

STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

In the Matter of Applications 16186)
and 16187 of Merced Irrigation)
District to Appropriate from Merced) Decision No. D 979
River in Mariposa and Merced Counties)

Substance of the Applications

Applications 16186 and 16187 of Merced Irrigation District (hereinafter referred to as "the District") were filed on December 23, 1954, for permits to appropriate unappropriated water from Merced River in Mariposa and Merced Counties.

Application 16186 is for an appropriation of 900,000 acre-feet per annum by storage to be collected between October 1 of each year and July 1 of the succeeding year for domestic and irrigation purposes. The storage dams proposed are as follows:

- (1) Bagby Dam* - Lot 11 of Section 6, T4S, R17E, MDB&M**
- (2) Exchequer Dam - NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Section 13, T4S, R15E
- (3) Snelling Dam - NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 7, T5S, R15E.

Water released from storage will be rediverted at the District's existing North Side and Main Canals for irrigating 153,000 net irrigable acres and domestic use within a gross area of 173,864 acres.

* This location of Bagby Dam is described in a petition for change in point of diversion dated April 6, 1960.

** All township references herein are from Mount Diablo Base and Meridian (MDB&M).

Application 16187 is for an appropriation of 900,000 acre-feet per annum by storage to be collected between October 1 of each year and July 1 of the succeeding year and 3,000 cubic feet per second by direct diversion, year-round, for power purposes. Storage is to be at Bagby, Exchequer and Snelling Dams, the locations of which are described in the preceding paragraph under Application 16186. Direct diversion is to be effected at a point within Lot 11 of Section 6, T4S, R17E, and rediversion will be at points within the SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 13, T4S, R15E, and the NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Section 7, T5S, R15E. The following proposed power plants will be used under Application 16187:

Bagby Power Plant - Lot 14 of Section 6, T4S, R17E

Exchequer Power Plant - NW $\frac{1}{4}$ of SE $\frac{1}{4}$ of Section 13, T4S, R15E

Snelling Power Plant - NE $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 7, T5S, R15E.

Protests and Hearing

The subject applications were completed and advertised in accordance with the provisions of the Water Code and applicable rules and regulations, and a public hearing was held in Merced, California, on October 14, 15 and 16, 1959, and January 5 and March 9, 1960. Kent Silverthorne, Chairman of the State Water Rights Board (hereinafter referred to as "the Board"), presided over all sessions of the hearing except the March 9, 1960, session which was conducted by Board Member Ralph J. McGill. The applicant, protestants and other interested parties were duly notified of the hearing.

The Issues

The protestants are, in general, favorable to the project proposed by the District provided adequate releases are made to satisfy prior vested rights. Certain of the protestants located below the confluence of Merced River with San Joaquin River are fearful that the District's project may reduce the quality of water available to them to such an extent that it would be unsuitable for protestants' uses. Protestant California Department of Fish and Game asserts that excessive diversion by the District would result in the destruction of fishery resources. Protestant Pacific Gas and Electric Company claims that the District's proposed project will diminish natural flows to which it is entitled.

Source

Merced River is formed by the junction of Triple Peak Fork and Foerster Creek within Section 10, T3S, R24E, and flows in a general westerly direction approximately 38 miles to a confluence with South Fork Merced River; thence approximately 14 miles southwesterly to a confluence with North Fork Merced River; thence southerly and westerly about 6 miles to the site of the proposed Bagby Dam; thence northwesterly about 9 miles and southerly about 6 miles to the existing Exchequer Dam; thence southwesterly about 10 miles to the site of the proposed Snelling Dam; thence southwesterly approximately 41 miles to a confluence with San Joaquin River. The total length of the stream scales approximately 124 miles.

The watershed of the Merced River above Exchequer Dam scales approximately 1020 square miles and ranges in elevation from 13,114 feet at Mt. Lyell to approximately 450 feet at the base of Exchequer Dam.

