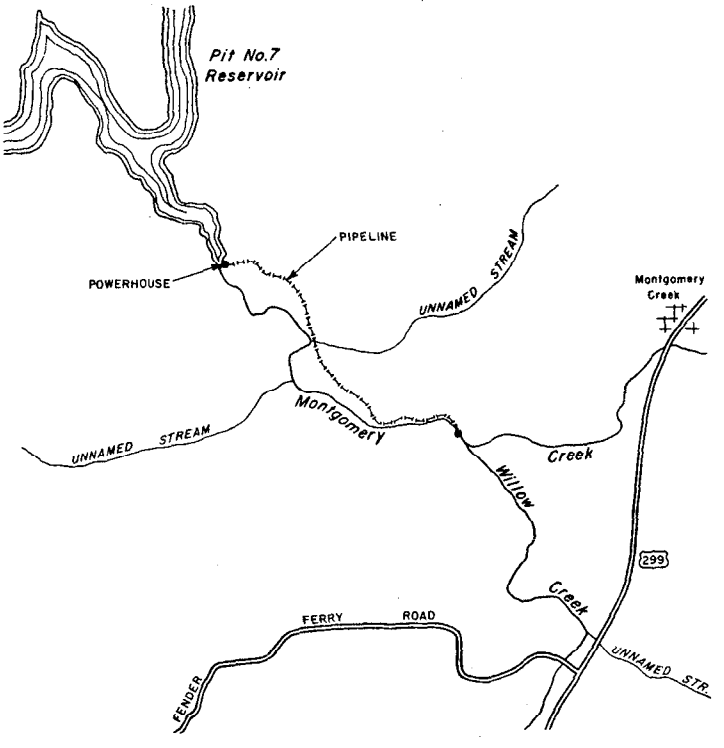
# MONTGOMERY CREEK HYDROELECTRIC PROJECT

# APPLICATION 27352

## DECISION 1599




MAY 1984

STATE WATER RESOURCES CONTROL BOARD

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

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| In the Matter of Application 27352, NORTHERN RESOURCES, INCORPORATED, Applicant, CALIFORNIA DEPARTMENT OF FISH AND GAME, NORTHERN CALIFORNIA COUNCIL OF FLY FISHING CLUBS, Protestants. | DECISION 1599<br>SOURCE: Montgomery Creek<br>COUNTY: Shasta |

DECISION APPROVING APPLICATION 27352

BY BOARD VICE CHAIRMAN NOTEWARE:

Northern Resources, Incorporated, having filed Application 27352; three protests having been filed; 3 days of hearing having been held on January 11, February 23 and 24, 1984; the Board having considered all evidence in the record; the Board finds as follows:

1.0 Scope of the Application

Application 27352 is for a permit to take 80 cubic feet of water per second from Montgomery Creek by direct diversion from January 1 through December 31 of each year for the purpose of power generation. The point of diversion is from Montgomery Creek within the NE1/4 of the NE1/4 of Section 2, T34N, R1W, MDB&M. The place of use is a powerhouse within the SW1/4 of the NE1/4 of Section 34, T35N, R1W, MDB&M. The point of return to Montgomery Creek is immediately below the powerhouse.

## 2.0 Project Description

2.1 Water will be diverted from Montgomery Creek just downstream from its confluence with Willow Creek approximately 0.5 miles below Montgomery Creek Falls. The diversion structure will consist of an 80-foot long, 6-foot high, grouted rock dam which will contain a 6-foot by 6-foot sluice gate for pool drainage. The intake structure, which will be approximately 40-feet long and 10-feet wide, will be constructed to the height of the 100-year flood level. A fixed weir will discharge fish flows.

2.2 Water will be transported through a 3000-foot long, 48-inch diameter low pressure pipeline, then into a 3600-foot long high pressure penstock, then into the powerhouse, and finally returned to Montgomery Creek upstream from the Pit No. 7 Reservoir.

2.3 The powerhouse will be approximately 35-feet by 35-feet and will contain two turbines and their generators with an installed capacity no greater than 2.5 megawatts. A minimum flow of 5.4 cubic feet per second (cfs) is required to operate the power plant.

2.4 The switch yard is located next to the powerhouse. Approximately three miles of powerline will connect the powerhouse to an existing Pacific Gas and Electric transmission line.

