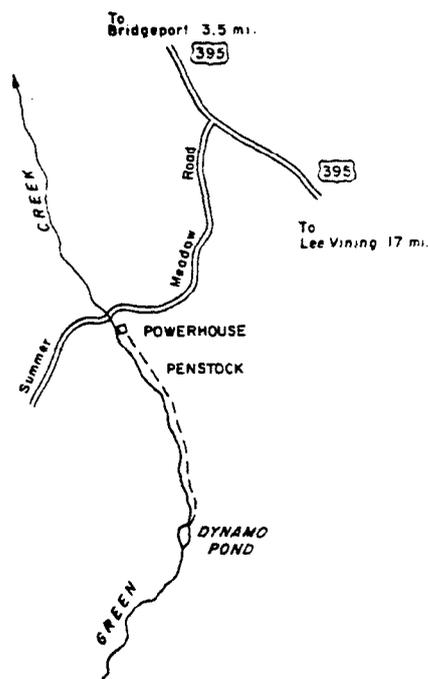


DYNAMO POND HYDROELECTRIC PROJECT IN MONO COUNTY

APPLICATION 26627

DECISION 1620



JUNE 1988

STATE WATER RESOURCES CONTROL BOARD

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Application 26627)	
HENWOOD ASSOCIATES, INC.,)	DECISION 1620
Applicant,)	
DEPARTMENT OF FISH AND GAME,)	SOURCE: Green Creek, a
Protestant.)	tributary to the
)	Walker River
)	COUNTY: Mono
)	

DECISION APPROVING APPLICATION 26627

BY THE BOARD:

1.0 INTRODUCTION

Henwood Associates, Inc. (Henwood) having filed Application 26627; protests having been filed; three days of public hearing having been held on February 16 and 17, 1988 and on March 7, 1988 by the State Water Resources Control Board (Board); applicant, protestants, and interested parties having appeared and presented evidence; the evidence having been duly considered; the Board finds as follows:

2.0 SCOPE OF APPLICATION

Henwood filed Application 26627 on November 20, 1980. Henwood requests a permit to divert up to 20 cubic feet per second (cfs) throughout the year from Green Creek, a tributary of the Walker River, at Dynamo Pond in Mono County. Henwood proposes to use the water for run-of-the-stream hydroelectric power generation using a 900 kilowatt (kw) generator.

Project facilities would be on federal land under the jurisdiction of the United States Department of Interior, Bureau of Land Management, and on private land leased from the landowners.

3.0 PROJECT DESCRIPTION

Dynamo Pond was developed in the 1890s to generate hydroelectric power for the Standard Consolidated Mine located 13 miles away in Bodie (now preserved as a State Historic Park). The original project provided a head of approximately 350 feet to a 350 horsepower turbine generator. Henwood's project will generate 900 kilowatts using approximately 700 feet of head between the existing dam at Dynamo Pond and the proposed powerhouse. Henwood proposes to reconstruct the dam to provide a forebay for run-of-the-creek generation during summer months and to regulate flows in Green Creek during the winter. Daily fluctuations due to freezing could be reduced by controlled releases from Dynamo Pond.

3.1 Location

The Dynamo Pond hydroelectric project is located in Mono County approximately six miles south of Bridgeport on Green Creek, a tributary of the East Walker River. The point of diversion would be located at the existing Dynamo Pond dam in the SE1/4 of the NW1/4 of Section 4, Township 3 North, Range 25 East, Mount Diablo Base and Meridian (MDB&M). The place of use would be at a powerhouse to be

located approximately 1-2/3 miles north of Dynamo Pond within the SE1/4 of the SE1/4 of Section 29, T4N, R25E, MDR&M. Water diverted through the project would be returned to Green Creek immediately below the powerhouse.

3.2 Diversion Facilities

The original dam at Dynamo Pond was built in 1895, and has been modified several times since then. It is now a timber crib structure that has been partially breached. Henwood's reconstruction of the dam would utilize the existing timber wall and retaining fill, but would include new provisions for metered releases of water to sustain fish in Green Creek below Dynamo Pond. The reconstructed dam will have a spillway at an elevation of 7,580 feet and will give Dynamo Pond a storage capacity of approximately 20 acre-feet.

A new diversion structure constructed of reinforced concrete would be installed in the pond. It would have a controlled slide gate and an enclosed trash rack. The diversion structure would include a concrete-bedded outlet pipe constructed in accordance with specifications promulgated by the Division of Safety of Dams of the Department of Water Resources. The 26-inch penstock from Dynamo Pond to the powerhouse would be routed underground on the east side of Green Creek, along the Dynamo Pond access road.

3.3 Powerhouse and Transmission Facilities

The powerhouse, at an elevation of 6,880 feet, would be a small (30x35 foot) windowless concrete block structure enclosed by a chain link

fence. The turbine nozzle rings would be designed to pass 20 cfs under the 700 feet of net head available.

Power generated by this project would be transmitted underground for just over 1.3 miles to an existing 16 kv line owned by Southern California Edison. The underground portion of this link would be built according to General Order 128 of the California Public Utilities Commission: "Rules for Underground Electric Line Construction".

4.0 PROTESTS AND INTERESTED PARTIES

4.1 Protests

Protests against approval of Application 26627 were filed by the following:

Protestant

Walker River Irrigation District
and
U. S. Board of Water Commissioners
of the U. S. District Court,
District of Nevada

Department of Fish and Game

Basis of Protest

Interference with existing
rights of users of the
Walker River Stream System
under Decree C-125 of the
U. S. District Court, District
of Nevada.

Environmental concerns.

