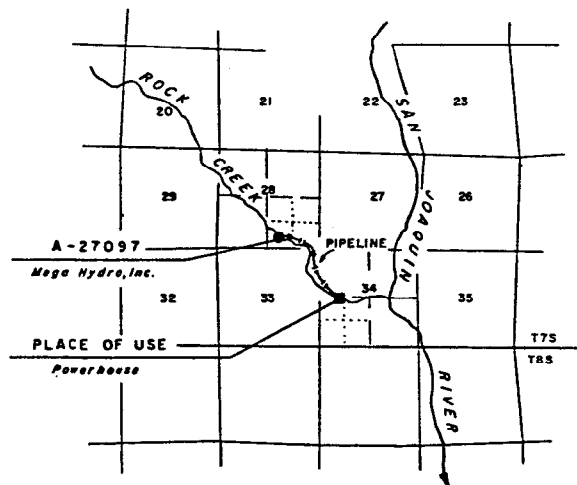


# ROCK CREEK HYDROELECTRIC PROJECT IN MADERA COUNTY

## APPLICATION 27097 OF MEGA HYDRO, INC.

### DECISION 1621



AUGUST 1988

STATE WATER RESOURCES CONTROL BOARD



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STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Application 27097	)	
MEGA HYDRO, INC.,	)	DECISION 1621
Applicant,	)	
CLIFFORD BETHEL, ET AL.,	)	SOURCE: Rock Creek
Protestants.	)	tributary to
	)	San Joaquin River
	)	COUNTY: Madera

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BY THE BOARD:

1.0 INTRODUCTION

Mega Hydro, Inc. (applicant), having filed Application 27097 for a permit to appropriate water; protests having been filed; a hearing having been held on June 14, 1984 and on July 31 and August 1, 1986 by the State Water Resources Control Board (Board); representatives for the applicant, protestants and interested parties having appeared and presented evidence; and the evidence in the record and environmental documents having been duly considered, the Board finds as follows:

2.0 SUBSTANCE OF APPLICATION

Application 27097 seeks to divert up to 40 cubic feet per second (cfs) of water year round from Rock Creek tributary to the San Joaquin River in Madera County for the generation of electric power. The water would be diverted within the SW1/4 of SE1/4 of Section 28, T7S, R24E, MDB&M. Power would be generated and the water returned to Rock Creek within the NE1/4 of SW1/4 of Section 34, T7S, R24W, MDB&M.

### 3.0 PROJECT DESCRIPTION

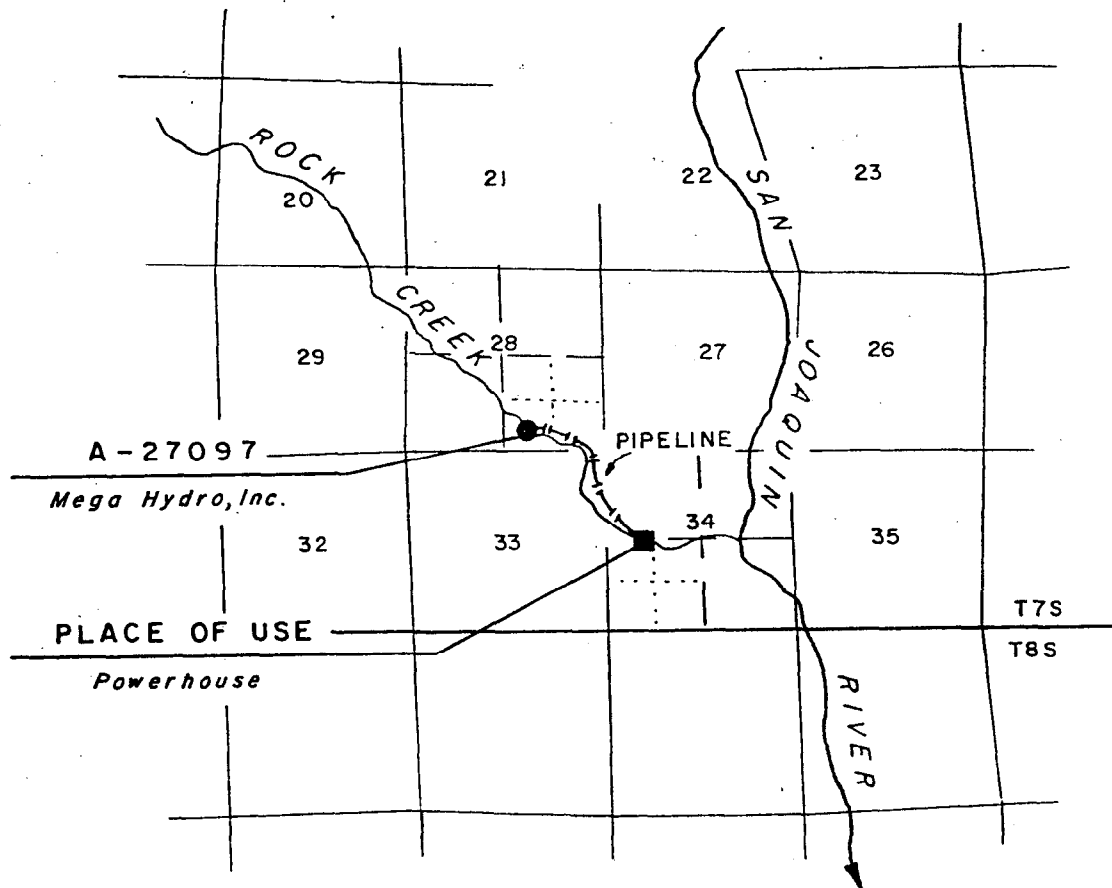
The proposed project would divert water for the generation of about 5.2 gigawatts per hour (Gwh) of electric energy annually. Water will be diverted from Rock Creek about one mile downstream from the U. S. Forest Service Rock Creek Campground which is about nine miles northeast of the town of North Fork, California, and about six miles northwest of Huntington Lake. The water will be diverted via a grated inlet sump buried in the streambed. About 4,900 feet of 36-inch pipe and penstock will convey the water to the powerhouse and its return to Rock Creek (see Figure 1). Roughly 80 percent of the pipe and penstock will be buried along an existing Forest Service road.