Water Supply

According to the District's Exhibit 19 the average annual flow, on a calendar year basis, of the Merced River at Bagby and at Exchequer Dams for the period 1917-1956 was 849,780 acre-feet and 904,020 acre-feet, respectively. The flow data used in the exhibit are from the records of flow at Bagby for the period November 1922 to 1956, correlations with other recorded flows for the period 1917 to 1922, and inflows between Bagby and Exchequer for the total period determined by correlation with records on streams with drainage basins of similar characteristics.

In order that the monthly and yearly variations of the flow of Merced River may be exemplified, Table I has been included herein showing flow records at Bagby (Staff Exh. 4). The records set forth in the table are on a calendar year basis and cover the period 1947 to 1956.

The drainage area which yields most of the water flowing in the Merced River is located in the western slope of the Sierra Nevada, in Madera and Mariposa Counties. Of the 1020 square miles of drainage area contributing to the Merced River above the existing Exchequer Dam, 46.7 per cent is below 5,000 feet and 53.3 per cent is above 5,000 feet (M.I.D. Exh. 19).

TABLE I

MERCED RIVER AT BAGBY FOR PERIOD
1947 to 1956
(acre-feet)

Year	: 1947	: 1948	: 1949	: 1950	: 1951	: 1952	: 1953	: 1954	: 1955	: 1956	: Mean
January	25,070	12,170	8,520	27,660	81,130	126,000	54,650	15,220	20,480	199,900	57,080
February	37,210	9,940	19,870	55,020	67,780	58,110	25,880	36,540	20,040	75,170	40,260
March	60,250	26,300	64,970	47,240	81,460	134,400	38,440	82,950	34,500	83,750	65,430
April	101,900	94,550	141,800	167,200	130,400	209,600	120,200	165,400	66,570	146,100	134,370
May	174,700	241,000	236,800	231,900	178,700	449,000	124,400	224,300	187,900	318,800	236,750
June	50,370	219,300	107,800	124,400	104,400	313,800	158,600	73,060	137,200	293,400	158,230
July	11,270	36,720	17,290	22,780	30,200	117,000	52,210	17,610	22,320	103,800	43,120
August	3,700	6,630	4,930	4,930	7,230	29,470	7,340	4,670	4,740	22,690	9,630
September	2,010	2,730	2,160	2,870	2,880	9,050	3,380	2,480	1,920	8,130	3,760
October	9,010	3,130	2,260	5,150	3,260	5,400	2,440	2,200	1,700	8,370	4,290
November	9,880	3,700	5,910	241,500	7,980	6,260	5,380	5,760	4,230	11,340	30,190
December	6,620	6,970	5,810	250,500	46,240	24,230	7,080	16,270	323,100	9,050	69,590
Total	491,990	663,140	618,120	1,181,150	741,660	1,482,320	600,000	646,460	824,700	1,280,500	853,000

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Applicant's Project

The District has a gross acreage of 163,864 acres, of which 143,075 acres are irrigable (RT p. 14). There are two areas of proposed inclusion which total about 10,000 acres. With these areas added to the existing District the gross acreage would be 173,864 acres and the irrigable acreage 153,000 acres (RT p. 33).

The District's existing Exchequer Reservoir with a capacity of 281,200 acre-feet is used to supply irrigation water to the District and revenue from the sale of hydroelectric power. The operation schedules for the reservoir show serious deficiencies in irrigation supply even though the total flow of Merced River is generally sufficient. Because of this inadequate facility the monthly irrigation demand requirements cannot be met 22 years out of 33 years studied during the period 1921-1954. Of the 22 deficient years, 10 are deficient more than 10 per cent (RT p. 205).

The District filed Applications 16186 and 16187 on December 23, 1954, for the purpose of developing a project that would supply its irrigation requirements. Studies of the Merced River were made by the Corps of Engineers from 1955 to 1957. And in November 1957, the Board of Directors of the District engaged Tudor Engineering Company to conduct further studies and prepare a feasibility report. The Tudor report was completed in September 1958, recommending a multi-purpose project for irrigation, power and flood control (RT pp. 24-26).