4.2 Resolution of Protests

The protests of the Walker River Irrigation District and the U. S. Board of Water Commissioners were resolved by an agreement between protestants and Henwood. The agreement, subject to final approval by the U. S. District Court for the District of Nevada provides for

dismissal of the protest if Henwood complies with stipulated permit conditions that are included in the Order portion of this Decision. The issues raised by the Department of Fish and Game were unresolved at the time of the hearing on Application 26627.

4.3 Interested Parties

California Save Our Stream Council (SOS) was given interested party status, with their participation in this matter restricted to:

1. Whether there is a need for this proposed project, and
2. Whether the Board should consider if the proposed project conforms to the California Energy Commission's 1986 demand conformance tests.

5.0 APPLICABLE LAW

In order to approve an application for a permit to divert water, the Board must find that water is available for appropriation (Water Code § 1375) and that the applicant will put the water to reasonable beneficial use (Water Code §§ 1240, 1375). Hydroelectric power generation is a beneficial use of water. The Legislature has declared that it is:

"[T]he established policy of this state to support and encourage the development of environmentally compatible small hydroelectric projects as a renewable energy source, provided that the projects do not result in surface disturbances within [designated] sensitive areas...." (Water Code Section 106.7(a).)

The Legislature also declared the desirability of developing small hydroelectric power generating projects on:

"[E]xisting dams, diversions, and canals with a sufficient drop so that power may be efficiently generated without significant environmental effects."
(Water Code Section 106.7(d).)

When considering the economic feasibility of proposed small hydroelectric projects of 100 kw or more, the Board must find that project revenues will exceed project costs, including the costs of measures necessary to mitigate environmental impacts, over the life of the project (Water Code Section 106.7(e)).

However, Section 1243 of the Water Code states:

"The use of water for recreation and preservation and enhancement of fish and wildlife resources is a beneficial use of water. In determining the amount of water available for appropriation for other beneficial uses, the board shall take into account, whenever it is in the public interest, the amounts of water required for recreation and the preservation and enhancement of fish and wildlife resources. The Department of Fish and Game shall recommend the amounts of water, if any, required for the preservation and enhancement of fish and wildlife resources and shall report its findings to the board."

In addition, Section 5946 of the Fish and Game Code prohibits the Board from issuing a permit to appropriate water in substantially all of Mono County, including the Dynamo Pond project area, unless the permit requires the owner of any dam to comply with Fish and Game Code Section 5937, which provides that the owner shall allow sufficient water at all times to pass through the dam "to keep in good condition any fish that may be planted or exist below the dam."

In order to integrate these expressions of public interest in the development of the water resources of the state and in the preservation of water resources for instream beneficial uses, the Board is required to:

"[A]llow the appropriation for beneficial purposes of unappropriated water under such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest the water sought to be appropriated."
(Water Code Section 1253.)

Section 25309 of the Public Resources Code directs the California Energy Commission to prepare a comprehensive biennial report:

"[D]esigned to identify emerging trends related to energy supply, demand, and conservation and public health and safety factors, and to provide the basis for state policy and actions in relation thereto, including, but not limited to, approval of new sites for additional facilities."

The Commission's biennial Electricity Report includes an "integrated assessment of the need for new resource additions" in each of the State's major utility service areas (including the Southern California Edison service area). "Integrated assessment" includes a balancing of projected demand against anticipated supplies, including energy conservation measures; and consideration of environmental impacts, public health consequences, effects on economic development and the diversity of the State's electricity generating resources.

The State's need for electric power is an aspect of the public interest considered by the Board in evaluating whether or not an

applicant will put the water sought to be diverted to reasonable beneficial use.

Diversion of waters of the State is a project within the meaning of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq.). As the state agency responsible for issuing a permit for the project, the Board must comply with the environmental impact assessment requirements of CEQA (Public Resources Code, Section 21100, et seq.); and must, to the extent of its jurisdiction, require the applicant to mitigate or avoid significant impacts of the project if it is feasible to do so (Public Resources Code Sections 21002, 21002.1).

5.1 Federal Preemption

Henwood applied for, and received, a license from the Federal Energy Regulatory Commission (FERC) to generate hydroelectric power under the Federal Power Act as amended by the Public Utility Regulatory Policies Act of 1978 (PURPA) and the Electric Consumers Protection Act of 1986 (ECPA) (16 USC § 791a, et seq.). The FERC license included bypass flow requirements intended to protect instream beneficial uses of Green Creek. Henwood contends that FERC's authority to consider and require mitigation of environmental impacts of hydroelectric projects, and to impose license conditions requiring licensees to bypass water for the maintenance of instream beneficial uses, preempts state authority to impose bypass flow conditions on water rights.

The Board has repeatedly rejected this proposition, and is currently litigating the issue in federal court. Accordingly, Henwood's

contentions regarding preemption of the Board's authority by the Federal Power Act are rejected. (See State's pleading in Rock Creek Limited Partnership v. SWRCB, CIVS 87-0523 LKK, U.S.D.C., E.D. Cal.; Sayles Hydro Associates v. U.S., CIVS 86-0868 LKK, U.S.D.C., E.D. Cal.; and State of California ex rel. SWRCB v. FERC, 87-7538, U.S.C.A., 9th Cir.)

6.0 AVAILABILITY OF UNAPPROPRIATED WATER

The flow of water in Green Creek was gaged for 22 years by the USGS at a point 200 yards downstream from the project's powerhouse location. The period of record is from October 1953 through September 1975, and during that period, flows at the gaging station averaged 29 cfs from the 19.5 square-mile watershed. The daily gage data was translated upstream to Dynamo Pond by the applicant by adjusting the data to reflect the difference in area and average precipitation in the watershed. The area of the watershed contributing to Dynamo Pond is 18.5 square miles, compared to the 19.5 square miles at the USGS gage. The weighted average annual precipitation in the Dynamo Pond watershed is 37.3 inches, and that for the gaged watershed is 36.3 inches. The recorded flow at the USGS gage was reduced 2.5 percent to compensate for these differences, thus representing the flow conditions at Dynamo Pond. This is a standard method for making this type of adjustment.