## 3.0 Protests

The California Department of Fish and Game, the Northern California Council of Fly Fishing Clubs (Council) and the United States Department of the Interior, Bureau of Land Management (BLM) protested the application.

The Department of Fish and Games's protest and the Council's protest are on the grounds that:

a. the project as proposed will not best preserve the public interest, and

b. the project as proposed will have an adverse environmental impact.

3.1 The Department of Fish and Game alleges that Montgomery Creek supports a resident trout population. The Department seeks to have flows retained in Montgomery Creek to protect the instream resources including the fish. As authority it cites Fish and Game Code Sections 16083 and 5937 and Water Code Sections 1243 and 1257.

In its protest the Department of Fish and Game originally stated the following as one of several conditions upon which the protest could be dismissed:

> "For the protection of instream resources, the following minimum stream flow, or the natural flow of the stream whichever is less, shall be continually released by the point of diversion: July 1 to October 31, 20 cfs; November 1 to June 30, 40 cfs."

By letter dated April 27, 1983, the Department requested its protest be revised to require the applicant to provide to the Board and to all protestants the results of instream flow studies which utilized best available technology. After receipt of the results of those studies the Department revised its instream flow requirement as follows: 30 cfs from June 1 to February 28; 70 cfs from March 1 to May 31. Prior to filing its protest, the Department had recommended a minimum

instream flow for the project of 20 cfs all year and commented that adjustment of this flow recommendation might be made following review of applicant-generated quantifiable data demonstrating that aquatic resources can be fully protected with an alternate flow regime.

3.2 The Council alleges that Montgomery Creek provides valuable habitat for numerous species of wildlife and wild trout populations. It seeks to have flows retained in Montgomery Creek to protect and maintain fishery resources. As authority, the Council cites Water Code Sections 100, 1243, and 1257 and Fish and Game Code Section 5937. The Council also stated it would support the Department of Fish and Game's recommended flows based upon the results of instream flow studies conducted by the applicant.

3.3 The BLM alleged that the project as proposed would have an adverse environmental impact. It also alleged that Montgomery Creek supports a viable trout population.

The BLM and the applicant reached an agreement upon a minimum bypass flow of 20 cubic feet per second year-round, provided a comprehensive habitat management plan for trout spawning be instituted at the minimum flow release.

4.0 Need for the Project

4.1 The project will have a maximum installed capacity of 2.50 megawatts and will generate 8,763,000 KWh per year with a 20 cubic-feet per second minimum bypass flow. The applicant proposes to sell the project's power to Pacific Gas and Electric (PG&E) under the federal Public Utilities Regulatory Policies Act of 1978 (16 U.S.C.

Section 824a-3). The project will meet approximately 0.14 percent of the PG&E service area's projected remaining capacity need and 0.07 percent of its projected remaining energy need after completion of projects already under construction.

4.2 The California Energy Commission has adopted preferential ranking among technologies for meeting future electricity needs. The ranking places small hydroelectric projects, including this project, in the third of sixth priority ranks. No evidence was received that sufficient projects will be available to meet all the projected needs of the PG&E service area with alternatives listed in the first three priority ranks. Therefore, a need will exist for the capacity and energy to be provided by the project.

5.0 Economic Feasibility of the Project

If this project is not economically feasible, the water allocated to the project by water right permits will not be put to beneficial use. Water allocated under a water right must be put to beneficial use (Water Code Sections 1240, 1241, 1375, 1396, 1397, 1410). In order to ensure that any water allocated to the applicant under a water right permit is put to beneficial use, the Board must inquire into the project's financial feasibility.

5.1 Construction cost of the project is estimated at $4,381,350. Annual costs are estimated at $670,000. These costs must be compared to the project's revenues in order to determine whether it is or may be economically feasible. If the project is not economically feasible it is unlikely to receive full financing.

5.2 The amount of project revenues will depend upon the price that PG&E will pay for the project's energy and capacity. This in turn depends on (1) the price PG&E must pay for the project's power under the Public Utilities Regulatory Policies Act of 1978, 16 U.S.C. Section 824a-3, and (2) the type of contract PG&E offers the applicant for this project's power.

The estimate of project revenues are based on a current offer from Pacific Gas and Electric Company (PG&E), Standard Offer No. 4, for the long-term purchase of capacity and energy. Based on this offer, the applicant expects to receive 5.94 cents per kilowatt hour in the first year of operation, rising in ten years to 11.24 cents per kilowatt-hour.