The plan conceived by the Tudor Engineering Company proposes enlargement of Exchequer Dam, construction of a dam upstream from Exchequer near Bagby and a dam downstream from Exchequer near Snelling. The Bagby Dam is to have a reservoir capacity of 415,000 acre-feet, the enlarged Exchequer Dam is to have a reservoir capacity of 1,000,000 acre-feet and the Snelling Dam is to have a reservoir capacity of 190,000 acre-feet. This plan for the over-all development of the Merced River provides full flood control, maximum electrical energy from the total flow of the river and a water supply for the full irrigation demand of the District except for deficiencies never exceeding ten per cent, and these deficiencies occurred only in 7 years of the total 40 years of record studied (RT pp. 198, 199, 203, 210; M.I.D. Exh. 19).

About 10 miles downstream from Exchequer Dam, a diversion dam and headgates for the Main Canal of the District are located. The headgate structure is upstream about one-half mile from the diversion dam on the left bank of the river. This structure releases up to 1,700 cubic feet per second. On the right bank of the river, at a point above the Merced Falls Power Plant, a small canal called North Side Canal irrigates land of the District on the north side of the river. The maximum flow in this canal is about 100 cubic feet per second. As a part of the proposed project of the District, a small regulating reservoir is to be included on the Main Canal, some three miles downstream from its headgate, for the purpose of holding daily releases from Snelling Dam until and as demanded for irrigation. The capacity of this reservoir is to be about 9,600 acre-feet (M.I.D. Exh. 19).

The total cost of the District's project as revised is \$89,530,000. Assuming a flood control contribution of \$13,000,000 and interest at $4\frac{1}{2}$ per cent, the project is financially feasible in that it can be paid for from power revenues (RT pp. 224-229).

Planned Operation of Project

Water routing studies were prepared by Tudor Engineering Company covering the period 1917 through 1956. These studies show the use of water that is to be made available by the proposed project at Snelling Dam. The average annual discharge at Snelling for the period of record was 877,000 acre-feet. Of this quantity the average annual irrigation demand for the District, including the supply for riparians under the Cowell Agreement*, amounts to 582,000 acre-feet. A 10 per cent deficiency is allowed in the irrigation demand beginning April 1 when the estimated runoff for April - July is less than 450,000 acre-feet. The difference between the average annual discharge and the average annual irrigation demand is 295,000 acre-feet which is broken down into average annual releases of 54,800 acre-feet for fish and wildlife; 53,600 acre-feet for downstream use other than by parties to the Cowell Agreement; 146,500 acre-feet for power, and 40,100 acre-feet for spill (M.I.D. Exh. 9; RT pp. 54-57).

* Agreement entered into between Merced Irrigation District and Henry Cowell Lime and Cement Company et al, whereby the District releases water for prior rights along the Merced River.

Petition to Change Point of Diversion

During the October 14, 1959, session of the hearing the District requested permission to change the location of the point of diversion at Bagby Dam to a point approximately one mile upstream from the site originally contemplated and as described in the notice of these applications. The reason for the change in location is a matter of geology; better foundation conditions were found at the upstream site (RT pp. 17-19, 35, 212). On April 6, 1960, the necessary forms and required fee were filed with the Board to complete the petition for changing the location of the point of diversion at Bagby. On May 20, 1960, amended applications describing the location of the new dam site were filed. There are no other filings of record with the Board between the Bagby dam site as originally contemplated and the proposed new location, and no opposition to the petition to change the point of diversion was expressed by any of the parties at the hearing.

Water Quality

Protestants Banta-Carbona Irrigation District, J. D. Patterson, Twin Oaks Irrigation Company, Orange Avenue Ranch Company, and Patterson Water District are located adjacent to the San Joaquin River downstream from the confluence with the Merced River. The water supply for these protestants is a combination of natural San Joaquin River runoff, irrigation return flow, effluent ground water, drainage water and Merced River flow. Banta-Carbona Irrigation District has the advantage also of flows

from Tuolumne and Stanislaus Rivers. The objective of these protestants is to maintain a supply of water having a suitable quality for their various uses, primarily irrigation (RT pp. 445, 527).

