

STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

In the Matter of Applications 16454)
and 17291 by Humboldt Bay Municipal)
Water District to Appropriate from)
Mad River in Trinity and Humboldt)
Counties)

Decision No. D 923

DECISION

Substance of the Applications

The subject applications are in furtherance of the Mad River Project of Humboldt Bay Municipal Water District and are as follows:

Application 16454 filed July 7, 1955, by the City of Eureka and subsequently assigned to the District is for a permit to appropriate 100,000 acre-feet per annum (afa) by storage to be collected between October 1 and April 30 of each season from Mad River for municipal purposes. Storage is to be effected by means of an earth-fill dam (Ruth Dam) to be located within the NW $\frac{1}{4}$ of NW $\frac{1}{4}$ of Section 19, T1S, R7E, HB&M* in Trinity County. The impounded waters are to be subsequently released down the main stream channel of Mad River and rediverted at the proposed Essex Diversion Dam and pumping station within the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 15, T6N, R1E, in Humboldt County. Statements in the application are to the effect that the District proposes to construct Ruth Dam and Reservoir under a staged development with an initial storage capacity of 50,000 acre-feet and an ultimate capacity of 120,000 acre-feet, and water is to be used within the confines of Humboldt Bay Municipal Water District which includes the cities of Eureka and Arcata, the Humboldt Community Service District and environs.

* Township and Range designations herein relate to Humboldt Base and Meridian (HB&M).

Application 17291, a companion to Application 16454, was filed September 21, 1956, by the District for a permit to appropriate, year-round, 200 cubic feet per second (cfs) by direct diversion at Essex Dam and 20,000 acre-feet per annum (afa) by storage at Ruth Dam to be collected between October 1 and April 30 of each season for municipal purposes.

Protests

Written protests against the approval of the subject applications were received from California Department of Fish and Game, Board of Supervisors of Trinity County, Earl P. and Alta R. Dillon, George and B. J. Hackett, George E. White, H. C. Sawyers, H. A. Guptill and Richard Myers, Six Rivers Pines Sales, Dudley F. and Marguerite T. Darnall, and J. K. and Udell M. Holly. Of the foregoing protestants, only the Department of Fish and Game, Trinity County, and Earl P. Dillon were represented at the hearing. The other protestants having failed to appear to offer proof in support of their written protests, no good cause therefor having been shown within the time allowed, and it being further evident that the issues raised by these protestants do not alter the disposition of the applications herein considered, their protests are hereby dismissed in accordance with Section 731* of the rules and regulations of the State Water Rights Board (hereinafter referred to as "the Board").

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

Hearing

Applications 16454 and 17291 were completed in accordance with the provisions of the Water Code and applicable rules and regulations and were set for public hearing under the provisions of the California Administrative Code, Title 23, "Waters" before the Board on Tuesday, June 17, 1958, in the City Council Chambers, Eureka, California. The applicant, protestants, and other interested parties were duly notified of the hearing which extended through June 18, 1958.

The following is a summary and discussion of the evidence produced at the hearing.

Description of Mad River System

Rising at about elevation 5,500 feet on the western slope of the Coast Range within southwestern Trinity County, the Mad River flows northwesterly about 90 miles to its confluence with the Pacific Ocean about four miles northwest of the Town of Arcata in Humboldt County. Table 23 of Bulletin No. 1, State Water Resources Board, "Water Resources of California", dated 1951, (SWRB* Exh. 3), gives the total drainage area of the Mad River System as 496 square miles. Roughly, the drainage area is equally divided between Trinity and Humboldt Counties. Topographic maps published by the United States Geological Survey (SWRB Exh. 7)

* "SWRB Exh." designates exhibit of staff of State Water Rights Board.

show that approximately the upper 70 miles of the Mad River System is confined within narrow, steep canyons incised in a trough averaging five to six miles in width and bounded by South Fork Mountain on the northeast and Mad River Ridge on the southwest. Numerous small tributaries drain the flanks of the trough. The lower 20 miles of the system flows through a diverging flood plain which has its apex below Sweasy Dam of the City of Eureka. Principal tributaries in the lower reach include (in their downstream order) from the northeast--North Fork Mad River, Lindsay and Mill Creeks; from the southwest--Puter, Quarry, Palmer, Kelly, Leggit and Warren Creeks.

