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STATE OF CALIFORNIA  
STATE WATER RIGHTS BOARD

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In the Matter of Applications 11198, 11199, 12578 and 12716  
by the United States of America, Department of the Interior,  
Bureau of Reclamation.

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Decision No. 869

Decided February 7, 1957

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Appearances at Hearing Conducted at Sacramento on September 25,  
26, 27 and 28 and on October 22 and 23, 1956, by Henry Holsinger,  
Chairman, John B. Evans, Member and W. P. Rowe, Member, State  
Water Rights Board:

For the Applicant

United States of America

John K. Bennett, Assistant  
Regional Solicitor, Depart-  
ment of the Interior

For the Protestants

Regents of the University  
of California

Bruce Hoffe, attorney

Yolo-Solano Underground  
Water Resources Committee

Morris and Elizabeth Carden

Richard C. and Charlotte R. Ham

Richard C. Ham, attorney

Lester J. Hamel

City of Davis by Frank O. Fargo

City of Winters by Harold Overhouse

Willis E. Hansen )  
Herbert and Mabel Pearson )  
Frederick A. and Margaret H. Brooks )  
Willowbank Club, Inc. )

Department of Fish and Game

County of Napa

William H. Boyce

For Interested Parties

Solano County Flood Control and  
Water Conservation District

Congressman John Moss

Luther E. Gibson, State Senator

Assemblyman Lloyd Lowery

Yolo County Board of Supervisors

George H. Crum

Ralph K. Davies

Lake County Water Commission

State Department of Water Resources

Woodland Farms

J. N. Knowles

F. L. Farish )

Water Committee, Yolo County )  
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Martin McDonough, attorney

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In pro. per.

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Martin McDonough, attorney

In pro. per.

F. L. Farish

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## DECISION

### Substance of the Applications

Application 11198, filed October 29, 1945, initiates an appropriation of 1,000,000 acre-feet per annum, to be collected between November 1 and May 31 of each season, from Putah Creek, stored in Monticello Reservoir and utilized for power generation at Monticello Dam.

Application 11199, filed October 29, 1945, initiates an appropriation of 1,000,000 acre-feet per annum, to be collected between November 1 and May 31 of each season, from Putah Creek and stored in Monticello Reservoir. The water is to be used for domestic, municipal, industrial, irrigation and incidental recreational purposes. The point of diversion is given as Monticello Dam with delivery to Putah Creek at the dam and rediversion from the creek at Putah Diversion Dam some 6 miles downstream. The area where the water will be used is within a 440,000 acre body of land known as the Potential Service Area as shown on Map No. 413-212-1, filed with the application. In general, this area covers all of the valley lands in Solano County, a small adjacent area in Napa County, the City of Crockett in Contra Costa County, and the Davis Campus of the University of California in Yolo County.

Application 12578, filed June 30, 1948, initiates an appropriation for irrigation and incidental domestic purposes of 900 cubic feet per second to be diverted from Putah Creek between February 1 and November 15 of each year and 600,000 acre-feet to be stored between November 1 and May 31 of each season, in

Monticello Reservoir. The points of storage and diversion and the places of use are the same as under Application 11199. The following explanatory passages are quoted from the application, as amended:

"This application covers the use of the same storage facilities as for Application 11199 ... and Application 12716 ... . The three applications combined file for a nominal total storage of 1,920,000 acre-feet annually. However, the maximum storage under these applications, for all purposes applied for, will not exceed 1,600,000 acre-feet in any one year, since the maximum irrigation and municipal uses are not expected to occur in the same years. Initially almost all of this storage will be used for irrigation purposes, but as the municipal needs increase, the irrigation use will decrease ... .

"The water applied for in this application is primarily for use within the potential service area ... designated on ... Map No. 413-212-1 ... . However during early stages ... surplus project water ... may be used within the service areas of the Delta-Mendota and Contra Costa Canals of the Central Valley Project ... . In addition, some of such surplus water may be permitted to flow into Suisun Bay in order to maintain the quality of water in the delta channels ... ."

Application 12716, filed September 27, 1948, initiates an appropriation for municipal, industrial, domestic and recreational purposes, from Putah Creek, of 116 cubic feet per second, year-round, and 320,000 acre-feet per annum, collected between November 1 and May 31 of each season. The points of storage, diversion and places of use are the same as under Applications 11199 and 12578, and the application, as amended, includes explanatory statements similar to those quoted hereinbefore from Application 12578.

Protests and Answers

Application 11198 (for power) is protested by the Regents of the University of California and by William H. Boyce only. Applications 11199, 12578 and 12716 are all protested by the following (including those who made no appearance at the hearing):

City of Winters  
Regents of the University of California  
Morris and Elizabeth Carden  
Yolo-Solano Natural Underground Water Resources Committee  
Fred C. and Elsie S. Hamel  
Lester J. and Irene C. Hamel  
Frederick A. and Margaret H. Brooks  
Earl and Olga Chiles  
Richard C. and Charlotte R. Ham  
U. S. Johnson, et al.  
Wm. F. Singleton, et al.  
Estate of Grace E. Crum  
Mabel and Herbert Pearson  
Willowbank Club, Inc.  
City of Davis  
Department of Fish and Game  
O. V. Humason  
Matilda H. and Warren P. Tufts  
Ovida B. Sackett  
C. W. and Alice E. Thompson  
Carrie L. Fischer  
Warren W. and Clara E. Cecil  
Kate F. and H. J. Hansen  
Willis E. Hansen  
County of Napa  
William H. Boyce

With the exceptions hereinafter noted, the protests are based upon apprehensions that impoundment and diversion of water as proposed in the applications will interfere with the exercise of protestants' alleged rights to divert from the surface flow of Putah Creek and/or to pump from wells that are fed by underflow and percolation of that stream.