The powerhouse will consist of a 20-by-34-foot structure and be situated immediately upstream of an existing diversion dam operated by Southern California Edison (SCE). An 8-by-8-foot switchyard will adjoin the powerhouse. The generated power will be delivered to an existing SCE power line near the point of diversion by about 5,100 feet of transmission cable. The cable will be buried with the pipeline and penstock or enclosed in conduit.

### 4.0 PROTESTS TO APPLICATION

Two protests were filed in response to the Notice of Application, one by the California Department of Fish and Game (DFG) and the other by Clifford Bethel. Both allege that: (1) the proposed project will not

Figure 1



MADERA CO.  
T7S - R24E  
MDB&M

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
DIVISION OF WATER RIGHTS

APPLICATION  
27079

SCALE  
0 MILE

DATE: 6-14-88	DRAWN: -E C W	CHECKED: P.T.M.	DWG: 3378
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best conserve the public interest, and (2) the project will have adverse environmental impacts.

Rock Creek has a small wild trout population and DFG stocks the stream with trout near the campground. DFG is concerned that the diminished level of flow resulting from the proposed project will reduce the carrying capacity of the stream for trout.

In his protest, Mr. Bethel alleged, among other matters, that: (1) the diminished level of flow resulting from the project will not be sufficient to maintain the balance of nature required to sustain Rock Creek and its plant and animal life; (2) an adverse cumulative impact to the watershed would occur from this and other proposed hydroelectric projects; and (3) the food and handicraft materials used by the Mono Indians would be reduced.

California Save Our Streams, Inc. (SOS) participated as an interested party and joined its presentation with Mr. Bethel's. In addition to SOS, numerous interested persons from the community of North Fork attended the hearing and addressed our hearing officer, Board Member Samaniego. We commend the citizens of North Fork for their active interest in environmental matters that may affect their lives.

#### 5.0 EARLIER PROCEEDINGS

A hearing for this application was initially commenced on June 15, 1984. The hearing was continued when it became apparent that an agreement mitigating environmental effects was predicated upon a



mistake of fact as to the location of the proposed point of diversion and DFG's recommendation that additional fisheries studies should be undertaken (T, 6/15/84, Vol. I, 31:2-38:5; 165:14-23). During the continuance, the applicant conducted additional fisheries studies. Due to the time having elapsed between the first and second hearing, the parties essentially presented their cases ab initio (from the beginning) when the hearing was reconvened.

#### 6.0 APPLICABLE LAW

In order to issue a permit, the Board must find that unappropriated water is available (Water Code Section 1375). The use of water for preservation of fish and wildlife resources is a beneficial use of water. When determining the amount of water available for other beneficial uses, the Board must take into account the water resources for preservation of fish and wildlife (Section 1243).

When acting as a lead agency, the Board must prepare and consider appropriate environmental documents pursuant to the California Environmental Quality Act (Public Resources Code Section 21000 et seq.). Further, the Board is required to mitigate or avoid, when feasible, significant project impacts (Section 21002.1). Also, the applicant must demonstrate that project revenues will exceed project costs, including the cost of mitigation measures over the life of the project (Water Code Section 106.7(e)).

The Board shall include conditions to protect the public interest when approving applications to appropriate water (Section 1253).

Jurisdiction may be reserved to impose additional conditions when actual operation or additional studies are necessary to determine conditions which may be required in the public interest.

#### 7.0 AVAILABILITY OF UNAPPROPRIATED WATER

Water is seasonally available in Rock Creek. The project will not interfere with any existing consumptive uses of water. Because the proposed project will directly divert water (no storage), is non-consumptive, and will return diverted water to its source above any other user, the project will not interfere with any downstream rights to the use of water. Accordingly, we conclude that unappropriated water is available to the applicant.

Notwithstanding the foregoing, the question of which months and what quantity of water is present in the streams is of importance. The quantity and seasonableness of water are critical for determining the quantity of water that should remain in the stream for fish and related uses and for determining the quantity of water available for generating hydroelectric power and project revenue. These issues will be discussed under "8.0 ENVIRONMENTAL CONCERNS" and "10.0 FINANCIAL FEASIBILITY", infra.

The Rock Creek watershed is roughly 15 square miles, ranging in elevation from 4,100 feet at the point of diversion up to 8,350 feet.

Annual precipitation ranges from an average of 40 inches at the lower elevation to 80 inches at the higher elevations. At about 5,000 feet, 90 percent of the precipitation is in the form of snow which results in high runoff during the months of April, May, and June of most years (MEGA 18, 24).

