of 683,900 acre-feet per annum, or 66,100 acre-feet per annum less than the 750,000 acre-foot limitation.

The contracts impose no restriction upon the quantity of Class 2 water that the United States may agree to deliver, the matter being at the discretion of the United States. Routing studies by the United States which are in evidence (USBR 24 and 25) indicate that in certain years a maximum annual quantity of 399,200 acre-feet of Class 2 water (see page 18) can be made available over and above the quantities presently covered by long-term contracts. A further quantity of 35,000 acre-feet can be made available for beneficial use in about one year out of four by exceeding the design capacities of Madera and Friant-Kern Canals through encroachment on their freeboard and receiving waters released from Millerton Lake to provide space therein for flood control storage (RT 821).

In the aforementioned routing studies, Friant-Kern Canal operational losses were estimated to average some 132,900 acre-feet per year (RT 1287). The evidence, however, indicates that under future project operation these losses will not exceed 50,000 acre-feet per year (RT 1291, 8204). For the seven-year period, 1951-1957, actual losses averaged only 22,100 acre-feet per year (RT 1289). Thus at least 82,900 acre-feet of water is actually available over and above all present allocations and commitments and in addition to quantities previously discussed. A considerable portion of this saving is undoubtedly Class 1 water.

With the exception of the Madera Irrigation District and Chowchilla Water District which have used only about 66 per cent of their contract allotments, ground water levels have been rising since 1951 more or less steadily in all of the districts receiving water under long-term water delivery contracts with the United States. This rise, coupled with notice of the quantities of water delivered, average probable future contractual deliveries, and acreages irrigated, presents a strong inference that some readjustment downward of contractual quantities may ultimately be not only desirable but necessary to prevent water logging of valuable agricultural lands. Most of the holders of long-term contracts expressed the belief that their Districts will eventually operate pumping facilities within their areas, thereby making ground water control a matter of district-wide operation. Such operation should create an eventual further availability of water.

In summary, it is noted that more than 66,100 acre-feet per year of Class 1 water and a maximum annual supply of 399,200

acre-feet of Class 2 water can be made available annually by the United States over and above the long-term contracts already executed without exceeding the reasonable yield of the project; namely, 750,000 acre-feet per annum of Class 1 water and an annual maximum of 1,400,000 acre-feet of Class 2 water; that the aforementioned routing studies (USBR 24 and 25) assume a Friant-Kern Canal loss of 82,900 acre-feet on an average annual basis in excess of the maximum presently estimated losses when the project is in full operation; that an additional average annual quantity of 35,000 acre-feet of releases for flood control purposes can be transported down the Madera and Friant-Kern Canals and beneficially used; and that contractual provisions for meeting the requirements of those entities now holding long-term contracts are in excess of presently anticipated requirements.

Reservation of Water for Fresno Ground Water Unit and Garfield Water District

In view of the considerations set forth in the preceding section of this decision it is clear that 50,000 acre-feet of municipal water to the City of Fresno and an average annual supply of 86,000 acre-feet of Class 2 water to Fresno Irrigation District, both entities being nearer to the source of supply than any contracting party, should be made available annually on a parity with other long-term contract holders, provided appropriate contracts are executed consistent with present Reclamation Law, or other provision as may be established by final judgment in Rank v. Krug (ante p. 42). Permits issued to the United States should be conditioned accordingly.

On the basis of the evidence before the Board, these quantities will adequately meet the ultimate supplemental requirements* of the Fresno Ground Water Unit. Sufficient water is available for diversion under permits to be issued to the United States and/or other rights of the United States to satisfy not only these requirements and the reasonable requirements of those entities now holding long-term water delivery contracts, but also the reservations of water made by the United States for Arvin-Edison Water Storage District and Gravelly Ford Water Association. Garfield Water District, being located in such close prcximity to Friant Dam, by this same reasoning applied to the Fresno Ground Water Unit, is likewise entitled to service. Its needs are small, the record showing that about 3,500 acre-feet annually of Class 1 water will suffice (RT 14,768). The record further indicates that quantities of water sufficient to satisfy all of the above-mentioned requirements can be delivered, provided any permits issued to the United States make allowance for a maximum diversion of 5,000 cubic feet per second to Friant-Kern Canal as requested by the United States and that canal capacity is made available to transport such a diversion. Any permits to the United States should so provide.

Suggested Plan of Cooperation for Management of Fresno Ground Water Unit

At the present time, the wells of the City of Fresno are supplied principally by return irrigation water from lands served by the Fresno Irrigation District. These lands lie northerly,

* See page 28.

northeasterly and easterly of the City. The District presently supplies these lands with surface water from Kings River. The individual water users operate pumps to furnish auxiliary supplies from the ground water basin (heretofore referred to as the Fresno Ground Water Unit) in common with the ground water supply of the City of Fresno.

As the City extends its service area to supply subdivisions of formerly irrigated lands, the potential supply to the City's wells is decreased proportionately in that the contribution to the ground water basin by deep percolation of applied water on land formerly irrigated is eliminated.

The 50,000 acre-feet per annum of municipal water to be reserved to the City could be assimilated into the City's distribution system by the time it is available without need of seasonal storage except as afforded by Millerton Lake. However, as the City expands, its supplemental requirement will increase and cannot be provided for in the absence of storage facilities. The City has no convenient surface storage possibilities and therefore must look to a more efficient use of the vast underground storage capacity of the Fresno Ground Water Unit.