Estimates of revenue were made considering two sets of minimum bypass flow conditions, 15 cfs and 20 cfs.

| | 15 cfs bypass | 20 cfs bypass |
|---|---|---|
| Average Annual Generation | 9,588,000 kWh | 8,763,000 kWh |
| Year One | $ 569,530 | $ 520,520 |
| Year Ten | $ 1,077,690 | $ 984,960 |

Regardless of the bypass flow requirement, project annual costs exceed project revenues in early years of operation. Total annual costs were estimated to be $670,000. Revenues were estimated to be $520,520 or $569,530 leaving a deficit of $149,480 or $100,470 in the first year. This computation excludes the tax benefits of the project for the investors, however, which could improve its feasibility.

5.3 At some point, however, the project will yield a net revenue. The applicant estimated that with the project operating under a 20 cfs bypass restriction, it would be year 7 before the project generated a net revenue before taxes and year 5 before the project yielded net revenue with a 15 cfs bypass restriction. A project can be economically feasible if its discounted long-term net payout is high enough, even though it may not make a profit immediately. This situation applies to the applicant's project.

The applicant stated and the evidence indicates that the project is economically feasible at either a 15 or 20 cfs minimum bypass flow restriction but at no greater a bypass. The applicant further stated that Northern Resources, Incorporated, would not proceed with the project as formulated if it was required to bypass flows greater than 20 cfs.

6.0 Availability of Unappropriated Water

Records of gaging data for water years 1912 and 1913 are available for Montgomery Creek at the highway bridge. Applicant installed a gage 500 feet downstream from the proposed diversion point. A continuous flow record was obtained for April 20, 1982, through June 18, 1982; and from April 22, 1983, through August 13, 1983. Because these records were too limited to use to determine directly a flow duration curve, estimations of project streamflows were made based on published data from other watersheds thought to be comparable to the Montgomery Creek watershed. The correlations were based upon a less than desirable length of record and no statistical analysis was made of the goodness of fit of the correlations. As a result, the correlations

are sufficient to make a finding that unappropriated water is available, but judgments based upon these correlations for more exacting determinations should be conservative.

Upstream development should be protected in the Montgomery Creek watershed. Such development may arise in the future, and likely will require water for domestic and stockwatering uses. Such uses should, in the public interest, be given a higher priority than power uses. Consequently, the permits should be made subject to upstream appropriations for these uses within the watershed.

## 7.0 Effect on the Fishery

Montgomery Creek is important because it provides fishery recruitment to the Pit River at the Pit No. 7 Reservoir. The Pit River flows into the Sacramento River at Shasta Lake. Montgomery Creek is also important because it directly provides adult trout for angler harvest. Because Montgomery Creek provides fishery recruitment to the Pit No. 7 Reservoir (a navigable body of water), diversions of water needed for fishery use from Montgomery Creek may affect fishery uses of the reservoir. Under National Audubon Society v. Superior Court, 33 Cal. 3d 419, 189 Cal. Rptr. 346 (1983), fishery uses of the reservoir appear to be protected by the public trust. Consequently, the Board has considered the effect of applicant's proposed diversion on the uses of the Pit No. 7 Reservoir and, to the extent feasible and within the standard of reasonableness contained in California Constitution, Article X, Section 2, attempts herein to avoid or minimize harm to the fishery of the Pit No. 7 Reservoir.

7.1 The Board's objective in mitigating the effects of this project on the fishery of Montgomery Creek and the Pit No. 7 Reservoir is to preserve the pre-project fishery resource of Montgomery Creek.

7.2 In order to determine a minimum flow to be bypassed by the project for the protection of the pre-project fishery resource, the applicant conducted several studies including an Instream Flow Incremental Methodology (IFIM, also known as $IFG_4$), an electroshocking population study, a sediment transport analysis, an upstream spawning habitat survey, and an accretion flow analysis. Hydrological data was also used. Based on varying interpretations of the results of the studies, the applicant and the protestants arrived at different recommended minimum flows for Montgomery Creek.

7.3 The applicant recommends 15 cubic feet per second (cfs) year round while the Department of Fish and Game proposes (and the Council supports) a minimum of 70 cfs during March, April, and May for spawning purposes and 30 cfs for the remainder of the year.