The flows in Green Creek are derived mainly from snowmelt and are subject to high seasonal variations. The peak runoff occurs during

the months of April through August and the low flows during the months of October through March. The flow conditions are summarized in the table below:

TABLE I

FLOW IN GREEN CREEK AT DYNAMO POND (cfs)			
MONTH	AVERAGE MONTHLY	MINIMUM	MAXIMUM
October	8.1	4.0	17
November	8.0	5.0	18
December	8.6	4.0	26
January	8.8	3.5	21
February	9.4	4.5	21
March	11.1	5.3	17
April	21.0	11.5	34
May	57.5	28.0	139
June	96.6	44.0	186
July	65.8	23.5	151
August	31.9	11.5	61
September	13.6	3.5	27

The flows derived from Green Creek at Dynamo Pond were used to size the project and, at the same time, develop mitigation measures to minimize environmental effects of the proposed project on the affected reach of Green Creek within the boundaries of the project. The operational studies for the project, utilizing the flow data developed, were used to evaluate the engineering feasibility, economic feasibility, and the impact on instream beneficial uses. The engineering feasibility studies show there is sufficient unappropriated water to operate the project as proposed.

7.0 NEED FOR THE PROJECT

This project would contribute a very small fraction of the total amount of power used in the Southern California Edison Company's (SCE) service area. The project consists of a 900-kw generator yielding between 2,240 and 4,190 mw hours per year, based on the range of minimum bypass flow requirements considered in the environmental and economic analysis of the project.

This project has qualified for the terms of Interim Standard Offer #4, and the power produced from this project will be sold to SCE pursuant to an existing Interim Standard Offer #4 contract. SOS testified that "the Board could take the existence of the standard offer as a presumption of the need for power from the project" (T, I, 43:16-18). Further, SOS did not present any evidence showing that there was no need for the project. The Board finds that the applicant has a valid Interim Standard Offer #4 contract with SCE and therefore will presume a need for the power to be produced from the proposed project.

8.0 COMPLIANCE WITH DEMAND CONFORMANCE TESTS

SOS alleged that the Board has a statutory responsibility to consider the California Energy Commission's demand conformance tests when considering applications to appropriate water for hydropower projects (T, I, 42:16-22). The Energy Commission uses demand conformance tests for determining whether projects that are within its jurisdiction are needed (T, I, 87:10-13). SOS cited no statutory authority for its allegation nor did it explain how the Board's jurisdiction could be

expanded to overlap with the jurisdiction of the California Energy Commission. Since the need for the proposed project has been demonstrated by the existence of the Interim Standard Offer #4 contract, the Board finds that any further inquiry into the need for the power to be produced by the proposed project is unnecessary.

9.0 PROJECT ECONOMICS

An applicant for a permit to appropriate water must be able to demonstrate the economic feasibility of the project with the amount of water available in order to satisfy the Board that waters of the state will be put to reasonable and beneficial use with due diligence.

Further, it is in the public interest to ensure adequate bypass flows for the maintenance and enhancement of fish and wildlife. The State Board must be satisfied that the applicant will not require additional flows at some future time in order to salvage the economic viability of an inadequately engineered project. Economic feasibility depends on the relation between project revenues and costs. The project costs include construction costs, financing costs, and the cost of operations, maintenance, taxes, insurance and labor. Revenues are directly related to the price a utility will pay for the electric power produced by a hydroelectric project.

Small hydroelectric projects sell their power output to public utilities under the terms of power sales agreements intended to reflect costs of installing additional generating resources avoided by the utilities. The most commonly used "avoided cost" agreement,

Interim Standard Offer #4, was negotiated in consultation with the utilities, the California Energy Commission and the California Public Utilities Commission, based on projections of energy supply and demand made in the then current Electricity Report. The favorable terms of Interim Standard Offer #4 encouraged so many qualifying facilities to enter into power sale agreements with the utilities that the Public Utilities Commission (PUC) suspended Interim Standard Offer #4. Unless the PUC invalidates existing contracts executed under Interim Standard Offer #4, revenue estimates based on such contracts have been accepted as valid.

Henwood has submitted the results of economic evaluation for seven different bypass requirements which were considered in developing the project. Case 3 represents the bypass flow required by conditions set forth in the FERC license, and Case 7 is for the bypass flows requested by the Department of Fish and Game. The summary shows the average annual flow remaining in the affected reach of Green Creek.

TABLE II

MINIMUM BYPASS FLOWS BY MONTHS (cfs)								
	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY-SEPT</u>
Case 3	5	5	5	5	5	5	5	5
Case 4	7	7	7	7	7	7	7	7
Case 5	5	----- Natural Flows			-----		5	5
Case 6	7	----- Natural Flows			-----		7	7
Case 7	15	----- Natural Flows			-----		15	15

9.1 Project Revenues

Henwood has entered into a contract under Interim Standard Offer #4 with Southern California Edison (SCE) for the sale of the project's energy output. The term of the contract is 30 years, in which the first 10 years have fixed prices covering 100 percent of project output. For each bypass scenario, Henwood has analyzed the effects of monthly production variations which result in shifts in monthly capacity and energy payments, thereby resulting in changes in average annual revenues.

To project revenues beyond the 10-year fixed period, the price was reduced to reflect the contract's constant capacity price for years 11 through 30 and projections by the applicant for levelized floating energy prices in the SCE system.