Because no historical stream gaging data were available in the vicinity of the proposed project, the flow in Rock Creek was estimated by periodic gaging and by comparing the results with the flow in other nearby representative streams for which simultaneous gaging data was obtained and for which long-term gaging data is available. The available gaging data on other streams were adjusted to compensate for observed differences in flow, differences in the size of the respective watersheds and differences in elevation which affects the quantity and form of precipitation, e.g., snow or rain (id.). These adjustments resulted in the following predicted mean monthly flows for Rock Creek.

TABLE I  
MONTHLY BYPASS FLOWS (cfs)

October	4.0	April	84.8
November	9.9	May	130.9
December	15.5	June	73.5
January	19.7	July	18.6
February	28.7	August	4.8
March	39.0	September	3.4
MEAN ANNUAL FLOW = 36.1			

DFG has requested and the applicant has agreed to minimum monthly bypass flows ranging from a low of 4.0 cfs in the months of September, October and November to a high of 7.0 cfs during the months of April, May, June, and July. Further, a minimum of about 4 cfs is needed to operate the turbine (T,I,107:19-109:4). This means that the flow in Rock Creek must equal or exceed 8.0 to 11.0 cfs before the project can operate. Indeed, one estimate by the applicant indicates that the plant will be shut down about 40 percent of the time due to low flow (MEGA 24, Rock Creek Energy Production, p. 2). We will give further consideration to the availability of water when we consider the project's environmental effects and financial feasibility.

## 8.0 ENVIRONMENTAL CONCERNS

Numerous environmental concerns are raised regarding the potential environmental effects from constructing and operating the proposed project. The effects will include short-term construction effects and longer-term effects resulting from the diversion of water from about 4,000 feet of Rock Creek. This decision will give consideration to those issues which were the subject of controversy at the hearing.

### 8.1 Fisheries

Rainbow and brown trout are present below the Rock Creek Camp Ground and above the proposed point of diversion and between the point of diversion and the place of use. Further, about 6,000 rainbow trout

are planted annually by DFG above the proposed point of diversion (Board 11, Fisheries Study).

The impact of reduced stream flow on fish resources was evaluated by the Instream Flow Incremental Methodology (IFIM) studies and by electro-fishing. IFIM studies utilize stream flow hydrology measurements (or estimates) in conjunction with representative cross sections of a study reach. Using this information, the study attempts to assess how flow decrements will affect the quantity of habitat for different life stages of fish, e.g., spawning, egg incubation, fry, etc. Cross-sectional habitat is characterized by reference to the depth and velocity of water and by substrate. Fish species and population densities were determined by electro-shocking. Rainbow and brown trout were found within the entire bypass section between the point of diversion and the point of return.

Based on these studies, DFG recommended the following bypass flows:

TABLE II  
MONTHLY BYPASS FLOWS (cfs)

October	4.0	April	7.0*
November	4.0	May	7.0*
December	5.0	June	7.0
January	6.0*	July	7.0
February	6.0	August	5.0
March	6.0*	September	4.0

\* Minimum bypass flows during these months would typically be augmented by "spills", i.e., flow in excess of the project's intake capacity. See months of higher flow under Table I, supra.

The applicant has agreed to these flows (Board 1; letter of April 10, 1986 to the Division of Water Rights from Fred Castagna). Further, Dr. Tribbey, a witness for Clifford Bethel, et al., testified that he had reviewed the fishery studies and concurred with DFG's analysis and recommended flows (T,I,42:12-43:12). The applicant has also agreed to the following measures to mitigate fisheries impacts: (1) the screening of the intake to protect fish and wildlife, (2) post-project fishery monitoring, and (3) a stream gage to assure compliance (T,II,256:15-262:26). These conditions should be a part of our approval.

#### 8.2 Impacts to Microinvertebrates and Water Temperature

Aquatic macroinvertebrates are an important food source for trout. Although Dr. Tribbey felt that changes in stream flow must result in some effect on invertebrate life, he had no basis for assessing how extensive such changes might be. Dr. Burdick, an insect taxonomist testifying for protestant Bethel, et al., expressed similar views.

Water temperature is very important to the maintenance of a trout fishery. Dr. Tribbey indicated that he felt that the diversion of water by the project would also have some effect on water temperature.

Evidence was received from DFG that the recommended bypass flows will provide satisfactory water depth and temperatures over the entire channel width in both pool and riffle areas, and, as such, would provide adequate habitat for known cycles of aquatic macroinvertebrates (Board 1; letter dated February 5, 1986;

T,II,275:21-276:19). We conclude that the project will not have significant effects upon microinvertebrates and water temperature.

### 8.3 Riparian Habitat and Sensitive Plants

The proposed diversion may affect stream side vegetation. However, based upon the fact that the project would probably have little or no effect on either the low flow or peak flooding events, the vegetation consultant concluded that no significant impacts should be anticipated (Board 11, Riparian Vegetation Evaluation, p. 8). Counsel for Mr. Bethel, et al., did not introduce testimony to indicate that the DFG recommended bypass flows would not protect the riparian vegetation.

Concern for sensitive plants along the riparian corridor focused on Collomia rawsoniana (Collomia). Collomia is a perennial, herbaceous, riparian plant that appears to be endemic to streams and moist areas in Madera County from about 2,650 to 6,640 feet in elevation.

Collomia, considered a category 1 candidate species by the U. S. Fish and Wildlife Service (Federal Register, 48:53647, 1983) is listed as sensitive species by the USDA-Forest Service in the Pacific Southwest Region.