7.4 Prior to beginning the IFIM study, the applicant's consultant modified the velocity preference curves for rainbow trout. While the curves published by the U. S. Fish and Wildlife Service in 1978 indicate that there is zero usability by rainbow trout of low velocity water, the consultant's modified curves go to the opposite extreme and indicate the greatest possible trout preference for zero to low velocity water. The $IFG_4$ input data included using both the standard published curves and the consultant's modified curves because the Department of Fish and Game would not agree to the use of the modified curves unless actual field data could be produced to

substantiate them. The Board finds that applicant did not provide hard, clear data to substantiate the use of the modified curves.

7.4.1 The report by Peter Moyle and others offered by applicant as field data to support use of the modified curves is unclear and inconclusive for that purpose. Data utilized by applicant in Moyle's report under Table 3 indicates that at least fry and juvenile rainbow trout have some preference for lower velocity water. However, the data does not indicate what degree of preference the various life stages have for lower velocities. Depending upon how the report is interpreted Moyle's data may or may not indicate that rainbow trout have optimum preference for zero velocity water. This lack of clarity is due to the fact that the Table 3 velocity columns are headed 0, 15, 30, etc., with representations of numbers of trout found in the column underneath each heading which may mean that the listed number of trout in the 0 column prefer zero velocity water or, alternatively, may mean that the listed number of trout preferred zero to 14.9 cfs velocity water (NRI, 16). Further complicating the problem is Table 9 of the report which provides ranges of velocities that read 0-9.9, 10.9-19.9, etc. The data provided in this table does not support applicant's modifications to the adult preference curve and no data is provided for fry. At the same time this table may support modification of the juvenile preference curve (NRI, 16).

The Moyle report also stated that:

> "...where microhabitat utilization or preference curves are needed for instream flow studies, they should be constructed using data gathered in the stream for which the curves are being used or at least from curves based on data collected in streams with the same physical and biological characteristics."

No evidence was offered that the streams from which the report's data was collected had the same physical and biological characteristics as the affected portion of Montgomery Creek.

7.4.2 The U. S. Fish and Wildlife Service's Instream Flow Group recently distributed for review a set of modified curves based on Moyle's data and other data. These curves are being submitted to the scientific community before being adopted and published in final form (T,II,161,13-21). This is a prudent and correct action. On the other hand, while the applicant's consultant discussed modifying the curves with other experts before he modified them, he did not submit the curves for review by anyone after the modifications were made (T,II,178,25-179,5). At the least, the modified curves should have been submitted to the Department of Fish and Game for review prior to their use.

7.4.3 The Board used the standard trout velocity preference curves to interpret the IFIM studies in determining minimum stream flows and believes they should be used until the U. S. Fish and Wildlife Service Instream Flow Group completes review of its modifications and decides to publish new curves to use in place of the present standard curves.

7.5 Since the evidence is unclear whether low flows in dry months or high flood flows in wet months, or both, limit the size of the rainbow trout population of Montgomery Creek, the Board will take a conservative position and set minimum flows to protect existing habitat based on the assumption that low flows limit the population.

7.6 Under the facts of the hydrological regime in this particular case and based on a thorough analysis of the extensive factual data provided regarding the stream, the Board finds that a 20 cfs minimum bypass flow all year will protect the fishery resource of Montgomery Creek at pre-project levels because:

a. At least as much adult rainbow trout habitat as remains in the month of lowest flow will remain in the other months of the year at a 20 cfs minimum; and

b. 1. the 70 cfs bypass flow requested by the Department of Fish and Game will primarily provide for spawning in the bank gravels;

2. a 70 cfs bypass would allow flows for spawning in the bank gravels in the last part of April through May;

3. bank gravels in Montgomery Creek are of doubtful quality (less than ideal to nil),

4. if spawning did occur in the bank gravels in May there is a 70 percent chance that such spawning would not be successful,

5. the Department of Fish and Game did not demonstrate that a 70 cfs bypass flow would be of measurable benefit to the fishery;

c. a 40 cfs spawning flow would provide insignificant increase in spawning habitat over that provided by a 20 cfs bypass flow.