The proposed Essex Diversion Dam is to be located about 12 miles downstream from Sweasy Dam and below the mouth of Lindsay Creek in Humboldt County; the proposed Ruth Storage Dam is to be located about 70 miles upstream from Essex Dam (Humboldt Exh. 6).

Testimony of Applicant

Water Supply

J. George Thon, Chief Civil Engineer, Bechtel Corporation, testified in substance that for the 34-year period beginning water-year 1923-24, the average seasonal runoff of the Mad River is estimated to be 192,000 acre-feet at Ruth Dam and 945,000 acre-feet at Essex Dam and that the estimated minimum seasonal runoff is 31,400 and 186,000 acre-feet, respectively (R.T. pp. 98-99, Humboldt Exhs. 11 and 12); that there is sufficient unappropriated water available to support a development for municipal and industrial

uses requiring a firm yield of 125 million gallons per day (R.T. p.92); that in determining conservable supplies of water, full provision has been made for existing rights to the use of water, including releases of water for maintenance of fish life in accordance with the recommendations of the Department of Fish and Game (R.T. p. 94), and that the estimated runoff at Essex Dam represents substantially the surplus water available for appropriation (R.T. p. 118).

Water Requirements

Mr. Thon testified that the allocation to municipal use should be of the order of 12 million gallons per day to supply the cities of Arcata and Eureka and other communities within the district boundaries (R.T. p. 85); and that a survey of the available timber resources in the Humboldt-Trinity area and the water requirements for the manufacture of wood pulp and paper shows that the allocation of water for industrial use should be 110 to 120 million gallons per day (R.T., p. 87, Humboldt Exhs. 3 and 5).

C. H. Kreienbaum, Vice-Chairman of the Simpson Timber Company, testified (R.T., pp. 19-40) in effect that his company contemplates construction in the near future of a 300-ton capacity pulp mill on the North Spit of Humboldt Bay which will have an initial water requirement averaging 20 million gallons per day; that his company looks to the District to furnish the water; and that utilization of the timber resources of Trinity County are planned.

Stanley Roscoe, City Engineer of Eureka, and Fred Roumage, Civil Engineer for the City of Arcata, expressed the desire of those cities to participate in the Mad River Project to alleviate a critical situation with regard to the availability of a stable supply of municipal water and assuring the continuance of a dependable supply for future needs.*

* The records of the State Water Rights Board show the following active water right filings by City of Eureka and City of Arcata:

Permit 4444 (Application 7621 - filed July 17, 1933) of City of Eureka allows the appropriation from Mad River of 7.74 cubic feet per second by direct diversion, year-round, and 750 acre-feet per annum by storage from about October 1 to about June 30 of each season for municipal purposes. The City's point of diversion and storage is at Sweasey Dam in Section 16, T5N, R2E.

Permit 10342 (Application 16452 - filed July 7, 1955) of the City of Eureka allows the appropriation of 2.32 cubic feet per second, year-round, by direct diversion from Mad River at a point within Section 25, T6N, R1E, for municipal purposes.

License 2776 (Application 9751 - filed October 12, 1939) of the City of Arcata confirms the right to appropriate a total of 0.31 cubic foot per second by direct diversion, year-round, from Park Creek, Preston Creek and Janes Creek and 35 acre-feet per annum by storage from about November 1 to about May 1 of each season for municipal purposes. The points of diversion and/or storage are located in Sections 21, 27 and 28, T6N, R1E.