One solution to this problem of providing an adequate water supply for the City and the District would be for the District to furnish the lands within the District lying northerly, northeasterly and easterly of the City with a 100 per cent gravity supply. Thus, as a result of this operation, all water which is applied for irrigation purposes and which percolates to the ground water table in this area would become tributary to the City's wells. In order to carry out such a plan, the District would have to make some arrangement with

certain landowners therein whereby the landowners southerly and westerly of the "Metropolitan Area" might pump more water to offset that portion of the surface quantity which would then be no longer available to them due to the increased use of surface supply in the area tributary to the City's wells. This problem could be easily solved if the District were to operate all pumping facilities within that area of the District southerly and westerly of the Metropolitan Area. The City of Fresno could well afford to finance such a program in return for the increased supply it would receive from this tributary area , the solution of the storage problem, and the saving in cost of treating gravity water. This possible solution would further require that use of the City's sewage effluent be confined to the lands overlying the Fresno Ground Water Unit rather than be exported to some area outside of the Unit as was intimated by the City as a possible method of disposing of this effluent.

While the Board cannot compel the District to supply additional gravity water to a portion of the District at the cost of additional pumping in the remainder of the area and cannot compel the City to cooperate with the District in a solution of their problem, the Board recommends that they solve their mutual problem by some such cooperation as herein suggested.

Quantities of Water Required Under Applications of the United States

Quantities Requested by United States

The United States requests (USBR Brief p. 91) that permits be issued pursuant to its applications allowing the storage of 2,800,000 acre-feet per annum during the period November 1 of each

year through August 1 of the succeeding year, and 11,500 cubic feet per second direct diversion during the period February 1 through October 31 of each year.

The foregoing request of the United States is amplified as follows (USBR Brief, p. 33):

> "The United States takes the position that all water allocable under purchased and exchanged rights was not, and is not, subject to appropriation, (alternatively, that if that water is subject to appropriation, then its prior applications cover it, nonetheless) and upon that basis, that the available annual amount based on 57 years of record was 1,780,000 acre-feet (R.T. 543) with as much as 4,131,100 acre-feet in one year (USBR Ex. 24). Since the United States seeks a permit that will satisfy the Constitutional requirements for the fullest beneficial use, the permit should be for the full amount asserted, which is 2,800,000 acre-feet by diversion to storage and 11,500 c.f.s. by direct diversion (R.T. 434 and Board's Ex. 1 and 2). A permit to the United States for those amounts should be issued."

An amendatory supplement to Paragraph 2 of Applications 234 1465, 5638 and 5817 through 5822 provides as follows:

> "It is intended to pool the waters under license 1986, Application No. 23, with those applied for in Applications 234, 1465, 5638, 5817 to 5822, inclusive, and 9369 so that the combined direct diversion from Friant Reservoir will be sufficient to divert 6,500 c.f.s. into the Madera and Friant-Kern Canals and upwards to 5,000 c.f.s. along the San Joaquin River, including Contra Costa and Delta-Mendota Canals."

Paragraph 2 of Applications 234, 1465, and 5638 contains a further amendatory supplement providing as follows:

> "Water will be stored and diverted from storage through the Madera and Friant-Kern Canals under Applications 234, 1465, and 5638 as needed for irrigation and for the replenishment of the natural underground reservoirs under Application 9369. The total water stored in Millerton Lake for both uses will be upwards to 1,200,000 acre-feet annually not including quantities of water stored for these uses but later released into the San Joaquin River in order to provide empty reservoir space for control of floods. Including releases for flood control the quantity of water stored would exceed 2,800,000 acre-feet in some years."

Purchase and Exchange Contracts

Some years prior to the authorization of the Central Valley Project, Miller and Lux, Incorporated, was the owner of extensive land holdings on both sides of the San Joaquin River between Gravelly Ford and a point some miles below the mouth of the Merced River, much of it riparian to the San Joaquin River, its sloughs and tributaries. The Company over a long period of years had also initiated and developed appropriative rights to the waters of the San Joaquin River. As a result of actions instituted by the Miller and Lux interests against the Madera Irrigation District and others in Fresno County, an extensive adjudication was made of the Company's rights to the use of the flows of the San Joaquin River. The decisions of the Court in these cases are commonly referred to as the "Haines Decrees". The decrees entered in favor of the plaintiffs entitled Miller and Lux, Incorporated, and its affiliated companies to most of the flow of the San Joaquin River at Whitehouse gaging station for use on their lands. The lands planted to crops are designated "crop lands" and the lands largely used for pasturage were designated as "grass lands".

Under the so-called "Purchase Contract" dated July 27, 1939, and by subsequent deed pursuant thereto, the United States acquired from Miller and Lux, Incorporated, and Gravelly Ford Canal Company their "grass land" water rights. Closely related to such purchases and considered part thereof is the "Exchange Contract"* of the same date entered into by the United States with companies formerly affiliated with Miller and Lux, Incorporated, which provided for an

* Amended March 17, 1956.

exchange of water from the Sacramento River for water of the San Joaquin River for the "crop lands". Numerous other rights along the San Joaquin River have also been acquired by the United States.

Although the United States takes the position that water acquired by virtue of purchase and exchange is not subject to appropriation, the requested permit quantities stated in the brief as well as in the supplements to the applications, clearly indicate that permits are requested to cover all the water to be diverted under the project.

Central California Irrigation District in its brief avers that water used by the United States by virtue of the "Exchange Contract" as amended March 17, 1956, and water covered in the "Purchase Contract" are available for appropriation by the United States and only the United States.

Fresno Irrigation District takes the position that the purported transfers of rights by purchase and exchange were no more than a quitclaim by the owners of these rights, vesting no title or right in the transferee except as against the transferors and that the water represented by these transfers, at least insofar as it is to be used on other lands, is unappropriated water subject to appropriation by an applicant according to priority given by law.