9.2 Project Costs

Total capital needed to finance the proposed project, including measures necessary to mitigate adverse environmental impacts, will amount to \$1,934,538 of which \$1,257,450 will be financed for 10 years at 11 percent. This estimate includes direct and indirect costs such as engineering, environmental studies, construction, and initial financing fees. Estimates of taxes and tax credits used in estimating project costs were based on provisions of the Tax Reform Act of 1986. Annual operations and maintenance costs were estimated to be \$44,000 in the first year and to escalate at the rate of 5 percent for the 30-year period of economic analysis of the project.

9.3 Economic Feasibility

Henwood's revenue under the power sales agreement with SCE will exceed the anticipated costs of installing, operating and maintaining the proposed 900 kw powerplant over the life of the project, including costs incurred to mitigate adverse environmental impacts. This appears to be the case under all of the bypass flow regimes analyzed.

Henwood's ability to finance the project will depend on its attractiveness to potential lenders or investors. This will be affected by the internal rate of return that can be achieved under the terms of this Decision. Increased bypass flow requirements will reduce the power output and revenues of the project, and decrease its profitability and internal rate of return. The internal rate of return associated with cases 3 through 7 of Henwood's economic analysis is presented below:

TABLE III

CASE	INTERNAL RATE OF RETURN (%)
3	15.22
4	12.71
5	11.81
6	10.72
7	5.81

By interpolation, the internal rate of return associated with the 9 cfs bypass flow requirement discussed in Sections 10.2 and 10.3

below is estimated to be between 9 and 10 percent. A project which provides a 9 to 10 percent rate of return is economically feasible.

10.0 ENVIRONMENTAL ISSUES

Henwood and the Department assert conflicting positions regarding the minimum amount of water that Henwood should be required to release from Dynamo Pond at various times of the year to protect fish and wildlife habitat in the reach of Green Creek affected by Henwood's diversion. Henwood contends that a minimum flow of 5 cfs throughout the year will be sufficient to keep fish in the affected reach in good condition. The Department contends that minimum flows should be 15 cfs from April through October and that no diversion should be authorized from November through March.

10.1 Protection of Fishery Resources in Green Creek

The trout population in the reach affected by Henwood's project is 80 percent brown trout and 20 percent rainbow trout. Experts for the Department and Henwood differed about the productivity of Green Creek, and the reasons therefore.

To analyze alternative bypass flows, Board staff calculated daily streamflows for the 22-year period of record for bypass amounts of 5, 7, 9, and 11 cfs. A flow of 0.5 cfs through the penstock to prevent freezing and use of storage in Dynamo Pond to maintain minimum bypass flows, as required by FERC, were simulated. The stream flow calculations were used in evaluating bypass flows during winter conditions and summer conditions.

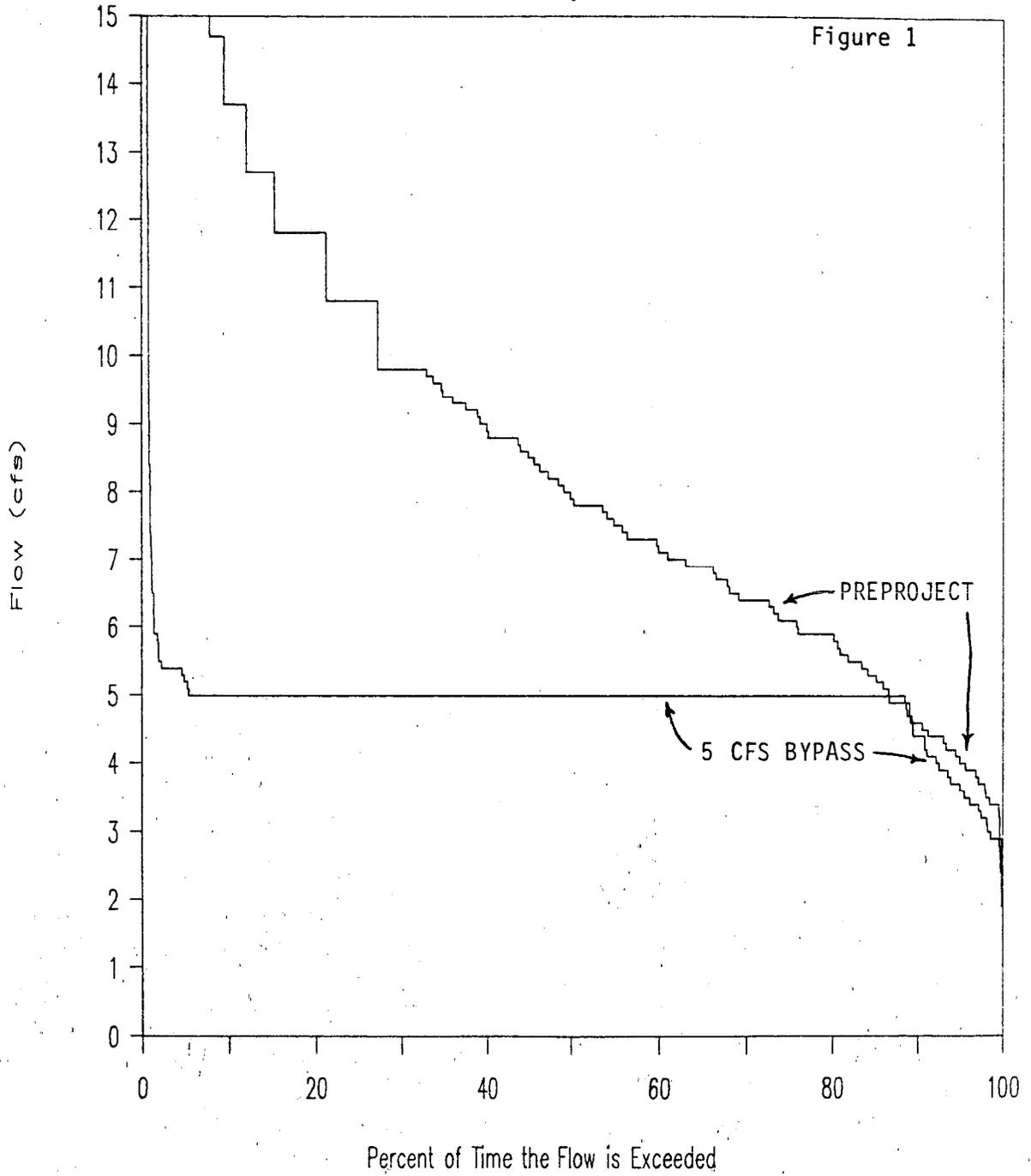
10.2 Winter Conditions (November through March)