Permit 6503 (Application 10910 - filed November 9, 1944) of the City of Arcata allows the appropriation of 0.5 cubic foot per second from about October 1 to about August 1 of each season from Jacoby Creek for municipal purposes. The point of diversion is located within Section 30, T5N, R2E.

City of Arcata filed Application 18132 on May 12, 1958, for a permit to appropriate 6.0 cubic feet per second from Mad River, year-round, for municipal purposes. The proposed point of diversion is located in Section 16, T6N, R1E. Application 18132 is currently pending before the Board.

The Mad River Project

Mr. Thon further testified that in the interest of economy the development of the Mad River will be programmed under staged construction, with the first unit thereof being capable of supporting a firm demand of 75 million gallons per day with provision to expand to satisfy a firm demand of 125 million gallons per day (R.T. p. 92); that Ruth Reservoir with storage capacity of 50,300 acre-feet will provide the initial yield, and a storage capacity of 129,600 acre-feet will provide the expected ultimate demand (R.T. p. 103); that a pipeline extending from Essex Diversion Dam into the district service area and terminating on the North Spit of Humboldt Bay will be headed by a pumping plant which will have units added as the water requirements expand to a capacity of 196 cfs (R.T., p. 115).

Initiation and Completion of Construction

Robert W. Matthews, President, Board of Directors, Humboldt Bay Municipal Water District, testified (R.T. pp. 47-55) that in September, 1956, the voters of the District approved the issuance of bonds for 12 million dollars; that the project has been found to be economically feasible by financial consultants; and that negotiations for water contracts for pulp processing are under way with two responsible firms operating in the area.

Through Mr. Thon the District stated that it contemplates beginning construction of the first unit on or before April, 1960, and completion thereof within 18 months after that date, followed

by immediate application of the water to beneficial use; and that construction of the final stage of the development would be dependent upon the growth of water requirements, but it is anticipated to begin within five years after completion of the first unit with completion of construction and application of water to beneficial use to be within about one year later (R.T., pp. 150-153).

Other Benefits

Mr. Matthews stated that the Mad River Project would make for improvement of the local economy and provide desired stabilization of employment through diversification of industries; that the project would enhance the placing of the area's timber resources on a sustained yield basis; and that the recreational activities created at Ruth Reservoir would be of great financial benefit to Trinity County.

Views of the California Department of Water Resources

Edward C. Greiner, Associate Hydraulic Engineer, Department of Water Resources, testified in effect that the Ranger Station site, (located a short distance downstream from the Ruth site), considered for development in that Department's report on the California Water Plan as set forth in Bulletin No. 3 under date of May, 1957 (SWRB Exh. 5), is not susceptible to staged construction because of adverse geological conditions; that the Ruth site is suitable to meet local water demands or for possible inclusion into an export project under The California Water Plan; and that in view thereof the Department encourages the construction

of the Mad River Project as envisioned by the applicant and desires that provision be made for the continuance of coordinated planning between the Department and the District in order to achieve comprehensive development of the Mad River (R.T. pp. 68-80).

Concerning the desire of the Department for coordinated planning, the District, with the concurrence of that Department, stated that at such time as the plans of the Department are consummated, negotiations for joint use of facilities could proceed, and accordingly no special term calling for such coordinated planning is deemed necessary for inclusion in the permits issued pursuant to the subject applications.

Testimony of Department of Fish and Game

Ralph B. McCormick, Fisheries Biologist, California Department of Fish and Game, testified in support of that Department's contention that the Mad River System sustains a large anadromous and resident fishery which extends into the head waters of the Mad River and that alteration of the existing regimen of streamflow could at times seriously impair the recreational and commercial value of that fishery (R.T. pp. 178-217, Fish and Game Exhs. 1-15).