The rights acquired pursuant to the Purchase and Exchange contracts with the former Miller and Lux interests consist of both appropriative and riparian rights. A number of other rights were acquired of a similar nature. Referring to all these rights collectively, by far the major flows were covered by appropriative rights, a number of which have repeatedly been referred to as among the earliest and best established rights in the State.

It has always been the administrative practice when there is doubt as to ability to produce the necessary proof of continuity of use, to accept applications duplicating the same use under old appropriative rights antedating the Water Commission Act.

Respecting riparian rights, all acquisitions by the United States are of estoppels only against the former owners to object to diversions for project purposes. Here, it would be eminently proper to issue permits covering use of the water. As to the appropriative rights, the record fully supports their validity, and there is nothing therein raising any question with respect thereto except possibly as to some lengthy delays in applying all the water claimed to beneficial use. Insofar as such delays were due to construction difficulties, it is not considered that any such objections are meritorious due to the magnitude of the project. Other questions have been raised as to the right of United States to change points of diversion, purposes and places of use. Again, there is no clear proof of injury adequate to defeat such changes, nor do we have jurisdiction to entertain any such objections.

A close analysis of the Exchange Contract reveals that essentially all rights are appropriative. Some of these are also riparian. A maximum flow of 2,316 cfs is in the contract reserved to the contracting companies for use on "crop lands". These rights are now vested in the Central California Irrigation District. The United States is obligated to release these scheduled flows at Friant Dam for the use of the District, subject to the right of the United States to use the water to the extent it makes available to the District at Mendota Pool a water supply from the Sacramento River

of a specified quantity and quality. There is no basis for questioning the right to change the points of diversion, purposes of use or places of use. In any event no questions of validity of any of these rights appear to be substantial.

As to the Purchase Contract, this includes many well established appropriative rights and also some riparian rights. Inasmuch as this contract was followed by a deed containing the traditional language of such a document, the justification for referring to it as a mere quitclaim is not perceived. However, we are without jurisdiction to determine the point. All other questions appear to be covered by the foregoing discussion.

It follows that a determination of the validity, nature and extent of rights acquired by the United States under the Purchase and Exchange Contracts, as well as other acquired vested rights is not within the province of this Board. We need only conclude that unappropriated water occurs at times and in amounts sufficient to warrant the issuance of permits to the United States. The permits will provide for water in an amount to enable the project to operate substantially as programmed by the United States, with noted exceptions, provided, to the extent the United States in operation of the project utilizes acquired vested rights, the amount so utilized shall be deducted from the aggregate water quantities under the permits.

Quantities to be Allowed Under
Applications of United States

As previously mentioned, the United States has requested in its brief permits allowing appropriations totaling 11,500 cubic feet per second by direct diversion and 2,800,000 acre-feet per annum by storage.

The applications provide that, under the plan of operation described therein,

> ". . . the combined direct diversion from Friant Reservoir will be sufficient to divert 6,500 cubic feet per second into the Madera and Friant-Kern Canals and upwards to 5,000 cfs along the San Joaquin River, including Contra Costa and Delta-Mendota Canals."

The record discloses, however, that approximately 98 per cent of the water arriving at Friant Dam will be diverted to the Madera and Friant-Kern Canals or released to the San Joaquin River for use in the vicinity of Mendota Pool (RT 822) and for the satisfaction of rights downstream along the "Friant to Gravelly Ford" reach of the River. Water released for use in the vicinity of Mendota Pool will either be for the satisfaction of prior vested rights under the Exchange Contract, as amended March 17, 1956, or will be water released from storage to provide space in Millerton Lake for flood control as hereinafter discussed. The water represented by the remaining 2 per cent will occur at the peak of flood runoff periods in extremely wet years and no showing has been made by the United States of its ability to place this water to beneficial use by direct diversion at points along the San Joaquin River below Friant Dam, including the Sacramento-San Joaquin Delta.

Accordingly the total quantity of water to be appropriated by direct diversion under the permits should be limited to 6,500 cfs, the combined ultimate capacities of the Madera and Friant-Kern Canals, and the applications should be denied insofar as they propose direct diversion at points downstream from Friant Dam.

Any releases of water for the satisfaction of downstream prior rights including the rights now being litigated in Rank v. Krug

(ante p. 42) and any releases for satisfaction of the Exchange Contract, as amended March 17, 1956, would not be considered a claim against the 6,500 cubic feet per second and need not be included in the permits.

Relative to diversion to storage, the United States has requested 1,200,000 acre-feet per annum for beneficial use and 1,600,000 acre-feet per annum which will be stored and later released to provide reservoir space for flood control. Of this latter quantity the United States estimates that on an average 35,000 acre-feet per annum will be placed to beneficial use along the Madera and Friant-Kern Canals and an average of 50,000 acre-feet per annum will be placed to beneficial use in the vicinity of Mendota Pool (RT 821).

Although we have earlier concluded that flood control is not a proper purpose of use under a permit from this Board, the permits should nevertheless allow the appropriation of all water which may be placed to beneficial use subsequent to release for flood control purposes. At this time no determination can be made as to the maximum amount of these flood control releases which may be placed to beneficial use in any one year. Therefore, in view of the inability to ascertain from the record the maximum amount of flood waters that could be placed to beneficial use, the total amount of water requested in the applications to be appropriated by storage - 2,210,000 acre-feet per annum - should be allowed. Reductions in permit quantities can be made at the time of license if such is in order.