The problem of water quality is one that is well recognized in the lower San Joaquin Valley. In fact, studies of the problem have been made and are continuing to be made (Banta-Carbona Exh. 2, RT pp. 542-547, 442-445). Since the construction of Friant Dam the amount of natural flow in San Joaquin River below Mendota Pool is negligible (RT pp. 536, 537). It is for this reason that the protestants located on the San Joaquin River are emphasizing the need for a supply of fresh water from the Merced River to dilute the poorer quality return flow and drainage waters now flowing in the San Joaquin. The quality of water in San Joaquin River at Fremont Ford, just upstream from the mouth of Merced River, has deteriorated from an average of 434 parts per million (ppm) total dissolved solids prior to 1951 to an average of 734 ppm total dissolved solids in 1955-56. During the same period the total dissolved solids in Merced River at the mouth decreased from an average of 142 ppm to an average of 129 ppm (Twin Oaks Exh. 11).

The protestants located on the San Joaquin River request that the Board retain jurisdiction of permits issued to the District to insure adequate releases at Snelling to maintain a suitable quality of water at the mouth of the Merced River (RT pp. 442, 452, 546). These protestants have no specific solution to offer for the water quality problem at least until the

investigation being conducted by the California Department of Water Resources on the lower San Joaquin Valley is completed. It is estimated that the final report of the investigation will be completed in about one year (RT pp. 442-444, 449, 450, 546, 547).

Banta-Carbona Irrigation District has requested certain releases of water by the applicant over and above those releases made for other vested rights (Banta-Carbona Exh. 1). The District is willing to comply with these releases provided releases for fish and wildlife are included therein (RT p. 597).

Stipulations and Agreements

Stipulations and agreements have been entered into between the District and California Department of Fish and Game, County of Mariposa, and Pacific Gas and Electric Company.

The stipulation and agreement between the District and California Department of Fish and Game dated October 8, 1959, provides for certain releases below Bagby Dam, Exchequer Dam, and Snelling Dam and for operation of the reservoirs for the protection, propagation, and preservation of fish and wildlife. The substance of the flow and reservoir operation requirements as contained in the stipulation and agreement is as follows:

Bagby Dam

Immediately below Bagby Dam a minimum flow of 20 cubic feet per second (cfs) is to be maintained whenever more than one-fourth mile of Merced River is exposed within Exchequer Reservoir area by lowering the water level of the reservoir.

A minimum pool of 30,000 acre-feet is to be maintained in Bagby Reservoir.

Exchequer Dam

A minimum flow of 50 cfs immediately below Exchequer Dam is to be maintained at all times during nondry years and 25 cfs during dry years. A dry year is defined as any 12-month period in which the unimpaired runoff for the station at Exchequer Dam is less than 450,000 acre-feet for the period April 1 through July 31, as forecasted on April 1 by the California Department of Water Resources and adjusted in accordance with the Department's May 1 forecast.

A minimum pool of 115,000 acre-feet is to be maintained in Exchequer Reservoir.

Snelling Dam

Sufficient water is to be released immediately below Snelling Dam to maintain the following minimum flows at Shaffer Bridge about 43 miles downstream from Snelling Dam and about 5 miles upstream from the town of Cressey:

<u>Period</u>	<u>Nondry Year</u>	<u>Dry Year</u>
June 1 through October 15	25 cfs	15 cfs
October 16 through October 31	75 cfs	60 cfs
November 1 through December 31	100 cfs	75 cfs
January 1 through May 31	75 cfs	60 cfs

A minimum pool of 20,000 acre-feet is to be maintained in Snelling Reservoir.

Details of the stipulation and agreement are contained in California Department of Fish and Game Exhibit No. 1. Permits issued to the District should be conditioned by the terms of those provisions of this agreement relating to the required flow releases and reservoir operations.