Populations of Collomia are within the area of the project. Although Collomia is believed to require high soil moisture, no available literature identifies the plant's requirements. The Federal Energy Regulatory Commission (FERC) intimated that reduced stream flow from the project could lead to reduced riparian canopy thereby affecting

the Collomia distribution (Board 14, FERC, Final Environmental Impact Analysis of Small-Scale Hydroelectric Development in the Upper San Joaquin Basin, September 1985, p. 7-2).

The U. S. Fish and Wildlife Service (USFWS) has recommended that the U. S. Forest Service include conditions in its permits to assure that Collomia is not disturbed by project construction (Staff 1, letter dated February 14, 1985). Mr. Mitchell, a witness for DFG testified that a riparian habitat monitoring program incorporating sensitive plants is desirable (T,II,274:14-275:3).

In view of the foregoing, we find that the project will not have a significant effect upon riparian vegetation or upon Collomia provided the applicant constructs the proposed project so as to not disturb existing plots of Collomia. Further, the applicant should be required to monitor annually the existing Collomia plots for the life of the project and to monitor riparian vegetation for ten years in conjunction with monitoring the Collomia plots.

#### 8.4 Wildlife

Wildlife concerns consist primarily of possible impacts to deer migration. At DFG's request, FERC has imposed conditions on the applicant for the protection of wildlife (Board 1, letters from DFG [3/31/82 to Secretary of Resources, 6/27/85 to FERC]; Staff 1, FERC, Project No. 5756-005, Order Granting Exemption from Licensing, 3/16/87). Included are conditions which limit the project construction season and which require: siting of project features to



minimize effects upon vegetative growth, burial of the penstock and transmission lines, above ground transmission lines to be constructed to protect raptors, new construction access roads be put to bed and the revegetation of disturbed areas. We conclude that, with the adoption of the foregoing conditions, the project will not significantly affect wildlife.

#### 8.5 Cultural Resources

Project investigations included a cultural resource field survey and archival research. A prehistoric site, 05-15-55-847, was identified on the north side of Rock Creek which would be disturbed by a proposed access road (MEGA, 25, Appendix 3, 3-3). Subsequently, the applicant changed the location of the proposed access road (MEGA, 25, 14). With this change, no known prehistoric site will be affected by the project. However, if unrecorded cultural resources are discovered during construction, the applicant should be required to stop work in the immediate vicinity until the resource can be evaluated and appropriate action determined.

During archival research, it was found that the French Trail had crossed the proposed route of the penstock. The trail was a major pack trail between the San Joaquin Valley and the Owens Valley during the mining boom and has been used as an Indian trade route for as long as 1500 years (MEGA, 18, Appendix 2, 8-11). The trail has not been maintained and no evidence of the trail was found in the project area

during the field survey (MEGA, 18, Appendix 2, 19; T,II,310:13-311:6). The applicant has agreed to reconstruct any portion of the trail discovered during project construction (T,II,326:17-22). Based on the foregoing, we find that the project will not have a significant effect upon the trail. Furthermore, as a mitigative measure, the applicant has agreed to reconstruct an additional portion of the trail off site, to U. S. Forest Service standards (T,II,326:10-327:47).

On behalf of the Mono Indians, Mr. Bethel protested the application. Among other matters, he alleged that the project would reduce the food and handicraft materials used by the Mono Indians. Mr. Ron Goode, a tribal representative, accompanied applicant's consultants during an early site investigation. Although he expressed generalized concerns regarding the project's potential effect on resources used by the Indians, he did not identify any specific problems (T,II,314:24-318:16). During the hearing, Mrs. Sylvena Mayer, a tribal representative, testified that the Mono Indians used the Rock Creek area for subsistence and economic activities; however, except for the possible use of a wild tea plant, Mrs. Mayer did not identify any Mono Indian use that differed from the uses made of the area by other persons. Mr. Castagna, testifying for the applicant, indicated that the tea plant has not been investigated but volunteered to undertake measures necessary to protect the tea plant (T,I,325:12-326:1).

In many respects, the tea plant issue is a variant of "8.3 Riparian Habitat and Sensitive Plants". Under that heading, we noted that the applicant's consultant had concluded that no significant impacts to vegetation were anticipated because the project would probably have little or no effect on either the low flow or peak flooding event. In the absence of specific information from the protestants, we cannot find that the proposed project will have any significant effect on the cultural resources. Nevertheless, we conclude that the applicant should be required to locate and identify any Indian tea plants situated in the immediate vicinity of the project and, if necessary, develop appropriate mitigation measures.

#### 8.6 Recreation and Aesthetics

The proposed project will have some effect on recreational uses and the aesthetics of the area. The Rock Creek Campground is about one mile upstream from the proposed point of diversion and has 18 developed sites. The primary activities within the immediate project area are dispersed hiking, fishing, hunting and water contact activities. An unknown number of fishermen use the USFS Road 7S47 to reach portions of the San Joaquin River.

Project construction will interfere with some use of the road and recreational activities. Once construction is completed, use of the road will be unimpeded and recreation will not be significantly reduced. Hiking opportunities will remain after the project is completed and the disturbed areas have been revegetated. As

previously noted, the applicant had agreed to reconstruct a portion of the French Trail. No significant reduction in the recreational fishery is anticipated (T,II,302:20-305:11). The fishery bypass flow should maintain water play activities, especially at the plunge pools and natural bathtubs about 1,000 feet below the point of diversion (Table II, supra). Even though the penstock will be buried, visual impacts will continue beyond construction and revegetation in the immediate vicinity of the point of diversion and the powerhouse. However, these works will not be visible from the USFS roads or from the campground.