The Department of Fish and Game asserts that game fish are present and spawn naturally in Putah Creek, that the amount

applicant seeks to appropriate is more than the minimum flow of that stream and game fish will therefore be destroyed if the applications are approved and unconditional permits issued.

The County of Napa protests that the appropriations sought by applicant will interfere with future utilization of Putah Creek waters within that county. It also alleges that the proposed method of diversion, storage and appropriation is not a reasonable method in that it will result in permanent flooding of valuable land in the County of Napa and that there are alternative methods which are feasible and consistent with the interests of all parties concerned.

In answer to the protests, applicant declares that it will recognize and respect valid prior water rights, that there is unappropriated water in Putah Creek, and that its project has greater engineering and economic feasibility than any alternative method for storage and diversion. It alleges that asserted preferential rights to future use of water within the county of origin are not valid under California law, that the fishery in Putah Creek is confined to the stream above Winters, and that its proposed appropriation will improve rather than damage such fishery.

#### Hearing Held in Accordance with the Water Code

Applications 11198, 11199, 12578 and 12716 were completed in accordance with the Water Code and applicable administrative rules and regulations and were set for public hearing under the provisions of the California Administrative Code, Title 23, Waters, before the State Water Rights Board (hereinafter referred to as "the Board"), on Tuesday, September 25, 1956, at ten o'clock a.m.,

in Room 2170, State Capitol Building Annex, Sacramento, California. Of the hearing the applicant and the protestants were duly notified. The hearing extended through later sessions convened on September 26, 27 and 28 and on October 22 and 23, 1956.

The following portions of this decision include a summary and discussion of information in the record of the hearing.

#### Description of the Watershed

Putah Creek originates near the town of Middletown in Lake County on the eastern slopes of the Coast Range in T11N, R7W, M.D.B.&M. It is formed by the junction of Big Canyon and St. Helena Creeks. Below this junction point, Putah Creek flows in a general easterly direction through Lake County for a distance of about 18.5 miles where it enters Napa County. The stream then takes a southeasterly course for about 7.5 miles where it reaches the high-water elevation of Monticello Reservoir (also known as Lake Berryessa). It continues in the same general southeasterly direction through Monticello Reservoir for a stream bed distance of 24.7 miles (airline 21 miles) to Monticello Dam.

The Putah Creek drainage area above Monticello Dam is about 568 square miles. The principal tributaries in Lake County are Soda, St. Helena and Hunting Creeks, which latter forms a portion of the boundary between Lake and Napa Counties. Eticuera, Butts and Pope Creeks are the principal tributaries of Putah Creek in Napa County.

Mean annual precipitation within the drainage basin varies from about 25 inches near Monticello Dam to about 80 inches along

the crest of the Coast Range where some of it occurs as snow (DWR Exh. 19, plate 12). The climate of the area is typical of the Central Valley of California with wet winters, during which 90 per cent of the total annual precipitation occurs, followed by dry summers.

Below Monticello Dam, Putah Creek flows easterly in a comparatively narrow channel for a distance of 29.3 miles to the Yolo By-pass.

### The Solano County Project

The Solano County project of the United States Bureau of Reclamation (hereinafter referred to as "the Bureau") as originally planned was designed to conserve the runoff of Putah Creek by storage in Monticello Reservoir to supply urgently needed water for agricultural, municipal, industrial and military purposes in Solano County, to provide flood control for the lower reaches of Putah Creek, and to create recreational benefits. The project includes as its principal feature a dam across Putah Creek at the Monticello site which is located at the point where the stream crosses the eastern Napa County line, which is the junction of the counties of Napa, Yolo and Solano. The reservoir, which will have a capacity of 1,600,000 acre-feet, is located entirely within Napa County and when full will inundate 27,700 acres in Berryessa Valley and will have an average net evaporation loss of 37,500 acre-feet per year (USBR Exh. 18). The water controlled by the reservoir is to be released downstream about 6 miles to the Putah Diversion Dam where it will enter the Putah South Canal extending southward for a



distance of about 38 miles on the edge of the foothills to a small terminal reservoir at a point near Cordelia. Water will be released from the canal along its route for irrigation, domestic, industrial and municipal use.

The project is designed to irrigate approximately 96,000 acres of land of which 59,000 are now dry-farmed or grazed, and 37,000 are in need of a supplemental water supply. Municipal and industrial water will be furnished to portions of Solano County along the northern shore of San Pablo and Suisun Bays.