An agreement between the District and County of Mariposa dated March 1, 1960, provides that permits issued to the District shall be subject to depletion of stream flow in the amount of 112,000 acre-feet per annum from South Fork Merced River, 4,000 acre-feet per annum from Maxwell Creek, and 1,200 acre-feet per annum from Bean Creek for beneficial use in Mariposa County. The agreement further provides that should diversion from South Fork Merced River be made pursuant to the agreement prior to the pay-out period of the revenue bonds for the project the District shall be compensated for the power revenue lost; and that the District will not protest or oppose any application to appropriate water of the Merced River or its tributaries for use within Mariposa County for storage of an annual amount of 50 acre-feet or less, unless studies show that use under such application will encroach upon the then existing rights of the District. Paragraph one of the agreement pertains to matters within the jurisdiction of the Board (M.I.D. Exh. 24), and permits issued to the applicant will contain conditions substantially as outlined in said paragraph. The remainder of the agreement concerns matters over which the Board has no jurisdiction.

Pacific Gas and Electric Company entered into a stipulation with the District on October 13, 1959. The substance of

the stipulation is that the District recognizes all existing rights of Pacific Gas and Electric Company; that the District will modify its proposed project so as to prevent inundation of the Company's Federal Power Commission Project 1335 (Merced Falls Project), or alternatively, make payment to the Company for damages thereto; and that the District will meet its obligation for sale of power to the Company as set forth by contract dated February 21, 1924, (amended February 6, 1941) by substitute performance or compensation (RT pp. 153-157).

The effect of the foregoing stipulations and agreements is the withdrawal of protests by California Department of Fish and Game, County of Mariposa, and Pacific Gas and Electric Company.

Motion by Chowchilla Water
District for Permission to Appear

In February 1960, during the course of the hearing of the subject applications, Chowchilla Water District filed a written motion for permission to appear at the hearing as an interested party and to introduce evidence in support of its position. The petition alleged that the District is in need of a supplemental water supply and had depended upon securing such supply from the Chowchilla River by means of the proposed Buchanan Dam; that after the convening of the hearings of Applications 16186 and 16187, petitioner learned for the first time that the County of Mariposa intended to utilize the water of Chowchilla River and that such use by the County of Mariposa would destroy the usefulness of Buchanan Dam to the petitioner; that the only other source of

water available to petitioner would be South Fork Merced River; that Chowchilla Water District is within the County of Madera, a county of origin of the waters of Merced River.

At the hearing on March 9, 1960, evidence in support of its position was presented by Chowchilla Water District (RT pp. 708-732). The evidence indicates that there is not now a deficiency of water supply within Chowchilla Water District; that the lands immediately adjacent to the District do have a deficiency in water supply; that the District has plans for developing the waters of the Chowchilla River by the Buchanan Project (covered by Application 18732); that impoundment and use of Chowchilla River water in Mariposa County would adversely affect the Buchanan Project from the standpoint of irrigation; and that if the Buchanan Project were abandoned the only other feasible source of water for the District would be South Fork Merced River. The District seeks a condition in any permit to be issued on Applications 16186 and 16187 reserving water of the South Fork for its future use. A ruling on the petition for permission to appear in the hearing was taken under advisement.

The Board of Supervisors of Mariposa County adopted a resolution, dated May 10, 1960, withdrawing any claim of right to the use of Chowchilla River water within Mariposa County. As this resolution eliminates the basis which Chowchilla Water District advanced for appearing at the hearing the petition of the District is denied.

California Water Plan

The California Department of Water Resources and its predecessor began studies which included the Mariposa area in 1947, culminating in the publication of Bulletin 56, "Survey of Mountainous Areas", dated December 1955. Subsequently, Bulletin No. 3, "The California Water Plan", was published in May 1957. On July 1, 1957, the Department commenced a study of the Mariposa area. The results of this study will be available about January 1, 1961 (RT pp. 253, 254).