With conditions requiring the reconstruction of Road 7S47, revegetation, the reconstruction of a portion of the French Trail and a fishing access trail, we conclude that the project will have no significant effect on recreation and aesthetics.

#### 9.0 PROJECT ALTERNATIVES

During the hearing, Mr. Henry contended that there are abundant opportunities for the production of energy in California and, therefore, projects with adverse environmental effects should not be approved (T,II,398:9-13; 399:12-16; 400:12-25). Further, Mr. Henry contends that the only environmentally compatible hydroelectric projects are those having only trivial impacts on the environment (Protestant, 32, Statement). Putting aside the question of the relative weight that should be given Mr. Henry's testimony, as a non-expert witness, concerning energy options and the rebuttal testimony

by Mr. Henwood, an expert witness (T,II,436:10-468:17; 439:16-17), Mr. Henry's contention is not now well conceived.

The first contention assumes that most run-of-the-river small hydroelectric projects have adverse environmental effects. As indicated, in the preceding sections, "8.0 ENVIRONMENTAL CONCERNS" and "11.0 COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)", we believe this assumption is not well founded with regard to this project. Secondly, the argument assumes that California's energy needs will be met from other less environmentally objectionable alternatives if this and similar projects are not approved, a proposition that is probably incapable of being demonstrated.

With regard to Mr. Henry's second point, Article X, Section 2 requires that the fullest beneficial use be made of water. And Water Code Section 105 declares in part:

"[T]hat the state shall determine in what way the water of the state ... should be developed for the greatest public benefit."

The use of water for the generation of power and for instream purposes are both beneficial uses and the Board is directed to consider the relative benefits of such uses (Section 1257). Further, the Legislature has declared that it is

"... the established policy of this state to support and encourage the development of environmentally compatible small hydroelectric projects as a renewable energy source...."

We conclude that this project, as mitigated by the conditions required in this decision is an environmentally compatible small hydroelectric project.

## 10.0 FINANCIAL FEASIBILITY

Financial feasibility depends upon the relationship between project revenue, cost and the tax law. Revenue is a function of the energy a project will generate and the price that can be obtained for the energy. Project costs are a function of the costs for construction, debt, operation and maintenance, and insurance. Depreciation and tax credits have the financial effect of reducing, or allowing investors to recoup, capital contributions and, thereby, improving the rate of return.

### 10.1 Project Revenue

Southern California Edison (SCE) has contracted to purchase the capacity and energy produced by the proposed project (MEGA, 33, pp. 29-43). Under the terms of the contract, the applicant will be paid levelized prices for a period of ten years. During the remaining years, the energy price is based upon SCE's full avoided cost (id.). Capacity payments are based on the Forecast of Annual as Available Capacity Payment Schedule and increase annually (id., Appendix B). When combined, the energy and capacity payments for this project is estimated as 8.5 cents per kwh (T,I,167:6-12).

Water Code Section 106.5 requires an applicant for certain hydroelectric projects to demonstrate that project revenues will exceed project costs, including the cost of mitigation measures over the life of the project. For the purpose of satisfying this requirement, the applicant's spreadsheet estimates annual revenues as \$643,520 by assuming that all available water would be diverted from the stream and then subtracting the value of revenues lost due to flows bypassed for fish (MEGA, 23, Spreadsheet, 2; T,I,194:20-25; see "Staff Analysis of the Record, 7.1 Project Revenue" for the computation of this value). After subtracting mitigation costs, including the value of bypassed flow, revenues are estimated as \$431,817.

10.2

Project Costs

The applicant's construction costs, exclusive of the costs for mitigation, are \$3,206,000. This figure includes the cost of obtaining the right to the use of land, all direct construction costs and overhead costs such as administration, supervision and interest during construction (MEGA, 23, Construction Cost Estimate). The costs associated with mitigation are \$494,000. This figure includes such items as the cost associated with the bypass of 4 to 7 cfs for fish, the burial of the pipeline and transmission lines, revegetation, etc. (id., Mitigation Costs, Alt. 2). Taken together, these costs total \$3,700,000.

### 10.3 Annual Costs

The first year operating costs, exclusive of interest and depreciation, are estimated as \$97,182 (id., Spreadsheet, Alternative 2). Operating costs are increased five percent annually within the spreadsheet (id., Financial Assumptions).

The applicant proposes to finance the \$3,700,000 with 25-percent equity and 75-percent debt or \$925,000 equity and \$2,775,000 debt. The costs of financing assume that a short-term construction loan will be used and then converted to a ten-year, 12-percent loan upon completion of construction (id.; T,I,189:03-192:18). Interest during construction is estimated as \$200,000 and is part of capitalized construction costs. The amortized annual interest for the first year of operating expenses is estimated as \$266,947. And the amortized interest for mitigation costs is \$58,813. These interest payments total \$325,760, approximately 12 percent of the \$2,775,000 of the anticipated debt. The interest payments decrease annually as the principal on the loan is paid (MEGA, Spreadsheet, Alternative 2).

### 10.4 Positive Cash Flow

Exclusive of depreciation which is not a cash payment, the project has a positive cash flow of \$67,688, during its first year of operation, after subtracting mitigation costs and operating expenses from projected revenues. As projected, cash flow improves by about \$20,000 a year during the early years of operation (MEGA, 23, Spreadsheet,



Alternative 2). Clearly, project revenues will exceed project costs, including the cost of mitigation, over the life of the project.