*2 1/2 ac  
= 240,000 BF  
Contracted yield  
= 247,000*

The project was included in a report to the Secretary of Interior from the Commissioner of Reclamation, dated April 26, 1948 (WRB Exh. 13) and was submitted to the State for review and comment. A letter signed by the Governor of California, dated April 8, 1948, declares that there is an urgent need for supplemental water supplies within the proposed project service area and that construction of the project would "yield the greatest benefits to the greatest number of people", and that construction of the project is favored (see WRB Exh. 13, p. VIII). The comments of the Governor were submitted to the Secretary of Interior as the views and recommendations of the State of California on the report of the Commissioners of Reclamation (see WRB Exh. 13, p. VII).

On November 11, 1948, the project was authorized for construction by the Secretary of Interior pursuant to Section 9 of the Reclamation Project Act of 1939 (53 Stat. 1187). Construction of the dam was commenced in 1954 and as of June, 1956, was 65 per cent complete. Construction expenditures as of that date were \$18,761,149. The total cost of authorized features of the

project is estimated to be about \$52,000,000, including over \$2,000,000 for future drainage facilities within the service area.

Although no initial power installation is contemplated or authorized, provisions have been made in the planning and construction for a power plant at Monticello Dam should it be justified by future conditions.

In 1951 the Solano County Flood Control and Water Conservation District (hereinafter referred to as "the district") was authorized by the Legislature (Stats. 1951, Ch. 1656) to create a legal entity with power to contract with the United States for utilization of the water to be developed by the project. The district comprises all of Solano County together with the Davis Campus of the University of California, a portion of which is in Yolo County. On March 7, 1955, a contract for a water supply was entered into between the district and the United States pursuant to provisions of Section 9(e) of the Reclamation Project Act of 1939 (USBR Exh. 22). The contract is for a period of 40 years and specifies the terms and conditions for water delivery. Under the contract the district, in effect, is given a first right to all of the water to be provided by the project for agricultural, municipal and industrial purposes.

Project storage and diversion works will be operated and maintained by the United States except that upon completion the Putah South Canal will be transferred to the district for operation and maintenance without expense to the United States.

The applications now under consideration were filed by the Bureau to secure rights in accordance with State law to

appropriate water of Putah Creek for project purposes. The applications for use other than power describe a gross service area of 440,000 acres of which the net area to be irrigated in any one year is 80,000 acres. The proposed place of use as delineated on maps filed with the applications includes two small areas outside the district's boundaries - a small strip of land in Napa County adjacent to Suisun Creek and the City of Crocket in Contra Costa County (see WRB Exh. 21, plate III).

#### Stream Flow

Putah Creek is an intermittent stream with wide seasonal and annual variations in flow. In most years the low summer flows are all diverted for beneficial use or are absorbed in the valley stretch of the stream as ground water recharge. According to records of the United States Geological Survey, the average annual discharge at "Putah Creek near Davis", a point 3.3 miles southwest of the City of Davis, during the period from May, 1948, through September, 1955, was 280,270 acre-feet, or approximately 395 cubic feet per second. The maximum annual discharge during this period was 565,800 acre-feet and the minimum was 86,790 acre-feet (USBR Exh. 5). This is the lowermost point of measurement on the stream and flows passing this point, for the most part, continue into Yolo By-pass and are apparently of no benefit to either diverters from Putah Creek or those who extract water from the basin supplied by the Creek.

The natural flow at or near Monticello Dam for the forty-year period 1915-16 to 1954-55, inclusive, according to Exhibit No. 16 of the Bureau of Reclamation averaged 309,500 acre-feet per

year, with a minimum annual flow of 34,800 acre-feet and a maximum of 1,400,000 acre-feet. This does not include the inflow of tributaries below the dam. The contract demands for the Solano project are 247,000 acre-feet per year from storage and inflow of tributaries below Monticello Dam and 223,500 acre-feet per year from storage alone (USBR Exh. 18).

*23,500 AF  
inflow below  
dam*

### Downstream Rights

It is not disputed that the natural flow of Putah Creek supplies surface diversions for beneficial use on adjacent lands and contributes to ground water by percolation from the channel in the reach of the stream below the Putah diversion dam. Varying estimates of the amount of such contribution have been made as the results of studies conducted independently by the United States Geological Survey and the State Engineer as Chief of the former Division of Water Resources. It is also not disputed that water is being withdrawn from ground water strata for beneficial use on overlying lands in the so-called "Cone Area" in Yolo and Solano Counties (see WRB Exh. 19), and that to the extent such water originates in Putah Creek under natural conditions the water users are entitled to protection from depletion of the supply as the result of project operation. The University of California properties at Davis and near Winters receive their principal supply of water from wells (R.T., Oct. 22, 23, pp. 13-14), as do numerous other landowners (R.T., Vol. 2, pp. 465-508, 517-536; WRB Exh. 19, Appendix C). The City of Davis is solely dependent upon ground water supply (R.T., Vol. 2, p. 504).