The Department has proposed a coordinated plan for the development of the Merced River as a result of its studies now being concluded. Main features of the plan involve a diversion out of South Fork Merced River through a series of dams and powerhouses and then back into the Merced River at Exchequer Dam for release through Snelling powerhouse or some alternate. The total power drop would be about 3,200 feet. The advantage of this plan to the upstream area in Mariposa County would be the placing of water where, should the need arise, the County could make use of it upon making substitute payment for revenue lost from power sales. This coordinated plan of the Department is predicated on the premise that the hydroelectric potential of the Merced River should be utilized in a manner which will not preclude the development of areas within the watershed (RT pp. 256-260; DWR Exh. 2).

Integration of the District's plan with that of the Department requires inclusion in the former of a reservation of

water to meet future upstream requirements and slight enlargement of the Bagby Power Plant; otherwise, there is no conflict. Provisions are made for those objectives in the agreement, previously referred to, between the District and County of Mariposa, appropriate portions of which will be included in permits to be issued to the District.

Status of Protests at Conclusion of Hearing

The protest of California Department of Fish and Game was satisfied by stipulation and agreement with the District (RT pp. 585-588; Fish and Game Exh. 1). Counsel for Gallo Cattle Company, E. and J. Gallo Winery Ranch, Gallo Vineyard, Inc., Joseph E. Gallo and Hall Ranch Operating Account stated at the hearing that they would not offer any evidence if assured that any permits issued would be subject to existing riparian rights (RT pp. 512-513). These protestants are all riparian to Merced River and claim pre-1914 appropriative rights (Staff Exh. 1). Protestants Maria De Angelis, 3H Securities Company and Georgette Judith Kelley are all apparently favorable to the proposed project of the District. They offered no evidence except a description of their lands (RT p. 649). Their main purpose in filing a protest, as stated by their counsel, was to guard against the possibility that failure to do so would result in loss of their rights (RT pp. 788, 789). Protestant Pacific Gas and Electric Company waived any right to protest by a stipulation entered into with the District on October 13, 1959 (RT pp. 153-157).

Protestants Banta-Carbona Irrigation District, Patterson Water District, J. D. Patterson, Twin Oaks Irrigation Company and Orange Avenue Ranch Company are generally favorable to the proposed project of the District but request that the Board retain jurisdiction over any permits issued to insure adequate releases for prior vested rights with respect to both quantity and quality (RT pp. 442, 452, 546, 783). Counsel for the Gallo interests expressed opposition to retention of jurisdiction by the Board and suggested that further jurisdiction should be exercised by the courts (RT p. 783).

Discussion

The proposed project of the District provides full flood control, maximum power and energy from the total flow of the river and a water supply for full irrigation demand of the District except for deficiencies never exceeding 10 per cent and only in 7 years of the total 40 years of record studied. Releases for downstream riparian lands, other lands with prior rights and fish and wildlife have been provided for in project operations. An agreement has been effected between the District and County of Mariposa which provides for utilization of Merced River water within the County when the need arises. All of the protestants and interested parties on Merced River are apparently favorable to the District's project.

The protestants located on San Joaquin River are fearful that, although the quality of water they receive during the late summer and early fall may be improved by the project, their

over-all quality problem may become more acute. Explanation of this condition by the protestants is that flushing operations now practiced, whereby high flows of good quality water during the spring are used to flush the salts from the soil accumulated during the preceding year, may not be possible with operation of the project (RT pp. 436-443, 530, 543-546; Banta-Carbona Exh. 1). These protestants do not oppose the project provided adequate releases are made to maintain water at a suitable quality to satisfy prior rights. Inasmuch as there is uncertainty as to the quantity of releases necessary to maintain the quality of protestants' water a retention of jurisdiction is requested over any permits issued.

On the other hand, the District contends that its proposed operation will improve conditions for the San Joaquin protestants by providing a greater quantity of good quality water during the late summer months than is now available. In other words, instead of having the bulk of fresh diluting water come down the river during spring flood season, the fresh diluting water will be spread throughout the year by regulated storage (RT p. 463).