By stipulation and agreement between the applicant and the Department of Fish and Game, which was received as a joint exhibit of both agencies (Joint Exh. 1), provision is made for: (a) maintenance of fish life through a by-pass or release at all times of a minimum flow of five cubic feet per second immediately

below Ruth Dam and a schedule of releases of water below Essex Diversion Dam; (b) construction and maintenance of fishways and suitable fish screens; (c) restrictions on the manipulation of the rate of releases from storage behind Ruth Dam; (d) maintenance of a minimum storage pool of 2,000 acre-feet in Ruth Reservoir; and (e) withdrawal of that Department's protests against the subject applications if permits issued thereon provide for the by-passing or releasing of water below Ruth and Essex Dams for maintenance of fish life in accordance with (a) above.

Mr. McCormick further testified that operation of the Mad River Project in accordance with the conditions of the stipulation would have a beneficial effect upon the Mad River Fishery (R.T. p. 217).

Wesley W. Spinney, Forest Supervisor, Six Rivers National Forest, testified (R.T. pp. 174-178) that the Forest Service will issue a special use permit to the District for access to and use of certain federal lands within the reservoir area conditioned upon maintenance of a minimum storage pool in Ruth Reservoir and a continuous release below Ruth of five cubic feet per second therefrom; and that the Ruth Reservoir will result in an increase in recreation visits to the area and afford a recreational development which will create considerable revenue to Trinity County in providing services to recreationists.

Position of County of Trinity

Through counsel, the County of Trinity offered a statement of position which is essentially a reiteration of its written protest against the approval of the subject applications and which expresses concern over losses in tax revenues, destruction of county property, denial of access to Ruth Reservoir for development by Trinity County residents, the extent to which the Mad River Project is consistent with the over-all plan to meet ultimate needs of Trinity County, and the protection of existing rights to the use of water (R.T. pp. 55-65).

Memorandum of Understanding

For the purpose of informally considering further the objections of the County of Trinity to the proposed project, discussions were had with the State Water Rights Board on December 30, 1958, and January 9, 1959, by representatives of the applicant and the County of Trinity. These meetings resulted in resolving the objections of the County and culminated in a Memorandum of Understanding between the parties dated January 28, 1959, which is annexed hereto as Exhibit 1. The Memorandum of Understanding provides essentially as follows:

1. The applicant will lease to the County of Trinity for a period of ten years, with option to renew for successive five-year periods, all land purchased by the applicant above normal maximum pool elevation of Ruth Reservoir for the purpose of allowing the County to administer recreational activities in connection with the reservoir.

2. The applicant will maintain a minimum reservoir pool of approximately 8,000 acre-feet.

3. All existing Trinity County roads which will be destroyed by Ruth Reservoir will be rebuilt by the applicant according to approved standards to be determined by engineers of the two agencies and the U. S. Forest Service.

4. The applicant will perform the major maintenance for the relocated roads for a period of three years from the completion thereof.

5. The Ruth Airstrip will be replaced with approximately equal facilities at the applicant's expense.

6. Ruth Reservoir will be cleared of all timber, stumps, and brush up to the high-water line in accordance with stage construction of the project.

7. Applicant will bear the expense of clearing the Ruth Reservoir of all timber, stumps and brush up to the high-water mark.

8. The applicant will pay taxes on all lands acquired or to be acquired for purposes of the project based upon the 1958-59 tax roll, exclusive of improvements.

9. The applicant will support any legislation to obtain State funds to construct Ruth Dam above the first stage and up to its ultimate elevation of 2,717 feet (Bechtel datum); provided that such will not impose any financial burden on the applicant and will not interfere with the applicant's schedule of construction or operation.

10. Permits issued to the District in approval of the subject applications may be issued subject to the Memorandum of Understanding.

Conclusions

The evidence shows and the Board concludes that unappropriated water exists at the points on Mad River named in the subject applications, which water may be taken in the manner proposed by the applicant without injury to any lawful user of water.