The United States has announced its intention of releasing sufficient water past its diversion dam to maintain natural percolation from the stream channel and to satisfy prior diversions from the surface flow. Allowance of approximately 15,000 acre-feet per year for these purposes is made in project planning by the Bureau. There is a conflict in the evidence as to the amount of percolation to ground water under pre-project conditions. There is evidence in the record indicating that the amount proposed to be allowed by the United States may not be sufficient. However, there is general agreement that computations of the amount and timing of the required releases for satisfaction of downstream rights are extremely complex and that available information is insufficient upon which to base positive conclusions. In recognition of these conflicts and uncertainties in the evidence, the Bureau, through its principal witness, Leland Hill, recommends a trial period of at least 5 or 10 years during which intensive studies would be made of the hydrologic phenomena associated with this problem (R.T., Vol. 1, pp. 102, 140). The Department of Water Resources (hereinafter referred to as "the department") has submitted recommendations for permit terms including provision for a trial period throughout the entire life of the permits for evaluation of the effect of the project upon downstream rights, during which period studies, investigations and measurements would be made by the United States and reported annually to the Board to determine such effect, with further provision for re-evaluation of the results of trial operations every 5 years (R.T., October 22, 23, p. 140). The director of the department testified that it is the intent of the foregoing recommendations that the

Board should retain jurisdiction to make such modifications of permit terms as the investigations and studies may show to be necessary and desirable (R.T., Oct. 22, 23, p. 169). The University of California has also requested that the Board retain jurisdiction during a trial test period for similar purposes (R.T., Vol. 2, p. 553), and certain of the other protestants advocate continuing studies and investigations (R.T., Vol. 2, pp. 501, 504, 507).

There is ample support in the record for permit terms to carry into effect the foregoing recommendations. The Board concludes that there is lacking in the record of these proceedings sufficient information upon which to base positive and definite conclusions concerning conditions to be imposed at this time in permits issued to the United States for the adequate protection of downstream vested rights and that the indicated investigations and studies should be carried out and reported annually by the United States until further order of the Board. The Board concludes that it should hold a hearing or hearings on these matters prior to the expiration of a 15-  
year trial period and in the interim should retain jurisdiction for the purpose of such reviews, hearings, and orders as may be required until a final determination and order can be made concerning the amounts, timing and rates of releases of water past the diversion dam in satisfaction of downstream rights, based upon further information to be developed by the continuing studies and investigations.

1972

The California Water Plan  
and the Upper Watershed

Pursuant to legislative authorization (Stats. 1947, Ch. 1541) the department and its predecessors have prepared a general and coordinated plan, known as "The California Water Plan", for the development, utilization and conservation of the water resources of the State. A preliminary report presenting this plan has been published as Bulletin 3 of the State Water Resources Board, May 1956 (WRB Exh. 4).

DWR Exhibit No. 1 is a map which shows the locations of certain dams, reservoirs and conduit systems which constitute a portion of the California Water Plan. Monticello Reservoir is shown as a part of the Eel River diversion plan, a feature of The California Water Plan.

Independently of the Eel River diversion plan, 2 dams and reservoirs are included in The California Water Plan for local construction in the headwaters of Putah Creek upstream from Monticello Reservoir. One of these proposed reservoirs is in Lake County on St. Helena Creek just below Middletown and is known as Middletown Reservoir. With a capacity of 14,200 acre-feet, it is estimated this reservoir would yield about 16,000 acre-feet of water per season which, with other local supplies, would satisfy the ultimate requirements of the Middletown area, estimated to be about 30,500 acre-feet per season.

Another reservoir is proposed in Napa County on Maxwell Creek, a tributary of Pope Creek, and is known as Goodings Reservoir.

With a capacity of 50,300 acre-feet, this reservoir would yield about 21,500 acre-feet of water seasonally, sufficient with other local sources to meet the water requirements of that area. Lands in Capell Valley and other small parcels in the watershed above Monticello Reservoir would be dependent primarily on development of local ground water supplies (R.T., Vol. 1, pp. 368-369; WRB Exh. 4, Vol. 2, pp. 9-97 to 9-99).

The department estimates that the future consumptive use of crops above Monticello Reservoir with full development of all irrigable lands would be about 33,000 acre-feet per year in addition to present uses (WRB Exh. 19, pp. 185-186). DWR Exhibit No. 1 shows that most of these lands overlie underground water basins. The quantity of water that could be supplied by existing riparian, overlying, and appropriative rights to meet the supplemental water requirements of this area has not been determined. No detailed plans or operation studies for the Middletown and Goodings Reservoirs were presented at the hearing.

Testimony was presented to the effect that the Diamond D Ranch lies within the upper Putah Creek watershed, that it now irrigates 544 acres with water from Putah Creek and from wells immediately adjacent thereto, and that some 950 additional acres are suitable for irrigation for which storage facilities would be required and that the construction of 3 storage reservoirs on tributaries of Putah Creek, for irrigation, domestic and stockwatering purposes, is contemplated (R.T., Vol. 2, pp. 538-542).

Two small reservoirs have been constructed on a tributary of Putah Creek to supply irrigation water for about 780 acres of the



Guenoc Ranch in Lake and Napa Counties. An additional 300 acres of the ranch are irrigable and require additional storage in order to make water available. Applications for such storage have not been filed (R.T., Oct. 22, 23, pp. 73-81).

The department through its director expressed no opposition to the Solano County Project (R.T., Oct. 22, 23, p. 150) and through its attorney expressed approval of issuance of permits to the United States upon conditions recommended in its Putah Creek report (WRB Exh. 19; R.T., Vol. 2, p. 456). Among these conditions was a reservation of adequate water (33,000 acre-feet annually) for ultimate development of the upper Putah Creek watershed (WRB Exh. 19, p. 211; and see R. T., Oct. 22, 23, p. 140).