From November to March the Department is concerned that reduced flows in Green Creek due to diversions for hydroelectric power generation would exacerbate fish mortality due to the formation of frazil and anchor ice, and ice dams. Icing is a commonplace, natural occurrence on Eastern Sierra streams, and it has been observed on Green Creek. The primary cause of anchor ice formation is a combination of cold air temperatures and lack of snow cover, but reduced flows also may contribute to the heat loss that triggers frazil and anchor ice formation.

Under the existing conditions on Green Creek below Dynamo Pond, during November through March, streamflows average 9.2 cfs and exceed 5 cfs 82 percent of the time (see Figure 1). Project operation according to Henwood's proposed conditions would result in a substantial reduction in flows above 5 cfs (such flows would occur only 5 percent of the time) (see Figure 1). Although it is not clear that flows at or below 5 cfs would increase the frequency of anchor ice formation in Green Creek, existing instream beneficial uses can be maintained with a minimum flow regime that approximates existing streamflow conditions. Henwood did not present evidence which showed that its proposed flows would protect the fishery during winter conditions. However, the evidence presented by the Department does not substantiate the need

Green Creek

November through March



for prohibiting diversions during the winter. Accordingly, winter diversions should be limited to provide a minimum flow of 9 cfs during the period from November through March.

10.3 Summer Conditions (April through October)

Henwood conducted an IFIM analysis which simulates fish habitat at flows from 3 to 100 cfs (T, I, 195:9-196:23). Henwood and the Department disagree on what type of habitat data should be input to the IFIM model. Henwood prefers habitat "use" data; the Department prefers habitat "preference" data. Habitat "use" data are based on field observations of the water depths and velocities in which fish are found, mathematically "smoothed" to reduce unexplainable spikes. Habitat "preference" data are derived from the same field observations and also are mathematically "smoothed", but are further mathematically adjusted to account for unequal availability of different depths and velocities. The U.S. Fish and Wildlife Service (which developed the IFIM model) stipulates that habitat "preference" data be used except when site specific data have been developed (T, II, 196:4-12). In this particular case we note that this is a decision on the facts of this case and use of preference data is not to be taken as a general determination of the Board's policy in other cases.

Staff analyzed alternative bypass flows using assumptions that balance the habitat values for various life stages of the local trout population. Figure 2 shows that a 5 cfs bypass would result in

considerable habitat losses. A 7 cfs bypass would provide some additional habitat, but would still result in considerable losses of habitat (Figure 3). A 9 cfs bypass would provide substantially the same amount of habitat as occurs under preproject conditions (Figure 4) (although the shapes of the preproject and 9 cfs curves differ, the areas under them are approximately equal). An 11 cfs bypass provides more habitat than occurs under preproject conditions (Figure 5). The Board finds that the Department's 15 cfs recommendation is excessive, and that a bypass flow of 9 cfs is sufficient to provide the preproject level of preferred fishery habitat. Further, the Board finds that a bypass flow of 9 cfs throughout the year will protect the fishery resources of Green Creek.

11.0 COMPLIANCE WITH CEQA

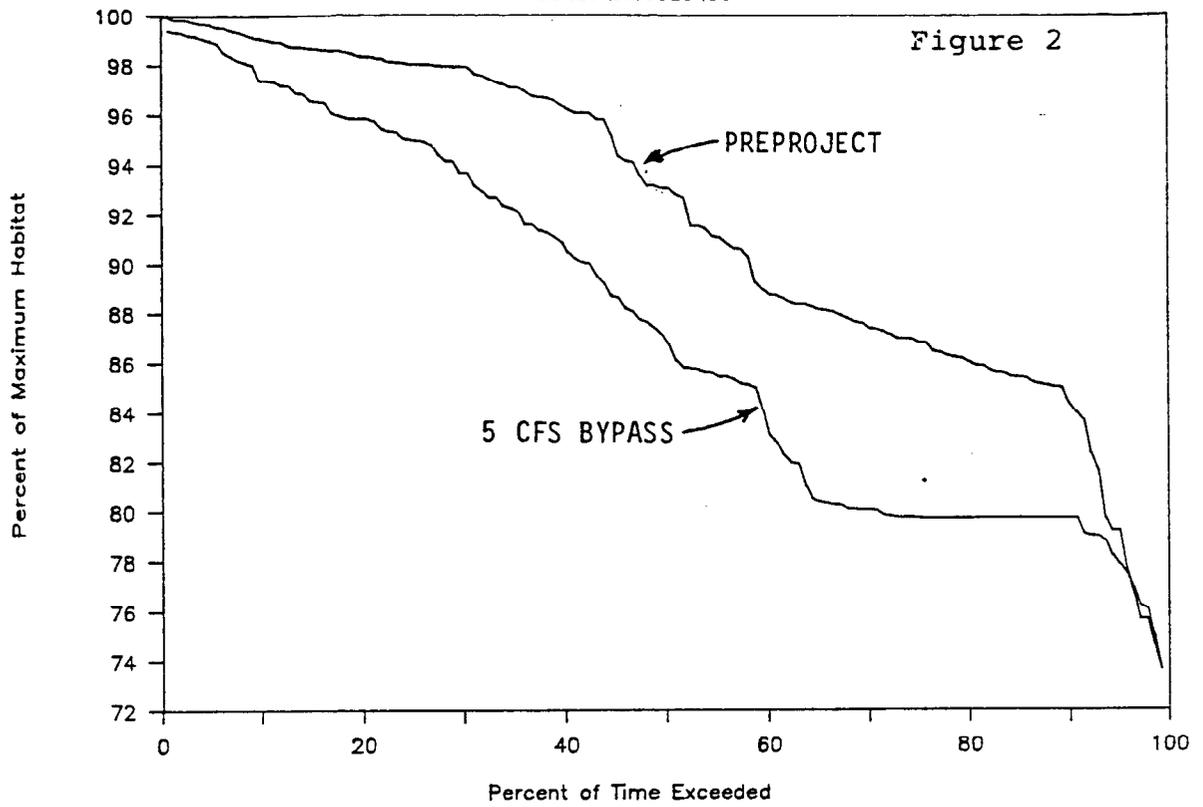
The State Water Resources Control Board is the lead agency for purposes of compliance with CEQA. The Draft Environmental Impact Report (EIR) was circulated September 3, 1987. Comments were received from the following:

- o California Department of Fish and Game
- o California Regional Water Quality Control Board, Lahontan Region
- o California Save Our Streams Council
- o Henwood Associates, Inc.

The Department commented on adverse impacts associated with winter

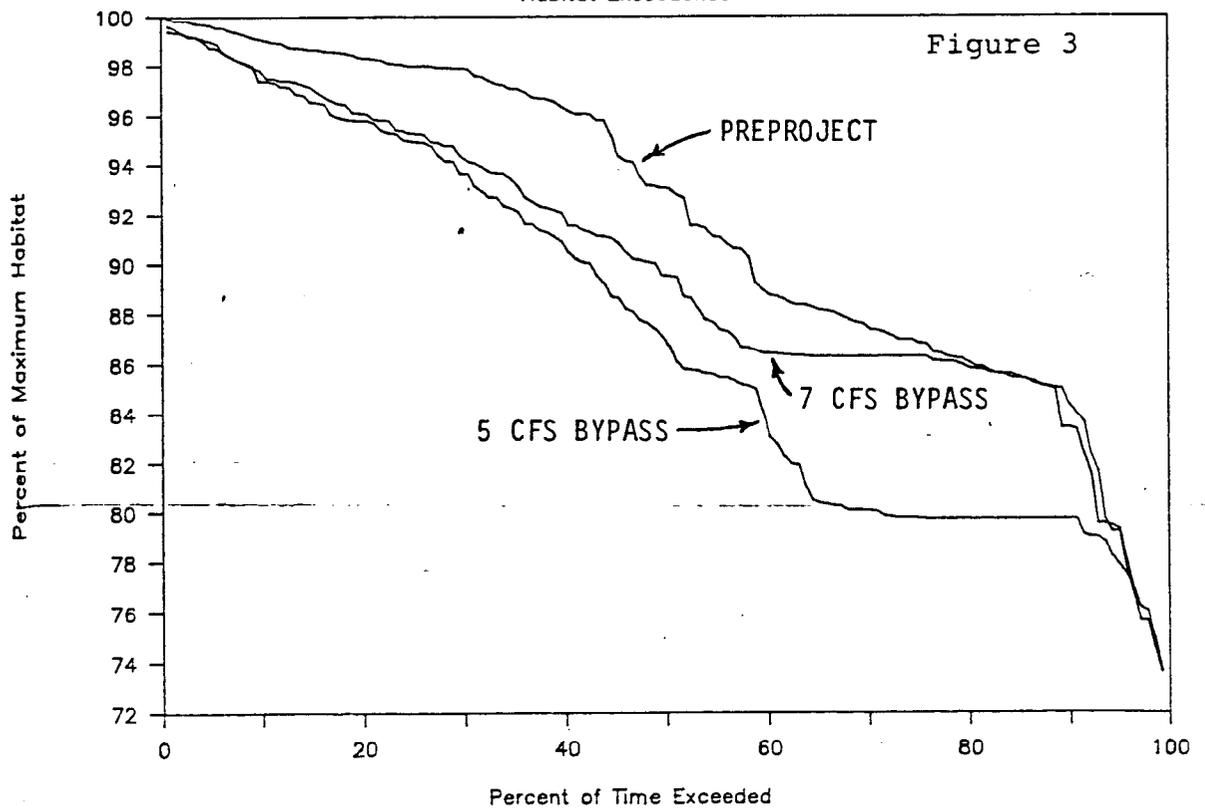
Green Creek

Habitat Exceedence



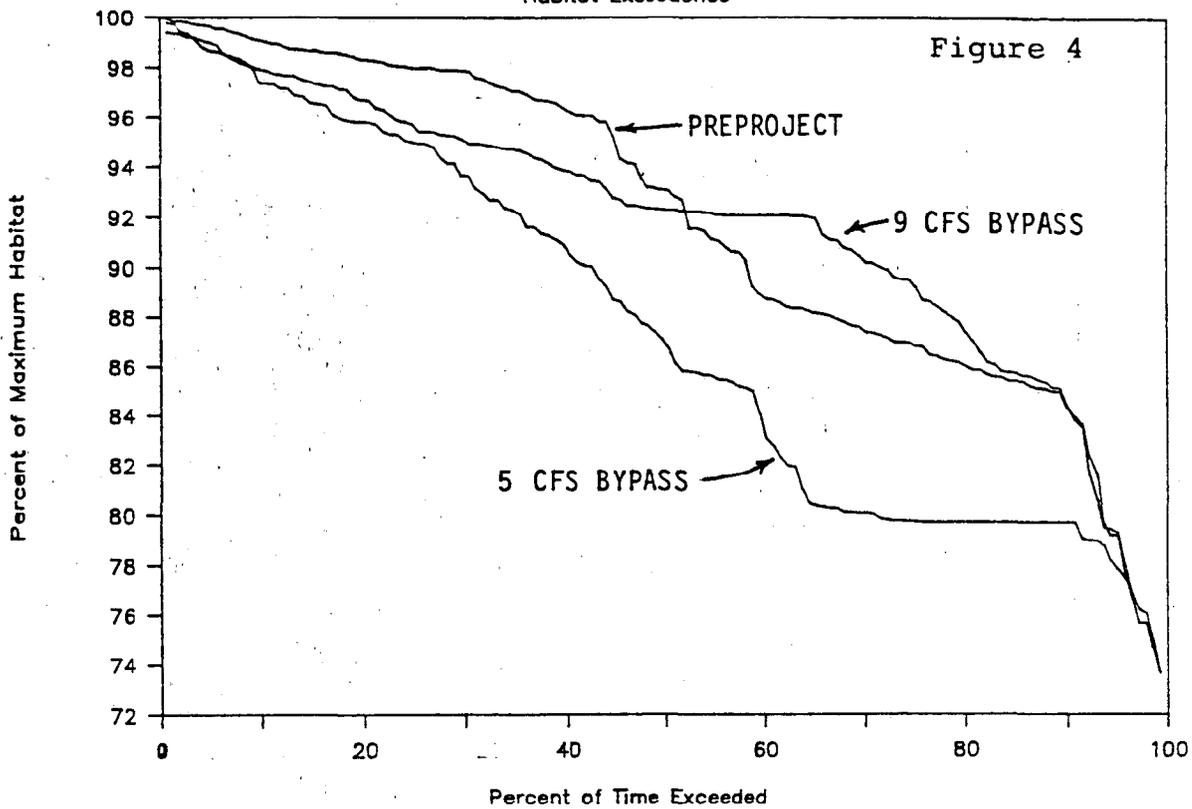
Green Creek

Habitat Exceedence



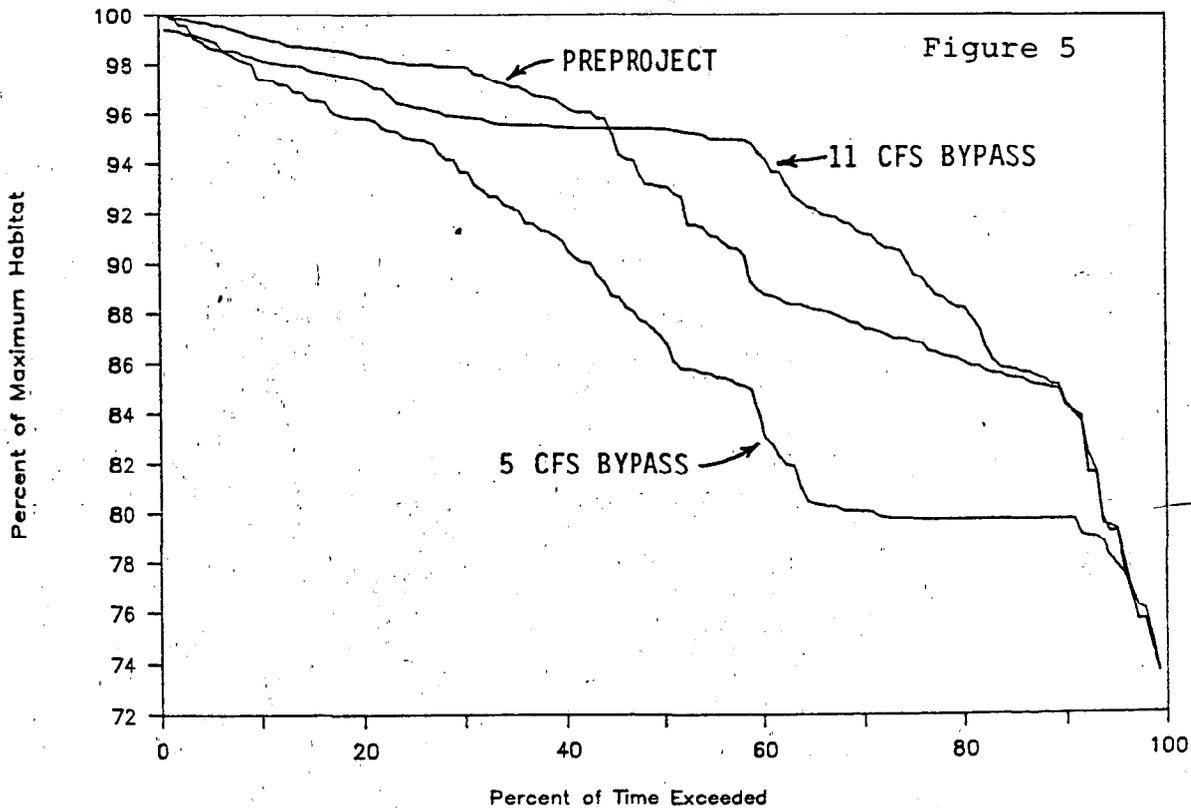
Green Creek

Habitat Exceedence



Green Creek

Habitat Exceedence



diversions from Green Creek, cumulative impacts associated with small hydroelectric power projects, and on potential adverse impact of construction on deer migration and fawning. The Department also commented that its recommendations for bypass flow requirements must be included in the project to mitigate adverse impacts on fish and wildlife in the reach of Green Creek affected by Henwood's proposed diversion, based on the provisions of Section 5946 of the Fish and Game Code.