The District believes that adequate releases have been provided for prior rights in its proposed operations and that a retention of jurisdiction by the Board is unnecessary, especially since financing of the project may be adversely affected thereby.

The record shows that the District recognizes prior rights and intends to make releases therefor. In fact, the District is willing to meet the schedule of releases proposed by Protestant Banta-Carbona Irrigation District, provided releases for fish and

wildlife are included therein (RT p. 597). Inasmuch as water released for maintenance of fish and wildlife in Merced River is a nonconsumptive use there would appear to be no basis for objection to this plan of operation. The release for fish and wildlife would serve a dual purpose of maintaining the Merced River fishery as well as providing water for Banta-Carbona Irrigation District on the San Joaquin River. Applicant's Exhibit No. 10 shows that releases below Snelling with the proposed project would, in most instances, be greater during the critical months of July, August, September and October than have been available historically. The exhibit also shows that during dry years the releases of water during the spring months, with the proposed Merced project, would generally have been greater than those historically available. Protestants located on the San Joaquin River other than Banta-Carbona Irrigation District presented no request for any specific flow releases.

The evidence appears to substantiate the contention that both quality and quantity of water available to protestants will be improved by the District's proposed project during the summer months. In fact, the soil flushing operations now practiced by the San Joaquin protestants may not be as necessary because of better quality water during the main irrigation season. Utilization of large flows in the spring for flushing salts from the soil may not be consistent with the declared State policy of putting to beneficial use to the fullest extent of which they are capable the water resources of the State (Calif. Const. Art. 14, Sec. 3). This policy requires that substitute means for providing

the required flushing action be accepted in order to free more water for further beneficial use, if no material injury results. Studies of the water quality problem along the San Joaquin River are now in progress by various agencies of the Federal and State governments. It is recognized that with increased use of water in the western San Joaquin Valley the quality of water in the San Joaquin River below Mendota Pool will decrease. One of the suggested solutions to this problem is the construction of a "west side" drainage canal and conduit to carry the poor quality and return flow waters to the delta area. This would permit better operational methods and more complete utilization of the good quality waters entering the San Joaquin River from the Sierra Nevada streams.

In any event, placing the entire burden on the Merced River for maintaining good quality water in the San Joaquin River would be an injustice, especially in view of the fact that the water quality problem in the San Joaquin River is becoming more acute under present conditions. The time could come when the entire flow of the Merced River would be called upon for maintaining the water quality of the San Joaquin if some other positive measures, such as the construction of the "west side" drainage canal, were not taken.

It should not be inferred that the problems of the San Joaquin River protestants are not recognized. However, with the operation of the proposed project of the District it appears that the water supply of these protestants during the main irrigation season will be at least as good if not better than has been

available in the past, and it is very probable that their over-all water supply will be improved. Moreover, permits issued to the District will be subject to vested rights and it will be incumbent upon the District to respect such rights, either by release of sufficient water of good quality to satisfy prior rights or by other appropriate means (see Meridian, Ltd. v. City and County of San Francisco, 13 Cal. 2d 424). Retention of jurisdiction by the Board merely to assure that sufficient releases are made for prior rights is therefore not believed to be warranted in this instance.

Conclusions

The evidence indicates and the Board finds that sufficient unappropriated water exists in the Merced River to warrant approval of Applications 16186 and 16187, and that such water may be taken and used in the manner proposed by the applicant during the season contemplated without injury to downstream water users holding prior vested rights; that the petition of the District for change in point of diversion at the Bagby dam site should be approved; that approval of Applications 16186 and 16187, as amended on May 20, 1960, and subject to the terms and conditions set forth in the following Order, will best develop, conserve and utilize in the public interest the waters sought to be appropriated.