Applications 234, 1465 and 5638 of the United States request permits totaling 11,000 cubic feet per second by direct diversion and 2,210,000 acre-feet per annum by storage. Applications 5817 through 5822 are for direct diversion only. As the foregoing discussion indicates, Applications 234, 1465 and 5638 are more than adequate to cover the required direct diversion and therefore Applications 5817 through 5822 are unnecessary and should be denied.

Disposition of Application 9369 and the Question of Coverage of District Ground Water Replenishment Program

Application 9369 was filed on August 2, 1938, by the Department of Finance of the State of California pursuant to aforecited Section 10500 of the Water Code. On September 30, 1939, the application was assigned to the United States. The application is for a permit to appropriate 2,000,000 acre-feet per annum by underground storage between October 1 and August 1 of each year from the San Joaquin River for irrigation and incidental domestic purposes. Diversion to underground storage is to be effected at Friant Dam at a maximum rate of 5,000 cubic feet per second. The lands to be irrigated include 900,000 net acres within the Central Valley Project service area.

Application 9369 was not pressed by the United States during the hearing nor was any proof submitted in connection therewith (RT 137, 16776). It must therefore be denied.

In view of the failure of the United States to offer proof in support of Application 9369, concern was expressed by certain of the districts presently holding long-term contracts with the United States as to whether permits that might be issued pursuant to other United States applications would adequately provide for the groundwater replenishment program of the districts. An expert witness for the districts testified that about one-half of the Class 2 waters diverted at Friant Dam will be placed directly underground upon delivery with subsequent recovery being made for application of the water to beneficial use (RT 1980). It is noted that in an extremely wet year, such as 1938, some 1,400,000 acre-feet of Class 2 water would be delivered (USBR 24).

Section 1242 of the Water Code provides as follows:

> "1242. The storing of water underground, including the diversion of streams and the flowing of water on lands necessary to the accomplishment of such storage, constitutes a beneficial use of water if the water so stored is thereafter applied to the beneficial purposes for which the appropriation for storage was made."

The record leaves no doubt that the storage of water underground with subsequent recovery as proposed by the districts constitutes a beneficial use within the meaning expressed in Section 1242. Furthermore, all water to be applied directly to underground storage by the districts in question is to be diverted through the Madera and Friant-Kern Canals, the ultimate capacities of which will be covered under the direct diversion portions of the permits to be issued. The principles set forth in Stevens v. Oakdale, 13 Cal. 2d 264, and later cases, manifestly enable an irrigation district to lawfully recapture waters applied by the districts to beneficial use on district lands which may percolate to the underground so long as the recapture is effected within the district boundaries. These factors should effectively dispel any apprehension that the ground-water replenishment program of the districts cannot be adequately covered by any permits to be issued in the manner herein discussed.

Legislative Resolutions Relative to Imposition of Permit Terms

On August 7, 1951, the State Legislative Joint Committee on Water Problems adopted a resolution which requested the then State Engineer to defer issuance of permits to the United States until such time as the Committee could study and make recommendations with respect to appropriate terms and conditions for insertion in such permits.

On March 13, 1952, the Joint Committee made a report to the Legislature in which it was stated, in substance, that the public interest requires that the State Engineer incorporate in all permits and licenses granted to the United States to appropriate water for irrigation purposes through Federal reclamation projects specific conditions to the effect that the agencies and landowners receiving water are the beneficiaries of each permit and each license; and the right to receive water appropriated under the permits and licenses is permanent and appurtenant to the lands upon which the water is used.

Pursuant to the report of the Joint Committee, the Legislature in Assembly Concurrent Resolution No. 2 of the 1952 First Extraordinary Session and in Senate Concurrent Resolution No. 8 of the 1952 Regular Session, identical in language, recited that the recommendations of the Joint Committee were found by the Legislature to be necessary in the public interest and memorialized the Director of Public Works and the State Engineer specifically as follows:

> "1. That, in issuing permits and licenses to appropriate water for federal reclamation projects, due consideration be given to the possibility and desirability of issuing such permits and licenses to appropriate water for irrigation purposes to the contracting public agencies of the State rather than the United States.
>
> "2. That licenses issued to the United States for irrigation purposes in connection with federal reclamation projects be limited to water subject to contracts between public agencies of the State and the United States which the State Engineer finds to be in the public interest and to conform to state law and that any permits and licenses issued for such purposes contain, in the public interest, the following conditions among, but not to the exclusion of, other conditions:
>
> "(a) That the beneficiaries of each permit and each license are and shall be the public agency

or agencies of the State together with the owners of land within such agency or agencies to be served with water appropriated under the permit and license.

"(b) That the rights of the agencies and owners of land within the agencies to be served with the water appropriated under the permits and licenses are, subject to continued beneficial uses, permanent and appurtenant to the lands upon which the water is used.

"(c) That the use of water appropriated under the permits and licenses are subject to the reasonable requirements of the watershed or area wherein the water originates or area immediately adjacent thereto that can be conveniently supplied with water therefrom; and that no transfer of water of one watershed or area of origin to another watershed or area shall be consummated unless and until provision is made to meet such reasonable water requirements of the former ...".

The Board, as successor in function to the State Engineer, has taken cognizance of these identical resolutions in the issuance of permits to the United States for the Solano Project on Putah Creek, the Folsom Unit of the Central Valley Project on American River, and the Cachuma Project on Santa Ynez River.