The applications are for municipal use. Although the evidence discloses that the use proposed by applicant is overwhelmingly industrial, no party raised the question of separate applications for such use and it is not necessary for the Board to discuss this feature at this time.

In view of the endorsement of the Mad River Project by closely concerned agencies, the project's compatibility with The California Water Plan, and the economic and recreational values that will work to the benefit of the residents of Humboldt and Trinity Counties, the Board finds that approval of the applications, including terms and conditions to provide for the bypassing or releasing of water for maintenance of fish life as stipulated to, will best develop, conserve, and utilize in the public interest the waters sought to be appropriated.

The stipulation and agreement between the applicant and the Department of Fish and Game provides for dismissal of that Department's protests.

The concern of Trinity County over the detriments to its interests that could ensue by reason of the Mad River Project is eliminated by the aforementioned Memorandum of Understanding, and appropriate reference thereto will be incorporated in the permits to be issued to the applicant. The Board believes that the benefits to Trinity County in the form of increased recreational values and the potential utilization of its timber resources will more than offset any possible adverse elements of the project, the former value being further assured by the Memorandum of Understanding.

ORDER

Application 16454 for a permit to appropriate unappropriated water having been filed with the former Division of Water Resources, jurisdiction of the administration of water rights, including said application, having been subsequently transferred to the State Water Rights Board, Application 17291 for a permit to appropriate unappropriated water having been filed with the State Water Rights Board, protests against the approval of both applications having been filed, a public hearing having been held by the Board, a Memorandum of Understanding having been negotiated and approved by applicant and the County of Trinity, this Board having considered all of the evidence received at said hearing and the terms and conditions of said Memorandum of Understanding, and now being fully informed in the premises:

IT IS HEREBY ORDERED that Applications 16454 and 17291 be and the same are hereby approved, and it is ordered that permits be issued to applicant subject to vested rights and to the following terms and conditions, to wit:

1. The amount of water to be appropriated under permit issued pursuant to Application 16454 shall be limited to the amount which can be beneficially used and shall not exceed 100,000 acre-feet per annum by storage to be collected from about October 1 of each year to about April 30 of the succeeding year.

2. The amount of water appropriated under permit issued pursuant to Application 17291 shall be limited to the amount which can be beneficially used and shall not exceed 200 cubic feet per second by direct diversion, year-round, and 20,000 acre-feet per annum by storage to be collected from about October 1 of each year to about April 30 of the succeeding year.

3. The maximum amounts herein stated may be reduced in the licenses if investigation so warrants.

4. Actual construction work shall begin on or before December 1, 1960, 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 July 1, 1967.

6. Complete application of the water to the proposed use shall be made on or before July 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. For the protection, propagation and preservation of fish life permittee shall:

a. At all times by-pass or release minimum flow of five cubic feet per second into the natural stream bed of Mad River immediately below Ruth Dam.

b. During the periods herein specified, by-pass or release into the natural stream bed of Mad River immediately below Essex Diversion Dam the following minimum flows or the natural flow of Mad River as regulated by diversions now in existence, whichever is less:

October 1 through October 15	30 cfs
October 16 through October 31	50 cfs
November 1 through June 30	75 cfs
July 1 through July 31	50 cfs
August 1 through August 31	40 cfs
September 1 through September 30	30 cfs

10. These permits are subject to the Memorandum of Understanding between Humboldt Bay Municipal Water District and County of Trinity, drafted on January 28, 1959, and duly approved by both agencies and on file with the State Water Rights Board.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Sacramento, California, on this 5th day of February, 1959.

/s/ Henry Holsinger

Henry Holsinger, Chairman

/s/ W. P. Rowe

W. P. Rowe, Member

/s/ Ralph J. McGill

Ralph J. McGill, Member

EXHIBIT 1

MEMORANDUM OF UNDERSTANDING

This memorandum drafted this 28th day of January, 1959, represents understandings reached by representatives of Humboldt Bay Municipal Water District, herein referred to as "District", and representatives of the County of Trinity, State of California and its duly elected Board of Supervisors, herein referred to as "Trinity County";

Said understanding has been reached in order to resolve certain differences which have arisen between the parties hereto in relation to District's Applications Numbers 16454 and 17291 now pending before the California State Water Rights Board.