The Board recognizes that there are no specific statutory provisions of general application having the effect of reserving water from appropriation for use outside the watershed of origin in order to meet the future water requirements within such watershed. However, it is the long established policy of the State "to extend to the areas of surplus water from which areas of deficient water may obtain a supply, definite and valid assurance that such areas of surplus water shall have a right to ample water for their ultimate needs, superior and prior to that of the areas of deficiencies to make use of such surplus" (Report of Joint Committee Dealing with Water Problems April 9, 1929, p. 5 and see Water Code Section 232, added by Statutes of 1956, Ch. 61).

The Board is required to condition appropriations of water in order that they shall conform to the public interest and, in

determining public interest, is directed to give consideration to any general or coordinated plan prepared and published by the department or its predecessor for the development, utilization, or conservation of the water resources of the State (Water Code Sections 1253, 1256).

Application of the foregoing policy specifically to reclamation projects was the subject of Assembly Concurrent Resolution No. 2 of the 1952 1st Extraordinary Session and Senate Concurrent Resolution No. 8 of the 1952 Regular Session of the Legislature (Stats. 1953, Vol. 1, pp. 272, 405), wherein the Department of Public Works and the State Engineer (predecessors of the Board) were memorialized to include in any permits and licenses issued to the United States for reclamation projects the following condition, among others, in the public interest:

"(c) That the uses 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 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 boundaries of the watershed of Putah Creek in the valley area between Winters and the Yolo By-pass are not well defined. However, it appears that the southern extremity of the watershed extends along an east-west line a short distance north of the boundary between townships 7 and 8, MDB&M (see WRB Exh. 20, Solano Plate 23). In any event it is apparent from the map filed with the applications that by far the greater part of the potential

service area of the project lies outside the watershed of Putah Creek above its confluence with Yolo By-pass.

The United States requests permits for substantially all of the unappropriated water of Putah Creek. However, the evidence produced by applicant shows that it will be many years, if ever, before all of the water sought to be appropriated by it will be put to full beneficial use within the service area of the project (see USBR Exh. 18). In view of this evidence and of the recitals set forth herein commencing on page 15, the State Water Rights Board finds it to be in the public interest that permits issued to the United States and all rights acquired thereunder be subject to depletion of stream flow above Monticello Reservoir, not to exceed 33,000 acre-feet of water annually, by future appropriations of water for reasonable beneficial use within the watershed of Putah Creek above Monticello Reservoir; provided such future appropriations shall be initiated and consummated pursuant to law prior to full beneficial use of water within the project service area under the permits issued to the United States.

There is no doubt that until the full amount of water authorized to be appropriated under a permit is actually applied to beneficial use for the purpose for which it is appropriated, others may appropriate and beneficially use the water not presently required for existing beneficial use under the permit (see Water Code Sections 106.5, 1203, and 1463 for application of this principle to appropriations by a municipality). Such interim use of water is required in order to prevent unnecessary waste and conform to the

policy that all water be beneficially used to the fullest possible extent. Therefore, it is clear that until the water to be stored in Monticello Reservoir is actually required for beneficial use in the project service area, the United States will have no ground to prevent water not required by the project from being appropriated for beneficial use in the upper Putah Creek watershed. Until the time arrives, if it ever does, that all the water is required in the project service area, the United States and the contracting public agencies will suffer no injury by appropriation of excess water by others.

#### Putah Creek Fishery

Putah Creek has been one of the most important small mouthed bass fishing streams in the State. In addition, there has been a steelhead run in the stream. Water released from Monticello Reservoir will be too cold for small mouthed bass and anticipated flows under proposed project conditions below the diversion dam will be insufficient to attract steelhead. In recognition of the foregoing the Department of Fish and Game plans to stock the stream between Monticello Dam and the diversion dam with trout and replace the small mouthed bass fishery with a trout fishery. A minimum flow of 10 cubic feet per second is required for such purposes. Maintenance of this minimum flow above the diversion dam will not interfere with operation of the project; in fact, project plans call for release of more than 10 cubic feet per second past Monticello Dam at all times (R.T., Oct. 22, 23, pp. 84-87). The Department

of Fish and Game recommends that the following conditions be imposed in any permit issued to the United States.

"1. That the permittee shall at all times release, for the purpose of maintaining fish life between the Monticello Dam and the diversion dam, into the natural streambed of Putah Creek immediately below the Monticello Dam, a minimum flow of 10 cfs of water.

"2. That all releases of water past the diversion dam be made in such a manner as to maintain a permanent live stream at all times as far below the diversion dam as possible, consistent with the purposes of the project and the requirements of downstream users.

"3. That if a study period is to be employed to determine the quantities and timing of releases of water for recharging the Putah Cone, the requirements of water for maintaining fish life in the Putah Creek streambed involved, be considered as one of the objectives of such study." (R.T., Oct. 22, 23, p. 88).

Inclusion of the foregoing conditions in permits issued to the United States appears reasonable and in the public interest.

#### The Project Beneficiaries

Reference has heretofore been made to Assembly Concurrent Resolution No. 2 of the 1952 1st Extraordinary Session and Senate Concurrent Resolution No. 8 of the 1952 Regular Session of the Legislature. Those resolutions, in addition to the portion previously quoted concerning protection for areas of origin, memorialized the Department of Public Works and the State Engineer in issuing permits and licenses for use of water for irrigation in connection with federal reclamation projects to give consideration to issuing such permits and licenses to public agencies of the State contracting with the United States for project water supplies rather than to

the United States, and that conditions be included to the effect that such public agencies together with the landowners therein are and shall be the beneficiaries of each permit and license and that the rights of the agencies and landowners to be served with water are, subject to application of the water to beneficial uses, permanent and appurtenant to the lands upon which the water is used.