7.6.1 Using the standard preference curves, the IFIM study shows that weighted usable area of rainbow trout fry habitat and junvenile rainbow trout habitat remain about the same for minimum instream flows ranging from 15 cfs through 80 cfs. Therefore, fry and juvenile rainbow trout habitat were not determinative factors in the choice of minimum flows for the project affected portion of Montgomery Creek. Habitat for available fry and juveniles will be moderately increased over existing conditions by a 20 cfs minimum bypass flow. This increase in the habitat for the immature trout should result in increased numbers of adult rainbow trout over the numbers that would occur at a 15 cfs bypass flow.

7.6.2 Adult rainbow trout habitat was a determinative factor in the selection of a minimum bypass flow for Montgomery Creek because the IFIM study shows that habitat for adults increases as flows increase. The Department requested 30 cfs to protect existing habitat and the associated fishery population. This assumes that available minimum habitat associated with low flow is a limiting factor for adult trout (T,IV,573,1-20) (T,III,289,2-9). Compared to existing conditions, all bypass flows between 15 and 30 cfs will cause some decrease in adult habitat during some months of the year. See Figure 1. However, a 20 cfs minimum bypass flow will provide at least as much adult rainbow trout habitat as exists in the month of lowest flow (September) in the affected reach of Montgomery Creek. See Table 1. Since the Board has chosen to adopt the conservative position of protecting the resource based on the assumption that the lowest flows limit the population, the minimum flow required should not allow the stream to be dewatered below the average low flow which occurs in September.