Order

Applications 16186 and 16187 to appropriate unappropriated water having been filed with the former Division of Water Resources, jurisdiction of the administration of water rights, including said applications having been subsequently transferred to the State Water Rights Board, a public hearing having been held by the Board, the Board having considered all of the evidence received at the hearing and now being fully informed in the premises:

IT IS HEREBY ORDERED that Applications 16186 and 16187 as amended on May 20, 1960, be and the same are approved, and that permits be issued to the applicant subject to vested rights and to the following terms and conditions:

1. The amount of water appropriated under Application 16186 for domestic and irrigation purposes shall be limited to the amount which can be beneficially used and shall not exceed 900,000 acre-feet per annum by storage to be collected from about October 1 of each year to about July 1 of the succeeding year.

2. The amount of water appropriated under Application 16187 for power purposes shall be limited to the amount which can be beneficially used and shall not exceed 3,000 cubic feet per second by direct diversion to be diverted from January 1 to December 31 of each year, and 900,000 acre-feet per annum by storage to be collected from about October 1 of each year to about July 1 of the succeeding year.

3. The maximum amount herein stated may be reduced in the license if investigation warrants.

4. Actual construction work shall begin on or before June 1, 1961, and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, these permits may be revoked.

5. Said construction work shall be completed on or before December 1, 1964.

6. Complete application of the water to the proposed use shall be made on or before December 1, 1970.

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

8. All rights and privileges under these permits including method of diversion, method of use and quantity of water diverted 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.

9. These permits and all rights acquired or to be acquired thereunder are and shall remain subject to depletion of stream flow in the quantities set forth in subparagraphs (a), (b) and (c) by future appropriations of water for reasonable beneficial use within Mariposa County; provided such future appropriations shall be initiated and consummated pursuant to law.

(a) From South Fork Merced River a maximum of 500 cubic feet per second of water not to exceed a total of 112,000 acre-feet annually by direct diversion

to beneficial use and/or by diversion to storage to be later applied to beneficial use; provided that such future appropriation shall not be made in whole or in part within the pay-out period of the bonds by which permittee shall finance the project under these permits, but not to exceed a period of 55 years beyond the date of beginning of construction of the projects of permittee as allowed under the permits or extensions thereunder, unless the person or agency making such future appropriation shall compensate the permittee for the loss of power revenue resulting during said period from said appropriation.

(b) From Maxwell Creek a maximum of 34,000 acre-feet of water in any consecutive ten-year period and a maximum of 4,000 acre-feet of water in any one year to be directly diverted to beneficial use and/or diverted to storage to be later applied to beneficial use.

(c) From Bean Creek a maximum of 10,000 acre-feet of water in any consecutive ten-year period and a maximum of 1,200 acre-feet of water in any one year to be directly diverted to beneficial use and/or diverted to storage to be later applied to beneficial use.

10. These permits are subject to the terms of provisions I, II, III and IV of the stipulation and agreement between Merced Irrigation District and California Department of Fish and Game dated October 8, 1959, and received into evidence as Fish and Game Exhibit 1 in the hearing of Applications 16186 and 16187.

11. Permittee shall establish such gaging stations and furnish to the State Water Rights Board upon request such records of flow as may be required to determine the quantity of water diverted and/or rediverted for beneficial use.

12. In accordance with Water Code Section 1393 permittee shall clear the site of the proposed reservoirs of all structures, trees, and vegetation which would interfere with the use of the reservoirs for water storage and recreational purposes.

Pursuant to stipulation between Merced Irrigation District and Pacific Gas and Electric Company, it is further ordered that issuance of permits be withheld until agreement is reached between the District and the Company with respect to the following:

- (1) Modification of the development proposed under the above-numbered applications to prevent the inundation of Pacific's Federal Power Commission Project 1335 - California, the Merced Falls Project, or alternatively, for payment of damages to Pacific therefor.
- (2) Provision for Applicant to meet its obligation under that certain contract dated February 21, 1924, and amended February 6, 1941, between Applicant and Pacific for the sale of power to Pacific from Applicant's existing Exchequer Project, by substitute performance or compensation.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Sacramento, California, on the 25th day of August, 1960.

/s/ Kent Silverthorne
Kent Silverthorne, Chairman

/s/ Ralph J. McGill
Ralph J. McGill, Member

Board Member W. P. Rowe did not participate in this decision.