Permits issued to the United States on these projects provided, in substance, that rights under the permits are to be held by the United States in trust for the water users, that rights acquired thereunder shall be permanent and appurtenant to the lands irrigated and that licenses shall be issued to the public agencies within which water has been beneficially used. Also repeatedly permits have been issued to the United States for reclamation projects containing terms and conditions requiring preferential treatment of areas of origin of the water sought to be appropriated.

The position of the United States is that such conditions are invalid because (1) they discriminate against the United States, and (2) they are not within the power of the State Water Rights Board.

It is obvious in view of the history of the development and present status of the Central Valley Project that in dealing with legal aspects of the complex subject of water rights for this gigantic project, which is entirely within the confines of a single state, it is requisite to arrive at an amalgamation - an accommodation - of and between State and Federal law. This is a very necessary objective in in the field of water rights which has been said to be pregnant with potentiality of conflict. The laws of the United States and the laws of the State of California should be harmonized to the maximum practicable extent.

A close review of the special terms and conditions contained in the permits heretofore cited reveals that they essentially consist in (a) a declaration of trusteeship of the United States; (b) a requirement that the use of water on the land for irrigation shall, under long-term contracts for water delivery, become appurtenant to the land (subject to certain exceptions) in accord with settled California law, and that the right shall continue in perpetuity subject only to continued beneficial use, and further subject to compliance with contract requirements, all in conformity with other terms of the permit; (c) a requirement that after the water is fully applied to beneficial use and a license is in order it shall be issued to the district for the landowners; and (d) protection of the reasonable requirements of the watershed wherein water sought to be appropriated originates or area immediately adjacent thereto which can conveniently be served with water therefrom.

After careful study of these terms and conditions, we have arrived at the conclusion that some are essential while others are not, as the following discussion demonstrates.

Condition (a) trusteeship, serves only as justification for imposition of the remainder. In fact it is not an operating condition at all but a declaration of status. It is fundamental in our form of government, State and Federal, that every public statute delegating functions to any individual officer or body, is a trust, and has often been referred to as a sacred trust. Yet it would be absurd to contend that it would necessarily follow that all the ramifications of the laws concerning trusts, trustees, and beneficiaries must be applied. Some general principles doubtless do apply to a trust of the nature here contemplated while most doubtless do not. Reference is made to a helpful treatise entitled "Government Ownership and Trusteeship of Water", by Frank J. Trelease, California Law Review, Dec., 1957, Vol. 45, No. 5, at pages 638-654.

Here, the Federal Government makes no claim that it is operating or proposes to operate the Central Valley Project for the benefit of the Federal Treasury but rather, precisely as was proposed by the Water Project Authority which originally contemplated its construction and operation "... in all respects for the welfare and benefit of the people of the State, for the improvement of their prosperity and their living conditions ..." (Water Code, Sec. 11126). The State authorization of the project in 1933 (Stats. 1933, Chapter 1042) has from time to time been refined and added to by amendments but except for additional units, remains essentially as it was in the beginning. No formal or informal relinquishment or transfer to the United States has ever been made with sole exception of assignment to the United States "in furtherance of the Central Valley Project" of applications to appropriate unappropriated water. One of these, as

has been noted, is now before us. With respect to that application, how then can the federal authorities contend with any show of justice or logic that they do not and will not hold in trust any water rights acquired pursuant to that application? Much more could be said on this particular subject but little need be. We consider it is sufficient to state that in entire absence of any reference to the subject in the permit, based only on the history and present status of state and federal law, the United States holds all water rights acquired or to be acquired for the purposes of the Central Valley Project as a solemn trust for the benefit of the people of this State.

Consideration is now given to condition (b), a requirement that the use of water on the land for irrigation shall, under long-term contracts for water delivery, become appurtenant to the land (subject to certain exceptions); also subject to certain exceptions, the right to receive the water and to apply it to beneficial use shall continue in perpetuity, all in accord with settled California law. It follows from the water right being appurtenant to the land, that it must continue in perpetuity - the one follows from the other, subject only to compliance with the noted conditions. That such is indeed settled law requires only reference to The California Law of Water Rights, by Wells A. Hutchins, (published by California Printing Division, 1956) at page 124, and authorities cited.

The federal reclamation law in a number of respects has given rise to controversy, much of which has involved Section 8 of the original act of June 10, 1902 (32 Stat. 390). The Ivanhoe case (and associated cases) was decided by the Supreme Court of California (Ivanhoe Irr. Dist. v. All Parties, etc., 47 Cal. 2d 597, 306 P. 2d

824), and on certiorari was reversed and remanded by the U. S. Supreme Court for further proceedings by the State Court (Ivanhoe Irr. Dist. v. McCracken, 357 U.S. 275; 78 S.Ct. 1174). On remand the remittitur was recalled and briefs are in course of submission whereupon the Supreme Court of California will give consideration to decision of the questions of state law involved.

The Supreme Court of the United States in the Ivanhoe case, et al., did not purport to decide questions of state law of concern to us in this proceeding, holding that water rights were not involved and that the water delivery and other contracts involved were governed by federal law and were valid. As to Section 8 of the reclamation act, the Court held that section required the Federal Government, proceeding under the reclamation laws, to conform to state law in acquiring water rights and apparently contrasted therewith the operation of projects.

Section 8 also contains a provision not touched upon in the Ivanhoe case but long accepted as fundamental law in many western courts and also in numerous decisions of the U. S. Supreme Court. That consists in the proviso to the section. It reads as follows:

> "That the right to the use of water acquired under the provisions of this act shall be appurtenant to the land irrigated and beneficial use shall be the basis, the measure, and the limit of the right."