FIGURE 1

# RAINBOW TROUT
## Adults

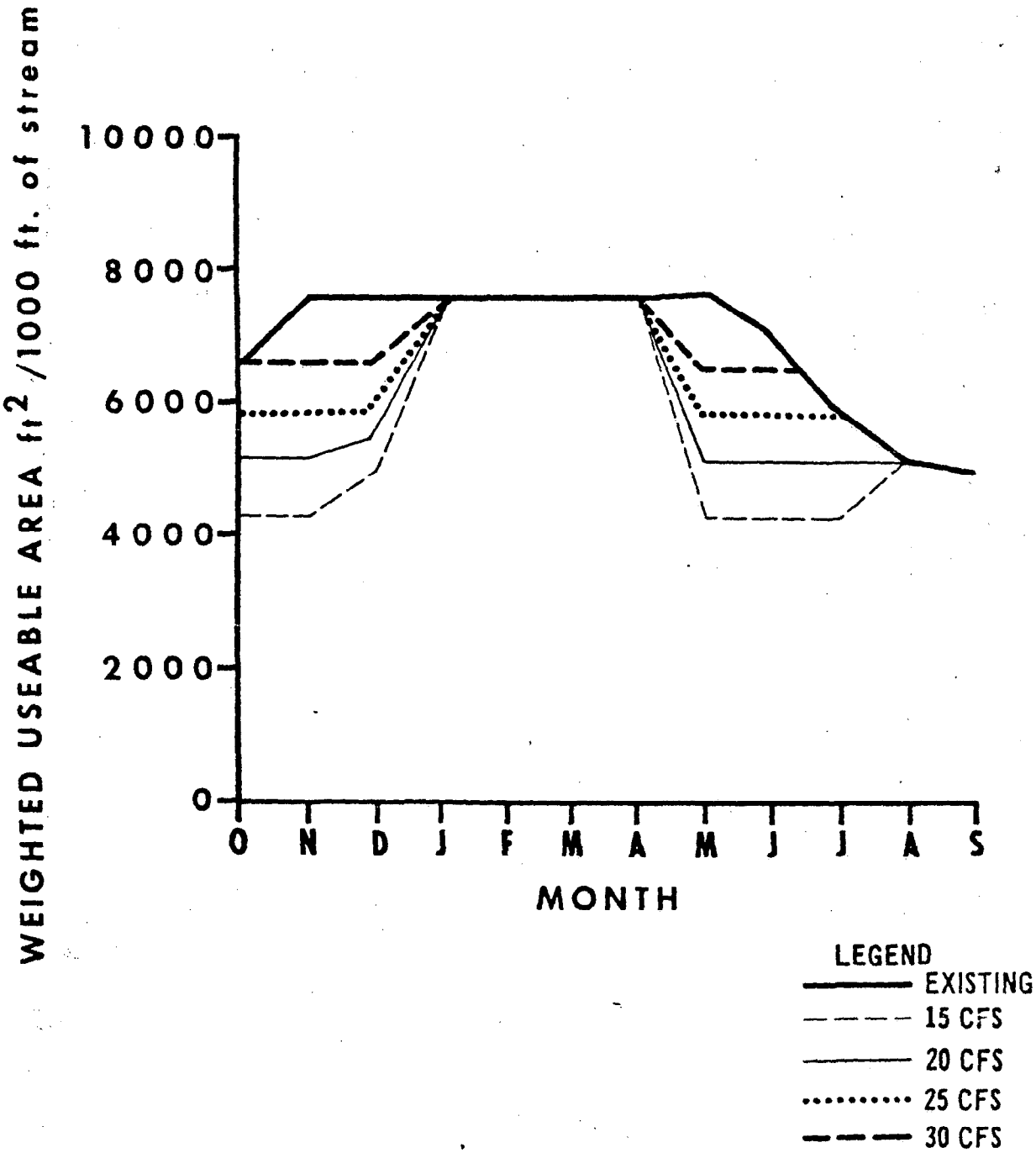

TABLE 1

ADULT RAINBOW TROUT

| | PRE-PROJECT | | POST-PROJECT | | |
|---|---|---|---|---|---|
| MONTH | AVERAGE MONTHLY[1] FLOW-CFS | WUA[2] | BYPASS[3] FLOW | WUA[2] | INCREASE OR % (DECREASE) |
| Oct | 30 | 6600 | 15 | 4340 | (34) |
| | | | 20 | 5200 | (21) |
| | | | 25 | 5990 | (9) |
| | | | 30 | 6500 | (1) |
| Nov | 80 | 7700 | 15 | 4340 | (44) |
| | | | 20 | 5200 | (32) |
| | | | 25 | 5990 | (22) |
| | | | 30 | 6600 | (14) |
| Dec | 104 | 7700 | 15 | 5800 | (25) |
| | | | 20 | 5800 | (25) |
| | | | 25 | 5990 | (22) |
| | | | 30 | 6600 | (14) |
| Jan | 248 | 7670 | 15 | 7670 | 0 |
| | | | 20 | 7670 | 0 |
| | | | 25 | 7670 | 0 |
| | | | 30 | 7670 | 0 |
| Feb | 224 | 7670 | 15 | 7670 | 0 |
| | | | 20 | 7670 | 0 |
| | | | 25 | 7670 | 0 |
| | | | 30 | 7670 | 0 |
| Mar | 180 | 7670 | 15 | 7670 | 0 |
| | | | 20 | 7670 | 0 |
| | | | 25 | 7670 | 0 |
| | | | 30 | 7670 | 0 |
| Apr | 151 | 7670 | 15 | 7670 | 0 |
| | | | 20 | 7670 | 0 |
| | | | 25 | 7670 | 0 |
| | | | 30 | 7670 | 0 |

TABLE 1
(continued)

ADULT RAINBOW TROUT

| MONTH | PRE-PROJECT AVERAGE MONTHLY[1] FLOW-CFS | PRE-PROJECT WUA[2] | POST-PROJECT BYPASS[3] FLOW | POST-PROJECT WUA[2] | POST-PROJECT INCREASE OR % (DECREASE) |
|---|---|---|---|---|---|
| May | 66 | 7690 | 15 | 4340 | (44) |
| | | | 20 | 5200 | (32) |
| | | | 25 | 5990 | (22) |
| | | | 30 | 6600 | (14) |
| June | 38 | 7000 | 15 | 4340 | (38) |
| | | | 20 | 5200 | (26) |
| | | | 25 | 5990 | (14) |
| | | | 30 | 6500 | (6) |
| July | 25 | 5980 | 15 | 4340 | (27) |
| | | | 20 | 5200 | (13) |
| | | | 25 | 5980 | 0 |
| | | | 30 | 5980 | 0 |
| Aug | 19.6 | 5200 | 15 | 5200 | 0 |
| | | | 20 | 5200 | 0 |
| | | | 25 | 5200 | 0 |
| | | | 30 | 5200 | 0 |
| Sept | 19.1 | 5000 | 15 | 5000 | 0 |
| | | | 20 | 5000 | 0 |
| | | | 25 | 5000 | 0 |
| | | | 30 | 5000 | 0 |

1. AVERAGE MONTHLY FLOW-CFS - Means historical monthly flow in CFS (1959-1982) obtained from NRI Exhibit 5.

2. WUA - Weighted usable area in $ft^2$/1,000 ft of stream.

3. BYPASS FLOW - Takes into account maximum allowable diversion (80 CFS) and minimum flow required for generation (5.4 CFS).