It is understood as follows:

1. DEVELOPMENT OF RECREATION

District intends to negotiate for and to purchase a strip of land at least 300 feet wide above normal maximum pool elevation of the ultimate project development, approximate contour 2697. (All contours to which reference is herein made are according to Bechtel Survey datum, as shown on District's Exhibit Number 7 in the records of the hearings of said applications). Said lands to be purchased by District will not include United States properties under the jurisdiction of the United States Forest Service. The lands to be purchased by the District will be for the following purposes:

- (a) to make available to the public free access to the reservoir, and
- (b) to assure proper sanitation.

District will make an agreement of lease with Trinity County, to extend for a period of 10 years, with option to renew for successive five-year periods, for an annual consideration of \$1.00, to enable Trinity County, without expense to District, to administer said strip, to designate and improve access facilities to the reservoir, to build, maintain, and operate boat launching facilities, and, subject to prior written approval of District, to construct such other recreation facilities and structures as Trinity County may deem suitable. Detailed terms of said lease to be drafted by legal counsel for District and for Trinity County.

2. MINIMUM POOL

The Ruth Reservoir will be operated in such a manner that from June 1 through September 10 of each year, water surface elevation will not be lower than approximate contour 2610, which represents reservoir capacity of approximately 8,000 acre-feet.

3. ROADS

District, at its expense, will rebuild existing Trinity County roads according to approved standards to be determined by the Trinity County Road Commissioner, a representative of the United States Forest Service, and a representative of Bechtel Corporation.

4. MAJOR MAINTENANCE OF ROADS

District agrees to maintain the relocated roads for a period of three years from completion of the road construction.

Such maintenance shall extend only to major maintenance. Major maintenance is defined to be repair of slides, slip-outs, washouts, or defective construction. Ordinary maintenance will be assumed by Trinity County. Ordinary maintenance is defined to mean grading, cleaning gutters, snow removal, minor graveling and removal of obstructions other than those defined as major maintenance. District agrees prior to road construction to submit complete plans and specifications to Trinity County for review and approval of any relocated roads.

5. REPLACEMENT OF EXISTING AIRSTRIP

District, at its expense, will replace the Ruth Air-strip with approximately equal facilities, to be rebuilt at a location to be selected by the Trinity County Road Commissioner, a representative of the United States Forest Service, and a representative of Bechtel Corporation.

6. CLEARING OF RESERVOIR

At expense of District, the Ruth Reservoir will be cleared of all timber, stumps, and brush up to the high water mark, in accordance with stage construction of the project.

7. PAYMENT OF TAXES

District agrees to pay taxes on all land acquired, or to be acquired, in the construction of the project or any extension thereof. It is understood and agreed that the assessed valuation of said property shall be the assessed valuation as shown on the Trinity County Roll 1958-1959,

exclusive of improvements. The tax rate will vary as determined by the County for all taxpayers within the County from time to time.

8. STATE FUNDS

District agrees to support any legislation to obtain State funds to construct the dam on a larger scale than the initial project proposal of the District. District further agrees to join with Trinity County in any procedural steps necessary to gain the State funds and assistance. District's duty hereunder does not extend to a requirement for a financial contribution to obtain such State funds, and the District shall not be required to join in any procedures which interfere with the District's construction program or operation of facilities. If State funds are available before the District commences construction, State contribution at any such time will not be deemed an interference with the District's construction program.

It is understood and agreed that any permit issued to said District by the State Water Rights Board may be issued subject to this memorandum.

This memorandum of understanding will forthwith be submitted for approval by appropriate resolution by the parties to this memorandum.