The Lahontan Regional Board commented on erosion control issues, and concurred with the Department's recommendations for bypass flow requirements.

California Save Our Streams Council (SOS) requested that the Draft EIR be withdrawn due to a number of alleged violations of CEQA. SOS also commented extensively on economic issues, alternatives to the project, fisheries impacts, the lack of need for the power, and demand conformance.

Henwood Associates, Inc., challenged the assessments of vegetation, recreation, and fisheries impacts presented in the Draft EIR.

Staff has prepared a final EIR which responds to all comments submitted and which is consistent with approval of Application 26627 under the terms of this Decision. This Decision includes permit terms to mitigate adverse environmental impacts associated with this project.

ORDER

IT IS HEREBY ORDERED that Application 26627 be approved subject to the following conditions to conserve the public interest in the water sought for appropriation.

The following conditions shall be included in any permit issued on Application 26627.

1. Standard permit terms 6, 7, 8, 9, 10, 11, 12, and 13.
2. The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 20 cubic feet per second to be diverted from January 1 to December 31 of each year.
3. Permittee shall comply with the following provisions which are derived from the Agreement between permittee, Walker River Irrigation District, and the U. S. Board of Water Commissioners, executed on June 21, 1985, and filed with the State Water Resources Control Board, and subject to final approval by the United States District Court for the District of Nevada:
 - a. Operation of permittee's project shall not interfere with the existing water rights of the Walker River Irrigation District or the water rights administered by the U. S. Board of Water Commissioners (U. S. Board) under the Decree in the U. S. v. Walker River Irrigation District, U.S. District Court, N.D. Nevada, No. C-125, and subsequently issued prior permits from the State of California and the State of Nevada.

- b. Permittee shall provide a mechanical, self-operating water level recording device with a three month minimum clock, installed in the pond area at a location acceptable to the U. S. Watermaster, to be operated year-round.

- c. Permittee shall install a dump gate or radial-type gate approximately two feet below the sill of the lower intake, sized and designed in a manner acceptable to the U. S. Watermaster. If during the design stage of the project it appears that different intakes and dam controls are adequate and acceptable to the U. S. Watermaster, those works can be used. The U. S. Watermaster shall have the right to control such facilities to assure that provisions of this Agreement are met. In the event the U. S. Watermaster operates these controls pursuant to the Agreement, permittee shall hold the U. S. Watermaster harmless for any damages to permittee's facilities resulting therefrom.

- d. Permittee shall, during the irrigation season as determined by the decree in U. S. v. Walker River Irrigation District, U.S. District Court, N.D. Nevada, No. C-125, as amended, operate the generating plant on a run-of-the-river basis. During the nonirrigation season, the plant shall be operated so that the net impact on storage in Bridgeport Reservoir will be zero.

- e. Permittee shall pay the U. S. Board of Water Commissioners a reasonable annual charge, to be determined by the assessing of a rate per kilowatt of installed generating capacity equal to that allowed by the court per

acre of water right, to cover the cost of the U. S. Board monitoring the operation of permittee's project to assure compliance with this Agreement. If the U. S. Watermaster or permittee concludes on the basis of operating experience that the assessed charges are either inadequate or excessive for the costs incurred by the Watermaster in monitoring the provisions of this Agreement, they may renegotiate the charges or, in the event they are unable to agree on a new cost of monitoring, they shall submit this matter to the U. S. District Court for resolution.

Inclusion in this permit of certain provisions of the referenced Agreement shall not be construed as disapproval of other provisions of the Agreement or as affecting the enforceability, as between the parties, of such other provisions insofar as they are not inconsistent with the terms of this permit.

4. For the protection of fish and wildlife, permittee shall during the period January 1 through December 31 bypass a minimum of 9 cubic feet per second. The total streamflow shall be bypassed whenever it is less than 9 cubic feet per second. Permittee shall operate the project so that the streamflow in the bypass reach and in the reach below the point of return to Green Creek does not change at a rate greater than 30 percent of the existing instream flow per hour. Permittee shall, in the month of June, after streamflow exceeds 58 cubic feet per second, or on June 15, whichever comes first, release a flow of 75 cubic feet per second, or the inflow to the impoundment, whichever is less, into the bypass reach for a period of

48 hours to flush accumulated sediments. The flushing flow schedule may be temporarily modified if required by operating emergencies beyond the control of the permittee and upon mutual agreement between the permittee and the Department of Fish and Game.

5. Permittee shall install a device, satisfactory to the Chief of the Division of Water Rights, which is capable of measuring the flows required by the conditions of this permit. Said measuring device shall be properly maintained.
6. In accordance with the requirements of Fish and Game Code Section 5946, this permit is conditioned upon full compliance with Section 5937 of the Fish and Game Code.
7. 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 Department of Fish and Game and/or the Department has determined that measures to protect fishlife 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.
8. The permittee shall not construct project facilities within the Green Creek canyon from April 15 to July 15 to protect mule deer.
9. Water diverted under this permit is for nonconsumptive use and is to be released to Green Creek within the SE1/4 of SE1/4 of Section 29, T4N, R25E, MDR&M.

10. 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 domestic and stockwatering uses within the watershed. Such rights and privileges under this permit also may be subject to future upstream appropriations for uses within the watershed other than domestic and stockwatering if and to the extent that the 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.

11. No construction shall be commenced and 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.

CERTIFICATION

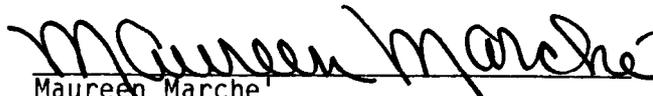
The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a decision duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 16, 1988.

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

NO: None

ABSENT: None

ARSTAIN: None


Maureen Marche
Administrative Assistant to the Board