10.5

Other Factors Influencing Profitability

As indicated previously, the energy and capacity payments for this project is estimated as 8.5 cents per kwh. The applicant may opt to be paid the higher rates found in the Forecast of Annual Marginal Cost of Energy (MEGA, 33, pp. 3 and 4); however, the latter option requires the applicant to assume the risk that over time the marginal rate will fall below the levelized cost of energy. Further, the rate for capacity payments has increased during the past two years (MEGA, 33, Appendix B).

Using the foregoing revenue, cost estimates and certain assumed tax benefits such as depreciation, an energy tax credit and an investment tax credit, the applicant projects a 20-percent return on investment for the first year of operation. Thereafter, the return improves about 3.5 percent for each year of operation (MEGA, 23, Spreadsheet, 2). Held during mid-1986, the hearing for this project preceded the federal Tax Reform Act of 1986 (P.L. 99-514). As a consequence, certain financial assumptions made at that time need to be examined.

First, the 20-year, straight-line method of depreciation used in applicant's spreadsheet was not changed by the 1986 amendments. Further, the applicant may opt to take the depreciation over the first five years of project operation (P.L. 99-514, Sections 204(a)(2)(A)

and (C), and 204(a)(3)), an option which would improve the rate of return during those years.

Second, the 11-percent energy tax credit expires on December 31 of this year (P.L. 99-514, Section 421(b); 26 USC Section 46(b)(2)(A) and (D)). Inasmuch as the applicant will probably not be able to construct the project during this year, the protected rate of return will be reduced.

Finally, it is assumed that no investment tax credit would be available (MEGA, 23, Financial Assumptions). This assumption is partially in error. Under the 1986 amendments, the applicant may claim a 6.5 percent investment tax credit (P. L. Sections 211(a) and 204(a)(2)(A) and (B)). Accordingly, this change will improve the projected rate of return.

Notwithstanding these changes, it appears that the project is financially feasible. Nevertheless, given the passage of time and the changes in the tax law, the applicant should be required to submit a revised financial analysis before commencing construction.

#### 11.0

#### COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Under CEQA, the Board is the lead agency for this project. In late 1983, the Board prepared and circulated an Initial Study and Notice of Preparation (NOP) for Application 27097 (Staff 1). The Initial Study/NOP found that the proposed project could significantly affect the environment and recommended that an Environmental Impact Report

(EIR) be prepared. The draft EIR was prepared and circulated for review during early 1984 and comments were received from agencies and the public.

Following the 1984 hearing, a supplement to the EIR was prepared and circulated for comment on December 11, 1985. The supplement was prepared as a result of new information that was not known at the time the draft EIR was prepared (see "5.0 Earlier Proceedings", supra). A Final EIR has been prepared that includes responses to the comments to the draft EIR and supplemental EIR and recommends measures to avoid or mitigate potential significant impacts. Impacts to the following were initially considered to be potentially significant: Fishery habitat, sensitive plants, water quality, cultural resources, visual quality, cumulative effects and fire risk (SWRCB 18, pp. 5 and 6). Project changes and measures required by state and federal agencies and measures agreed to by the applicant have avoided potentially significant project effects. We have considered the draft and supplemental EIRs and the project's contribution to the potentially considerable adverse cumulative impacts and the comments and responses thereto. Further, we have considered FERC's Cumulative Environmental Impact Assessment of small hydroelectric projects in the upper San Joaquin Basin. With the conditions required by this decision, the project will not have a significant effect upon the environment nor will it contribute to measurable considerable adverse cumulative impacts.

12.0 CONCLUSIONS

The Board finds that: (a) unappropriated water is available during most months, wholly or partially, to satisfy the application for the proposed project; (b) the proposed bypass flows will protect instream beneficial uses; (c) project revenues will exceed project costs, including the cost of mitigation measures over the life of the project; (d) the Board, as the lead agency, has prepared and considered an EIR, including a supplement to the EIR; and, finally, (e) this decision includes conditions which avoid or mitigate significant project effects and conditions to protect the public interest.

ORDER

IT IS HEREBY ORDERED that:

1. The water appropriated shall be limited to the amount which can be beneficially used and shall not exceed 40 cubic feet per second to be diverted from January 1 through December 31 of each year.
2. Permittee shall maintain the following minimum flows past the point of diversion for the protection of fish and wildlife:

January	6.0 cfs	July	7.0 cfs
February	6.0 cfs	August	5.0 cfs
March	6.0 cfs	September	4.0 cfs
April	7.0 cfs	October	4.0 cfs
May	7.0 cfs	November	4.0 cfs
June	7.0 cfs	December	5.0 cfs

The total streamflow shall be bypassed whenever it is less than the designated amount.

3. Permittee shall develop a fisheries monitoring program in consultation with, and meeting the approval of the California Department of Fish and Game, the State Water Resources Control Board, the U. S. Forest Service, and the U. S. Fish and Wildlife Service. The monitoring program shall continue for five years following completion of the project. Jurisdiction is reserved to amend the bypass flows upon completion of the program. Action by the Board will be taken only after notice to interested persons and the opportunity for a hearing.
4. Permittee shall install, and maintain throughout the life of the project, a continuous recording stream gage. The gage shall be located not more than 0.1 mile downstream from the point of diversion.
5. Permittee shall provide the State Water Resources Control Board and the California Department of Fish and Game with the daily stream flow records for the October 1 through September 30 water year, on or before January 1 of the succeeding year.
6. Permittee shall submit at least 90 days prior to start of construction engineering drawings of the diversion structure, the fish screen, and the powerhouse tailrace to California Department of Fish and Game and the State Water Resources Control Board for review and approval. These drawings shall be designed by a Civil Engineer licensed in the State of California. The intake structure shall be constructed in such a manner that the required bypass releases are automatically and continually bypassed.