The Board has given consideration to each of the matters referred to in the foregoing resolutions. It is concluded that permits should be issued to the applicant United States, subject to substantially the conditions as specified in the resolutions. By this procedure, jurisdiction will be maintained during the entire permit period of the agency owning, controlling and operating the principal project works on Putah Creek and thus operation of the project in compliance with State law and the terms of the permits will be insured. However, the permits should provide that when beneficial use of water is completed, licenses will be issued confirming to the public agencies of the State their perpetual rights to the water which shall have been found by inspection of the Board to have been applied to beneficial use.

Approval of these applications and issuance of conditional permits thereon to the United States is not dependent upon validity of the contract between the United States and the district for a water supply from the project. Similar contracts between the United States and irrigation districts have been declared invalid by a recent decision of the Supreme Court of California (Ivanhoe Irrigation District vs All Parties, etc., filed January 24, 1957, and

companion cases). While these decisions have not yet become final it is now within the power of the district to require renegotiation of the contract pursuant to the provisions of the Act of Congress of July 2, 1956 (70 Stat. 483). By this process many objectional features of the contract may be eliminated.

#### Power Features

The Solano County project as authorized by the Secretary of Interior includes provisions for future development of power at Monticello Dam, and in the construction of the dam provision has been made to utilize one of the outlet pipes as a penstock for future power facilities. A feasibility report is now under preparation by the Bureau on such development (see USBR Exh. 13; R. T., Vol. 1, pp. 150, 151). However, the Monticello power plant is not presently authorized and the record contains no reasonable assurance that it will be authorized or constructed in the near future, if ever. It is a well established principle of California water law that a reservation of water may not be made for future use where there is no present plan or purpose to proceed promptly and diligently with construction of the necessary works and beneficial use of water (see 23 Cal. Adm. Code, Sec. 778). Consequently, Application 11198 should be denied at this time without prejudice to filing a new application for the same purpose at such time as the United States is ready and able to proceed diligently with construction and operation of power facilities in connection with the project. Until that time arrives there can be no apprehension that the United States will be prejudiced by denial of the application since it owns and will remain in control of the dam and appurtenant works.

### Conclusion

The Board finds that there is unappropriated water in Putah Creek available to supply applicant, which water may be appropriated to a substantial extent in the manner proposed in the applications without injury to any other lawful user of water, that the intended uses are beneficial, and that said applications should be approved and permits issued to applicant subject to the usual terms and conditions and subject to those additional terms and conditions indicated in this decision for the protection of prior rights and in the public interest. The Board further finds that as so conditioned, the appropriations will best develop, conserve and utilize in the public interest the waters sought to be appropriated.

In accordance with the views heretofore expressed, Application 11198 for generation of power should be denied, without prejudice.



O R D E R

Applications 11198, 11199, 12578, and 12716 for permits to appropriate unappropriated water 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 having been subsequently transferred to the State Water Rights Board and a public hearing having been held by the Board and said Board now being fully informed in the premises:

IT IS HEREBY ORDERED that Applications 11199, 12578, and 12716 be and the same are hereby approved and 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 shall be limited to the amount which can be beneficially used.

2. The amount of water to be appropriated under permit issued pursuant to Application 11199 shall not exceed 1,000,000 acre-feet per annum by storage to be collected between November 1 of each year and May 31 of the succeeding year.

3. The amount of water to be appropriated under permit issued pursuant to Application 12578 shall not exceed 900 cubic feet per second by direct diversion to be diverted between February 1 and November 15 of each year, and 600,000 acre-feet per annum by storage to be collected between November 1 of each year and May 31 of the succeeding year.

4. The amount of water to be appropriated under permit issued pursuant to Application 12716 shall not exceed 116 cubic feet per

second for direct diversion to be diverted between January 1 and December 31 of each year, and 320,000 acre-feet per annum by storage to be collected between November 1 of each year and May 31 of the succeeding year.

5. The total amount of water to be appropriated by storage for all purposes under permits issued pursuant to Applications 11199, 12578, and 12716 shall not exceed 1,600,000 acre-feet between November 1 of each year and May 31 of the succeeding year.

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, 1958.

8. Complete application of the water to the proposed use shall be made on or before December 1, 1993.

9. 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.

10. All rights and privileges under this permit 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.

11. Permittee shall release water into Putah Creek channel from Monticello Reservoir and past the Putah Diversion Dam in such amounts and at such times and rates as will be sufficient, together with inflow from downstream tributary sources, to supply downstream

diversions of the surface flow under vested prior rights to the extent water would have been available for such diversions from unregulated flow, and sufficient to maintain percolation of water from the stream channel as such percolation would occur from unregulated flow, in order that operation of the project shall not reduce natural recharge of ground water from Putah Creek.