Section 8, either by reference or expressly, has a number of times been reaffirmed by the Congress, the latest instance being Act of July 2, 1956, Chapter 492, Section 4, 70 Stat. 484, now codified as Section 485 - 4, U.S.C.A., Title 43. Section 8 is here re-enacted, including the proviso. As has been noted, settled California law is in accord.

Justifying independent consideration is that portion of the condition now being considered that the right acquired pursuant to long-term contracts for irrigation shall continue in perpetuity subject only to continued beneficial use and to observance of any and all contractual commitments to the United States. An objection to this term could only arise from the stand taken by the federal authorities in the Ivanhoe case that the long-term water delivery contracts of concern to us here are for terms of 40 years and (with exception of the Madera contract) are not subject to renewal, and if it is not desired by such authorities to renew at that time, all rights thereunder of the contracting parties will cease to exist. Certainly this was the position of federal authorities, so far as it was possible to ascertain it, until enactment of the Act of July 2, 1956, hereinbefore referred to, which expressly provides that existing long-term (40-year) contracts, at the request of the contracting agency, shall be amended to provide for renewal. The same act further provides for the conversion, at the request of the contracting party, of such long-term water delivery contracts, into the traditional form of repayment contract. The latter form of contract is by federal law required to be followed in event the United States constructs distribution systems for and on behalf of the water users.

At this juncture we must not lose sight of our objective. We have been exploring the intent of federal authorities respecting future continuity in water service under these long-term delivery contracts prior to the Act of July 2, 1956. One point here should be conclusive on this subject as to the intent of federal law respecting future service of water after expiration of the 40-year term. Many

of these long-term contracts in effect along the course of the Friant-Kern Canal, in addition to the water delivery feature, also provide for construction by the United States of elaborate distribution systems to deliver the water to the lands, the costs of distribution system to be repaid in forty annual installments as set forth in the contract. In a number of such contracts the cost of these distribution systems, as our record here shows, have run to many millions of dollars. There can be no doubt that these works were designed to remain in service far beyond the period of forty years.

Reflection on this situation is sufficient to convince that obviously the United States and its subordinate agencies are required by obligations of good faith to continue delivery of water to the contracting agencies beyond the present terms of the contracts. This would be in accord with the definition of an appropriative right as defined by the U. S. Supreme Court in Arizona v. California, 283 U.S. 423, 459:

> "To appropriate water means to take and divert a specified quantity thereof and put it to beneficial use in accordance with the laws of the state where such water is found, and, by so doing, to acquire under such laws, a vested right to take and divert from the same source, and to use and consume the same quantity of water annually forever, subject only to the right of prior appropriations."

We believe that such practice by the federal authorities speaks louder than words and that in view thereof it is eminently sound and proper to require such continuity of water service by the permit term here in contemplation. In fact, the objections advanced to this and other special terms herein approved (See Brief of United States, pages 78-85, incl.) are sufficient justification, if any be

required, for their insertion. Certainly this is more than adequate response to the claim of discrimination.

There is next for attention condition (c) that after the water for irrigation is fully applied to beneficial use, and license is in order it shall be issued to the district for the landowners, and not to the United States. This condition partakes to a substantial extent of the nature of condition (a). Under our permit and license system the right to the use of water by appropriation does not vest by virtue of application, permit or license, although these are necessary steps in the process of acquisition of the right - which vests by application of the water to beneficial use upon the land, precisely as it did long before enactment of the Water Commission Act, now codified as Water Code, Division 2, Part 2. The Code subjects that acquisition to the following orderly steps:

(1) Filing of application. This grants (with stated exceptions) a right of priority as against later applications which continues until action on the application. If denied it terminates; if approved it merges in the permit. Until such final action is taken it is a procedural right of priority only.

(2) Issuance of permit. This grants, limited by its terms, the privilege of taking and using the water but in and of itself vests no water right, for the excellent reason that such does not occur until all conditions are fulfilled - and there is never issued any permit without conditions. The major function of a permit is to grant the consent of the State to the future use of water according to its terms.

(3) Use of water according to the terms of the permit. Beneficial use of water as authorized by the permit is the basis, the measure, and the limit of the water right acquired.

(4) Issuance of license. This is the last step in the process. It is a document formalizing and declaring, on the part of the State, that beneficial use has been made as required, to the extent found, and is confirmatory of acquisition of the right by appropriation by such use.

It is therefore clear that when any entity is an applicant for a water right for irrigation which has no intention to itself use the water, and when such use is made by others, direct proof of such use must be made by the water users. Under such circumstances when the required use and proof thereof has been made, even though formal title to the use is held of record by the permittee or licensee, the right by use is vested in those by whom the use has been made, as a matter of law. It is true that in California a different rule applies to a utility corporation operating pursuant to regulation by the Public Utilities Commission. But here the status of the Federal Government operating the Central Valley Project bears no true analogy to a utility corporation functioning under California law. Any faint analogy there was has been discounted by the Act of July 2, 1956, heretofore referred to, making applicable to the situation here the following excerpt from the opinion of the U. S. Supreme Court in Nebraska v. Wyoming, 325 U.S. 589, 614; 65 S.Ct. 1332, 1349:

> "The property right in the water right is separate and distinct from the property right in the reservoirs, ditches or canals. The water right is appurtenant to the land, the owner of which is the appropriator. The water right is acquired by perfecting an appropriation,

> i.e., by an actual diversion followed by an application within a reasonable time of the water to a beneficial use. (Citing.) Indeed Sec. 8 of the Reclamation Act provides as we have seen that 'the right to the use of water acquired under the provisions of this Act shall be appurtenant to the land irrigated, and beneficial use shall be the basis, the measure, and the limit of the right.'"