7. To prevent fish stranding, increases in the amount of water diverted shall occur at a rate not to exceed 30 percent of the total stream flow per hour.
8. In accordance with Section 1601, 1603, and/or Section 6100 of the Fish and Game Code, no work shall be started on the diversion works and no water shall be diverted until permittee has entered into a stream or lake alteration agreement with the California Department of Fish and Game and/or the Department has determined that measures to protect fish life have been incorporated into the plans for construction of such diversion works. Construction, operation, and maintenance costs of any required facility are the responsibility of the permittee.
9. Permittee shall establish permanent plots for all Collomia colonies within the project boundary. Permittee shall initiate an annual monitoring program approved by the U. S. Fish and Wildlife Service and the U. S. Forest Service of the Collomia plots for the life of project. The monitoring program is to detect changes in the species populations as a result of hydrodevelopment or any other activity. The monitoring program shall be conducted by a competent biologist.
10. Permittee shall submit an annual report of the Collomia monitoring to the State Water Resources Control Board, California Department of Fish and Game, U. S. Forest Service, and the U. S. Fish and Wildlife Service.
11. Permittee shall construct the project in such manner that no Collomia plants are directly lost.

12. If during the life of the project, the U. S. Fish and Wildlife Service/ U. S. Forest Service cooperative management agreement for Collomia requires additional mitigation of a nonstream release nature, the project owner shall comply with those measures as a condition of the water right permit or license.
13. Permittee shall develop a riparian vegetation monitoring plan approved by California Department of Fish and Game and U. S. Forest Service.
14. Permittee shall establish permanent riparian plots to be monitored annually for a period of ten years in conjunction with the Collomia monitoring program.
15. Permittee shall file annual reports of the monitoring program with the State Water Resources Control Board, California Department of Fish and Game and U. S. Forest Service.
16. If the results of the monitoring program indicate that project operation are directly causing significant impacts to riparian vegetation, changes in project bypass flows may be made by the State Water Resources Control Board to reduce or avoid significant impacts after notice and the opportunity for a hearing.
17. Permittee shall, for the protection of migrating deer, conduct on-site project construction only between June 15 and October 15.
18. Permittee shall site all project features in a manner which provides optimum retention and minimum disturbance of existing oak and riparian

vegetation. Wherever such resources are removed or altered, they shall be compensated for by replacement in kind within the project boundary.

19. Subject to approval by U. S. Forest Service, permittee shall bury penstock and transmission lines wherever possible.
20. Permittee shall construct all project surface features such that barriers to wildlife in excess of 150 linear feet are not created. The California Department of Fish and Game shall determine the appropriate animal crossing designs.
21. Permittee shall conform to U. S. Fish and Wildlife Service designs on any above-ground powerlines to protect raptors.
22. Permittee shall revegetate all disturbed soils and cleared areas with native browse, forb and grass species to benefit wildlife. The specific species used for revegetation shall be determined in a revegetation plan to be approved by California Department of Fish and Game and the U. S. Forest Service.
23. Permittee shall have the public access control determined by the U. S. Forest Service on all new roads constructed for the project. Any roads that are constructed only for access during project construction shall be put to bed and revegetated.
24. Permittee shall survey, design, and stake all soil disturbance activities (roads and penstock construction) for approval by the U. S. Forest Service prior to construction.



25. Permittee shall conduct all soil disturbing activities between June 15 to October 15.
26. Permittee shall stabilize by seeding and mulching all disturbed areas prior to the winter rainy season as recommended by the U. S. Forest Service.
27. Permittee shall install an automatic, emergency shut-off device at the diversion works to stop water flow in case of penstock failure.
28. Permittee shall, prior to construction, design and receive approval from the Regional Water Quality Control Board for a de-watering system used to carry the Rock Creek flow around the diversion site during construction.
29. Permittee shall, prior to construction, file a Report of Waste Discharge pursuant to Water Code Section 13260 with the California Regional Water Quality Control Board, Central Valley Region (Regional Board), and shall comply with all waste discharge requirements issued by the Regional Board. If the Regional Board waives issuance of waste discharge requirements, the permittee shall comply with Parts I and II of the "Guidelines for Protection of Water Quality During Construction and Operation of Small Hydro Projects" (Guidelines) as contained in the Water Quality Control Plans of the Central Valley Basin.

Specific requirements set forth in the permit shall prevail over any specific or general requirements in the referenced Guidelines in the event of conflict.

When complying with the Guidelines, pursuant to this condition, the permittee shall not commence construction until the Erosion Control Plan and any baseline data required by the Guidelines have been submitted to and approved in writing by the Regional Board; and before commencing sluicing operations, the permittee shall submit and receive written approval from the Regional Board of the Sluicing Operation Plan.

30. In the event any previously unrecorded cultural resources are discovered during the course of project construction, permittee shall cease all work in the immediate vicinity of the discovery and shall notify the U. S. Forest Service and the State Water Resources Control Board archeologists. Permittee shall have the site evaluated by a qualified archeologist and work shall not resume until the agencies have evaluated the site(s) and determined the appropriate course of action.
31. Permittee shall complete historic mitigation of the French Trail within the project area as specified by the U. S. Forest Service, if the trail is located during project construction.
32. Permittee shall have a botanist accompany a Native American consultant to locate and identify any populations of Indian tea that may be situated in the project area. If it is determined that the project will adversely impact the Indian tea, appropriate mitigation measures must be developed. The State Water Resources Control Board reserves jurisdiction to require the permittee to implement any mitigation measures deemed necessary.