12. Until further order of the Board permittee shall make or cause to be made suitable field investigations, measurements, and studies, and shall install necessary measuring facilities, to determine the amount, timing and rate of releases of water into the natural channel of Putah Creek that are required of permittee in order to fully comply with the provisions of condition No. 11 in this permit. Permittee shall submit to the Board with the annual progress reports, or at such other times as the Board may require, a report of such investigations, measurements, and studies and the results thereof, including but not limited to the following information:

(a) Compute daily inflow to Monticello (Berryessa) Reservoir by proper computations of change in storage.

(b) Establish and measure daily evaporation, wind movement and temperatures of two stations at or near Monticello Reservoir.

(c) Measure daily discharge through and over Monticello Dam.

(d) Install proper gaging stations and obtain daily records of discharge of:

Putah Creek near Guenoc

Putah Creek at Monticello Dam outlets and spillway

(R.M. 29.3)

Putah Creek near Winters (R.M. 27.6)

Putah South Canal at Diversion Dam (R.M. 22.6)

Putah Creek below Diversion Dam (R.M. 22.6)

Putah Creek about 3 miles below Winters (R.M. 17.0)

Putah Creek at Stevenson Bridge (R.M. 12.8)

Putah Creek near Davis (R.M. 9.0)

Putah Creek above Yolo By-pass (R.M. 3.8)

(e) Make sufficient spot measurements of Enos Creek and Pleasants Creek, and all river diversions to enable determination of monthly records of inflow and diversions.

(f) Continue State and Bureau ground water studies of Putah Creek Cone with spring and fall observations of all wells and monthly observations of wells within three miles of Putah Creek channel.

(g) Install four continuous water stage recorders and maintain record on two wells on each side of and within one-half mile of Putah Creek channel.

(h) Make periodic surveys of Putah Creek channel in order to determine consumptive use by native vegetation.

(i) Make biennial crop surveys of service area served from Putah Creek to enable determination of changes in crop pattern.

(j) Quarterly water quality analyses of surface and ground water downstream from Monticello Dam at locations approved by the Board.

(k) Estimate of augmentation each water year from Putah Creek to underground supply below Monticello Dam, together with supporting data.

Permittee shall make its records of such investigations and measurements available for inspection by the Board and shall allow authorized representatives of the Board reasonable access to its project works and properties for the purpose of gathering information and data, to the extent not inconsistent with national defense.

13. The Board may, either upon the request of any party or on its own motion, and shall, prior to the expiration of a 15-year trial period, hear, review, and make such further orders as may be required concerning proper releases of water for downstream use and recharge of ground water, and concerning the investigations, measurements, and studies to be conducted by permittee, until a final determination and order can be made concerning the amounts, timing and rates of releases of water past the diversion dam in satisfaction of downstream rights, and the Board retains continuing jurisdiction for such purposes during said 15-year trial period.

14. The permits and all rights acquired or to be acquired thereunder are and shall remain subject to depletion of stream flow above Monticello Reservoir, not to exceed 33,000 acre-feet of water annually, by future appropriations of water for reasonable beneficial use within the watershed of Putah Creek above said reservoir; provided such future appropriations shall be initiated and consummated pursuant to law prior to full beneficial use of water within the project service area under these permits.

15. Permittee shall at all times release, for the purpose of maintaining fish life between Monticello Dam and Putah Diversion Dam, into the natural stream bed of Putah Creek immediately below Monticello Dam a minimum flow of 10 c.f.s. of water.

16. All releases of water past the Putah Diversion Dam shall be made in such a manner as to maintain a permanent live stream at all times as far below the diversion dam as possible, consistent with the purposes of the project and the requirements of downstream users.

17. The requirements of water for maintenance of fish life in Putah Creek below Monticello Dam shall be included as one of the objectives of the investigations and studies provided in condition No. 12 of the permits.

18. The right to divert and store water, and apply said water to beneficial use as provided in the permits is granted to the United States as Trustee for the benefit of the public agencies of the State together with the owners of land and water users within such public agencies as shall be supplied with the water appropriated under the permits.

19. Subject to compliance by the public agencies concerned with any and all present and future valid contractual obligations with the United States, such public agencies, on behalf of their landowners and other water users, shall, consistent with other terms of the permits, have the permanent right to the use of all water appropriated and beneficially used hereunder, which right, 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 to 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.

20. Upon completion of the appropriation and beneficial use of water under the permits, any license or licenses which may be issued pursuant to Chapter 9 of Part 2 of Division 2 of the California Water Code shall be issued to the public agencies of the State within which the water shall have been found by inspection by the Board to have been applied to beneficial use.

IT IS FURTHER ORDERED that Application 11198 for generation of hydroelectric power be and the same is hereby denied without prejudice to the filing of a new application for the same purpose at such time as the United States is ready and able to proceed with diligence to construct the necessary works and power plant, and complete beneficial use of water for such purpose.

Approved as the decision and order of the State Water Rights Board this 7th day of February, 1957.