Permits issued to the United States should contain a condition to the effect that water used thereunder for irrigation under long-term contracts for water delivery will by use within their respective districts be appurtenant to the land on which used, and will also contain a term requiring continued application to beneficial use. It therefore matters little whether the formal license is issued to the water user organizations or to the United States. Similarly to condition (a), by force of applicable law, state and federal, the United States holds all water rights acquired for project purposes in trust for the project beneficiaries who by use of the water on the land will become the true owners of the perpetual right to continue such use, subject to the noted exceptions. There is some justification for the objections of the United States to issuance of license to the water users in that the United States will, until otherwise provided by act of Congress, continue to divert the water, store it, and doubtless also will operate the main canals and other facilities. In each of the previous instances in which permits to the United States have provided that licenses be issued to the water users, not more than two or three districts were involved. Here, many agencies have and will receive a water supply from the project. To issue a separate license to each, based upon permits held by the United States, might, and doubtless would, pose serious legal and

administrative problems not all of which can be anticipated at this time. The Board cannot now say that such action would best serve the public interest under circumstances which may prevail, many years in the future, when the time comes for the issuance of licenses. Such determination should be deferred until that time.

There is last for consideration condition (d) that the permit shall be subject to the reasonable requirements of the watershed wherein the water sought to be appropriated originates, or area immediately adjacent thereto which can be conveniently served with water therefrom. Conditions protecting future use for areas of origin are not expressly authorized by act of Congress; however, as a matter of both state and federal law, it appears that the United States, the Bureau of Reclamation as well as its parent organization, the Department of the Interior and the Secretary thereof, are obligated to observe Water Code Sections 11460-11463, in carrying out the Central Valley Project. See Central Valley Project Documents, Engle, Part II Operating Documents, 1957, U. S. Government Printing Office, Washington, D. C., pp. 514-543, incl. A review of the history of Water Code Sections 10505, 11460-11463, together with that portion of the present decision dealing with the subject of the public interest amply demonstrate the propriety of conditioning permits to the United States in the public interest, including but not limited to requirements as to how, when, where, and for what purposes the water is to be used.

Conclusions

The evidence indicates and the Board finds that unappropriated water exists in the San Joaquin River at times and in sufficient amounts to justify approval in part of Applications 234, 1465, and 5638 of the United States; that said applicant has substantially completed all necessary construction work and has for some time been delivering water to various contracting agencies for beneficial use thereof; that such waters in general but with certain exceptions and subject to certain conditions may be taken and used as proposed without interference with the exercise of prior rights; and that those applications should be approved and permits issued pursuant thereto, subject to the usual terms and conditions and subject to those additional terms and conditions indicated in the preceding portions of this decision for the protection of prior rights and in the public interest. The Board finds that as so conditioned the developments proposed in those applications will best develop, conserve and utilize in the public interest the waters sought to be appropriated.

The Board also finds that the proposed changes of point of diversion and place of use under License 1986 (Application 23) and of purpose of use under Application 5638 will not operate to the injury of any legal user of water and that the petitions for such changes should be approved with the exception that the point of diversion under License 1986 should be limited to Friant Dam; that "flood control" as a purpose of use under Application 5638 is not within the jurisdiction of the Board and should be denied for that reason. With respect to the applications other than those enumerated in the first

paragraph of this section of the decision, the evidence indicates and the Board finds that all such applications should be denied for reasons heretofore set forth.

ORDER

Applications 234, 1465, 5638, 5817, 5818, 5819, 5820, 5821, 5822 and 9369 of the United States; Applications 6771, 6772, 7134 and 7135 of the City of Fresno, Application 6733 of Fresno Irrigation District for permits to appropriate unappropriated water and petitions to change point of diversion and place of use under License 1986 (Application 23) of the United States having been filed with the former Division of Water Resources, protests having been filed, jurisdiction of the administration of water rights including the subject applications and license having been subsequently transferred to the State Water Rights Board, a public hearing having been held by the Board, petitions to amend Applications 5638, 7134 and 6733 having been filed during the course of said hearing, and said Board having considered all of the evidence received at said hearing and now being fully informed in the premises:

IT IS HEREBY ORDERED that Applications 234, 1465 and 5638 of the United States be and the same are approved in part and it is ordered that permits be issued to the applicant, subject to vested rights and to the following terms and conditions, to wit:

1. The amount of water to be appropriated under permit issued pursuant to Application 234 shall not exceed 3,000 cubic feet per second by direct diversion to be diverted from about February 1 to about October 31 of each year; and

500,000 acre-feet per annum to be collected between about November 1 of each year and August 1 of the succeeding year.

2. The amount of water to be appropriated under permit issued pursuant to Application 1465 shall not exceed 3,000 cubic feet per second by direct diversion to be diverted from about February 1 to about October 31 of each year; and 500,000 acre-feet per annum by storage to be collected between about November 1 of each year and about August 1 of the succeeding year.

3. The amount of water to be appropriated under permit issued pursuant to Application 5638 shall not exceed 5,000 cubic feet per second by direct diversion to be diverted from about February 1 to about October 31 of each year; and 1,210,000 acre-feet per annum by storage to be collected between about November 1 of each year and about August 1 of the succeeding year.

4. The total amount of water to be appropriated by direct diversion under these permits shall not exceed 6,500 cubic feet per second.

5. To the extent that permittee shall divert water from San Joaquin River at Friant Dam under rights initiated other than pursuant to these permits, the amount of water diverted under these permits shall be reduced by a like amount.