33. Permittee shall rehabilitate and vegetate the dispersed recreation site on the flat near the diversion point after construction to protect its value for camping and day use.
34. Permittee shall reconstruct existing U. S. Forest Service Road 7S47 to improve drainage to provide all weather vehicle access for fishermen, hunters, hikers, and administrative vehicles. Existing low-level maintenance will be continued.
35. Permittee shall construct a fishermen access trail from the end of USFS Road 7S47 to the San Joaquin River, approximately .8 (eight-tenths) of a mile, then north along the river for one-half mile. This trail will be located and designed by the U. S. Forest Service.
36. Permittee shall reconstruct the French Trail for a distance of one-half mile in both directions from U. S. Forest Service Road 7S47. The trail will be located and designed by the U. S. Forest Service.
37. All rights and privileges to appropriate water for power purposes under this permit and any subsequently issued license are subject to depletions resulting from future upstream appropriation for (a) domestic and (b) stockwatering uses within the watershed. Such rights and privileges may also be subject to future upstream appropriations for uses within the watershed other than domestic and stockwatering if and to the extent that the State Water Resource Control Board determines, pursuant to Water Code Sections 100 and 275, that the continued exercise of the appropriation for power purposes is unreasonable in light of such proposed uses. Any such

determination shall be made only after notice to permittee or licensee of an application for any such future upstream appropriation and the opportunity to be heard provided, that a hearing, if requested, may be consolidated with the hearing on such applications.

No water shall be used under this permit until all necessary federal, state and local approvals have been obtained, including compliance with any applicable Federal Energy Regulatory Commission requirements.

38. This permit shall not be construed as conferring upon the permittee right of access to the point of diversion.
39. The amount authorized for appropriation may be reduced in the license if investigation so warrants.
40. Construction work shall begin within two years of the date of this permit and shall thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.
41. Construction work shall be completed by December 31, 1991.
42. Complete application of the water to the authorized use shall be made by December 31, 1992.
43. Progress reports shall be submitted promptly by permittee when requested by the State Water Resources Control Board until license is issued.
44. Permittee shall allow representatives of the State Water Resources Control Board and other parties as may be authorized from time to time by said

Board, reasonable access to project works to determine compliance with the terms of this permit.

45. Pursuant to California Water Code Sections 100 and 275, and the common law public trust doctrine, all rights and privileges under this permit and under any license issued pursuant thereto, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Resources Control Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

The continuing authority of the Board may be exercised by imposing specific requirements over and above those contained in this permit with a view to eliminating waste of water and to meeting the reasonable water requirements of permittee without unreasonable draft on the source. Permittee may be required to implement a water conservation plan, features of which may include but not necessarily be limited to: (1) reusing or reclaiming the water allocated; (2) using water reclaimed by another entity instead of all or part of the water allocated; (3) restricting diversions so as to eliminate agricultural tailwater or to reduce return flow; (4) suppressing evaporation losses from water surfaces; (5) controlling phreatophytic growth; and (6) installing, maintaining, and operating efficient water measuring devices to assure compliance with the quantity limitations of this permit and to determine accurately water use as against reasonable water requirements for the authorized project. No action will be taken

pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such specific requirements are physically and financially feasible and are appropriate to the particular situation.

The continuing authority of the Board also may be exercised by imposing further limitations on the diversion and use of water by the permittee in order to protect public trust uses. No action will be taken pursuant to this paragraph unless the Board determines, after notice to affected parties and opportunity for hearing, that such action is consistent with California Constitution Article X, Section 2; is consistent with the public interest and is necessary to preserve or restore the uses protected by the public trust.

The quantity of water diverted under this permit and under any license issued pursuant thereto is subject to modification by the State Water Resources Control Board if, after notice to the permittee and an opportunity for hearing, the Board finds that such modification is necessary to meet water quality objectives in water quality control plans which have been or hereafter may be established or modified pursuant to Division 7 of the Water Code. No action will be taken pursuant to this paragraph unless the Board finds that (1) adequate waste discharge requirements have been prescribed and are in effect with respect to all waste discharges which have any substantial effect upon water quality in the area involved, and (2) the water quality objectives cannot be achieved solely through the control of waste discharges.

46. Prior to commencing construction, permittee shall submit, for the approval of the Chief, Division of Water Rights, a financial analysis detailing estimated revenue, project costs, the proposed method of financing, and treatment under applicable tax law. Construction may commence upon a finding by the Chief, Division of Water Rights, that the project as proposed is financially feasible.

#### CERTIFICATION

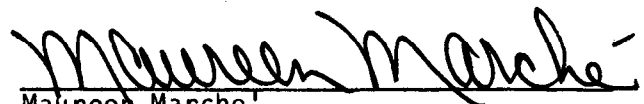
The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a decision duly and regularly adopted at a meeting of the State Water Resources Control Board held on August 18, 1988.

AYE: W. Don Maughan  
Darlene E. Ruiz  
Edwin H. Finster  
Danny Walsh

NO: None

ABSENT: Eliseo M. Samaniego

ABSTAIN: None

  
Maureen Marche  
Administrative Assistant to the Board



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