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Henry Holsinger  
Chairman

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John B. Evans  
Member

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W. Penn Rowe  
Member

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Permits )  
10657, 10658 and 10659, )  
Issued on Applications )  
11199, 12578 and 12716, )  
UNITED STATES BUREAU OF )  
RECLAMATION, )  
Permittee )

Source: Putah Creek  
County: Solano

DECISION AND ORDER AMENDING DECISION D 869  
AND PERMITS 10657, 10658 and 10659

On February 7, 1957, the State Water Rights Board, predecessor of the State Water Resources Control Board (Board), adopted its Decision D 869 approving Applications 11199, 12578 and 12716 of the United States Bureau of Reclamation (Bureau) and ordering that permits be issued subject to certain terms and conditions. Paragraphs 11, 12 and 13 of the order provide for releases of water into the channel of Putah Creek, for the Bureau to gather certain information and report to the Board, and that the Board, prior to the expiration of a 15-year trial period, may make further orders concerning proper releases of water from the Monticello Reservoir and past Putah Diversion Dam for downstream use and recharge of



groundwater and concerning investigations, measurements and studies to be made by the Bureau.

On March 2, 1969, the Bureau filed a petition to set aside Conditions 11, 12 and 13, along with the corresponding conditions incorporated in Permits 10657, 10658 and 10659, and replace them with a monthly schedule of releases past the Putah Diversion Dam.

The Bureau's petition was the subject of a public hearing held by the Board in Sacramento, California, on June 17, 1969. The Bureau appeared and presented evidence, and appearances were also made by Solano County Flood Control and Water Conservation District, Regents of the University of California and the Department of Fish and Game. No opposition to granting the petition was expressed.

The evidence received at the hearing having been duly considered, the Board finds as follows:

1. The Bureau has based its releases from Monticello Reservoir required by Decision D 869 on the reservoir's inflow calculated from evaporation rates and climatological data. However, records of Putah Creek streamflow above the reservoir since construction of the project compared with preproject records show substantially less flow into the reservoir during the summer

months than that calculated by the Bureau. The releases proposed by the Bureau exceed inflow to the reservoir during these months.

2. The schedule of releases proposed by the Bureau plus uncontrolled spills and tributary inflow of project water will maintain within reasonable limits the groundwater levels and satisfy the rights of surface diverters to the extent that they would have been satisfied in the absence of the Monticello Project, except as indicated in the next paragraph.

3. Groundwater in the area of influence of the lower reach of the Creek, from about mile 4.0 to mile 11.0\*, has had a decrease of about 5,000 acre-feet per annum of water between 1957 and 1966 as a result of project operations. Releases in accordance with the Bureau's proposed schedule will not correct this deficiency. However, the groundwater in the vicinity of the lower reach of the creek is being benefited by the use of imported water from West Cut and the use of water from Putah South Canal in lieu of well water and Cache Creek water. Whether this will result in offsetting the diminution of groundwater in the area remains to be seen.

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\* Mile 0.0 is the west levee of the Yolo By-Pass.

4. The schedule of releases proposed by the Bureau, in lieu of the Board's order contained in Condition 11, should be adopted. However, the Board should continue to retain jurisdiction over Permits 10657, 10658 and 10659 until December 31, 1974, or such additional time as then seems necessary, to determine if the release schedule affords adequate protection to prior rights.

5. It is no longer necessary for the Bureau to report streamflow measurements and water quantity data as directed by Condition 12 except for measurements of diversions to Putah South Canal and flows past the Putah Diversion Dam. Also, the provisions for groundwater monitoring should be limited to recording depths to groundwater and estimates of changes in storage in the area influenced by Putah Creek between mile 4.0 and mile 11.0.

From the foregoing findings the Board concludes that Conditions 11, 12 and 13 of Decision D 869 and the corresponding conditions contained in Permits 10657, 10658 and 10659 should be and they are amended to read as follows:

11. Permittee shall release water into the Putah Creek channel from Monticello Reservoir and past the Putah Diversion Dam in accordance with the following schedule:

<u>Period</u>	<u>Normal Year (cfs)*</u>	<u>Dry Year (cfs)**</u>
November through January	25	25
February	16	16
March	26	26
April	46	46
May through July	43	33
August	34	26
September and October	20	15

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\* Cubic feet per second.

\*\* When inflow to Lake Berryessa is less than 150,000 acre-feet per annum.

12. Permittee shall submit to the Board with its annual progress reports, or at such other times as the Board may request, the following information:

(a) Daily records of diversions to Putah South Canal and flows past the Putah Diversion Dam.

(b) Records of depth to groundwater and estimates of changes in the groundwater storage in the area influenced by Putah Creek between mile 4.0 and mile 11.0.

Permittee shall allow authorized representatives of the Board reasonable access to the project works and properties for the purpose of gathering information and data.

13. The Board reserves jurisdiction over Permits 10657, 10658 and 10659 until December 31, 1974, or for such additional time as then seems necessary, to determine if the schedule of releases in paragraph 11 herein provides adequate protection to downstream prior rights and for the recharge of groundwater to the extent that water would have been available in the absence of the Solano Project to make any further orders that may be required concerning proper releases of water for such purpose, and to impose any conditions providing for additional measurements or studies as may become necessary.

Adopted as the decision and order of the State Water Resources Control Board at a meeting duly called and held at Santa Monica, California.

Date: April 16, 1970

KERRY W. MULLIGAN **ABSENT**  
Kerry W. Mulligan, Chairman

E. F. DIBBLE  
E. F. Dibble, Vice Chairman

NORMAN B. HUME  
Norman B. Hume, Member

RONALD B. ROBIE  
Ronald B. Robie, Member

W. W. ADAMS  
W. W. Adams, member