6. The maximum amount herein stated may in license be reduced if investigation so warrants.

7. Construction work shall be completed on or before December 1, 1985.

8. Complete application of the water to the proposed use shall be made on or before December 1, 1990.

9. Progress reports shall be filed promptly by permittee on forms to be provided annually by the State Water Rights Board until license is issued.

10. From the quantities set forth in permit conditions 1 through 4, there shall be reserved for a period of three years from the date of this order, or for such additional time as may be allowed by the State Water Rights Board, 50,000 acre-feet per annum of municipal water for City of Fresno or such additional quantity as may be mutually agreed by permittee and the City; 3,500 acre-feet per annum of Class 1* water for Garfield Water District or such additional quantity as may be mutually agreed by permittee and the District; and such quantities of Class 2* water for Fresno Irrigation District as may be required to provide an average annual supply of 86,000 acre-feet, or such additional quantity as may be mutually agreed by permittee and the District.

(a) Permittee shall provide water to City of Fresno, Garfield Water District and Fresno Irrigation District only after execution of water service contracts with the United States all in conformity with Federal Reclamation Laws; and

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* Class 1 and Class 2 water referred to in this order is as defined in "Contract between the United States and the Delano-Earlimart Irrigation District Providing for Water Service and for the Construction of a Distribution System", dated August 11, 1951 (USBR 5 in the matter of Applications 234, etc.).

subject to such provisions as may be imposed by final judgment in Rank v. Krug, No. 685-ND, United States District Court, Southern District of California, Northern Division; and the right to receive water by City of Fresno, Garfield Water District and Fresno Irrigation District shall be co-equal with all entities which heretofore have executed long-term service contracts with the United States for delivery of water.

(b) Permittee and City of Fresno, Garfield Water District and Fresno Irrigation District shall each within six months from the date of this order and each six months thereafter submit to the Board a written report as to the progress of negotiations for water service contract (or contracts). If, at the end of three years or such additional time as may be allowed by the State Water Rights Board, said contract(s) has (have) not been executed, said Board shall call for further hearing to show cause why said contract(s) has (have) not been executed.

(c) If, after further hearing, the Board concludes that permittee has unreasonably refused to execute such water service contract(s) with the City of Fresno, Garfield Water District or Fresno Irrigation District in the amounts and under the terms set forth in this paragraph, these permits shall be subject to revocation by the Board.

(d) If, after further hearing, the Board concludes that the City of Fresno, Garfield Water District or Fresno Irrigation District has unreasonably refused to execute such water service contract(s) with permittee in accordance with the provisions of this paragraph, the reservation of water provided for in this paragraph shall be subject to termination by the Board insofar as the refusing entity is concerned.

11. All rights and privileges including method of diversion, method of use and quantity of water diverted under these permits are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

12. Permittee shall maintain daily records of inflow into and outflow from and releases from Millerton Lake, volumes in storage and water surface elevations and shall provide and maintain such measuring facilities as may be necessary for the formulation of said records. Permittee shall make said records of inflow, outflow, releases, volumes in storage and water surface elevations available to the State Water Rights Board and shall allow authorized representatives of said Board access to its project works and properties for the purpose of securing supplemental information.

13. Subject to the existence of long-term water delivery contracts between the United States and public agencies and subject to the compliance with the provisions of said contracts by said public agencies, these permits are further conditioned as follows:

(a) The right to the beneficial use of water for irrigation purposes, except where water is distributed to the general public by a private agency in charge of a public use, shall be appurtenant to the land on which said water shall be applied, subject to continued beneficial use and the right to change the point of diversion, place of use, and purpose of use as provided in Chapter 10 of Part 2 of Division 2 of the Water Code of the State of California and further subject to the right to dispose of a temporary surplus.

(b) The right to the beneficial use of water for irrigation purposes shall, consistent with other terms of this permit, continue in perpetuity.

14. The Board retains continuing jurisdiction for such period as may be necessary for the purpose of conforming these permits with the provisions of the final judgment in Rank v. Krug, No. 685-ND, United States District Court, Southern District of California, Northern Division.

IT IS FURTHER ORDERED that petitions to change the point of diversion and place of use as described in License 1986 (Application 23) be and the same are hereby approved in part and that appropriate orders be issued allowing such changes, to wit:

1. The point of diversion is to be located at "Friant Dam, N. 39° 30' W - 2,200 feet from S¼ corner of Section 5, T11S, R21E, MDB&M, being within the NW¼ of SW¼ of said Section 5."

2. The place of use is a gross area of 4,986,000 acres "within the potential service area shown on Map No. 214-212-37 of the United States dated April 10, 1951 and revised December 13, 1951 and entitled 'Potential Service Area, San Joaquin River Application Nos. 23, 234, 1465, 5638, 5817 to 5822 Incl. & 9369' and filed of record with License 1986".

IT IS FURTHER ORDERED that Paragraph 3 of Application 5638 be amended to read as follows:

The use to which the water is to be applied is irrigation, domestic, municipal and recreational purposes.

IT IS FURTHER ORDERED that Applications 6771, 6772, 7134 and 7135 of the City of Fresno; Application 6733 of Fresno Irrigation District; and Applications 5817, 5818, 5819, 5820, 5821, 5822 and 9369 of the United States in their entirety and Applications 234, 1465 and 5638, insofar as they relate to direct diversion at points downstream from Friant Dam, be and the same are hereby denied.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Sacramento, California, on this 2nd day of June, 1959.

/s/ Henry Holsinger

Henry Holsinger, Chairman

/s/ W. P. Rowe

W. P. Rowe, Member

/s/ Ralph J. McGill

Ralph J. McGill, Member