In October and the other months, average flow in the stream is greater than in September. For example, the 30 cfs October average at a 15 cfs bypass flow would result in a 13% loss of habitat over what was naturally present in September. However, with a 20 cfs minimum flow there will be no reduction in adult rainbow trout habitat below the amount of habitat available in September. Available habitat would be either maintained or increased slightly. Therefore, based on the average monthly flow record, 20 cfs minimum bypass flow will protect pre-project existing habitat for adults associated with the natural low flow period.

7.6.3 The Department of Fish and Game was concerned that making a bypass flow recommendation based on monthly average flow conditions might exclude increased trout habitat which could occur in good water years. Because 23 years of record of average daily flows for August and September (the lowest flow months) show that flows exceeded 25.4 cfs (20 cfs plus 5.4 cfs minimum flow to operate power plant) only three times, the Board finds that a 20 cfs minimum bypass flow requirement will not exclude to any significant degree rainbow trout habitat (NRI, 5).

7.7 Whether spawning habitat should be protected is at issue between applicant and protestants. The maximum possible weighted usable area for spawning habitat at a flow of 80 cfs in the project site in Montgomery Creek is one third of one percent of the total habitat (90 square feet of weighted usable spawning area per 1,000 feet of stream) (NRI, 17) (T,II,143,1-10). The available spawning habitat in the thalweg (line of maximum depth) of the stream and in sheltered

areas behind boulders in the channel is of much better quality than the spawning habitat along the stream banks, which is at best "not ideal" in quality and at worst was described as "nil" (T,III,309,15-310,5 and 360). The inclusion of these bank gravels in the IFIM studies resulted in a generous estimate of the amount of available spawning habitat. If these gravels had not been included in the IFIM, actual reduction of weighted usable area at various bypass flows would be much less than the data indicates. The spawning gravels in the stream channel will always be under water regardless of what bypass flow is adopted (15 cfs to 70 cfs). A 70 cfs spawning flow while maintaining gravels in the stream would primarily cover gravels along the banks (T,IV,637,6-15). The Department sighted exposed bank gravels at 28 cfs (T,IV,532,23-24). A 70 cfs bypass flow would be beneficial for only some part of April and through May. After April the flow in the stream drops off quite rapidly toward summer flow levels. The incubation period from spawning to emergence is about 50 days. Therefore spawning that occurs in May results in emergence in July. The natural hydrology of the stream as shown by the daily average flows for 23 years of record is such that the flow was equal to or greater than 28 cfs only seven times in the month of July. This amounts to flows greater than or equal to 28 cfs in only about 30 percent of the years by July. Therefore about 70 percent of the time the redds (nests) will be exposed by July and will be destroyed (T,IV,638,9-19). Thus, for an area which is, at most, one third of one percent of the affected portion of the stream for a significant majority (70 percent) of the time, flows are not available to provide for the successful May bank spawning that a 70 cfs bypass flow would

be attempting to provide, if bank gravels actually are of sufficient quality to provide for spawning.

7.7.1 The Department of Fish and Game did not demonstrate that a 70 cfs flow, which will primarily cover bank gravels, would be of measurable benefit to the fishery. The 70 cfs bypass flow was chosen only because it represented maximum spawning habitat, regardless of the quality or use of that habitat.

7.7.2 For minimum bypass flows of from 15 to 40 cfs there is very little spawning habitat change. See Table 2 and Figure 2.

7.7.3 During average years it appears that project operation would improve spawning habitat over existing conditions from approximately March through mid-April by over 100 percent. See Table 2 and Figure 2. At a 40 cfs minimum bypass flow an increase in spawning habitat of only 12 square feet per 1,000 feet of stream over that available at 20 cfs would occur for approximately 1-1/2 months. This is an insignificant increase when balanced against the 100 percent increase it appears project operation will provide in March and April, and is insufficient reason to recommend a spawning flow which is greater than the 20 cfs recommended for adult rainbow trout.

7.7.4 Therefore, a 20 cubic-feet per second minimum bypass flow all year should be required based upon the particular facts of this case and should not be construed as precedent in other cases.

7.8 As previously mentioned, there is a notable lack of spawning gravels within the project affected portion of Montgomery Creek. However, gravels can be increased by a properly timed release of

sediment which will accumulate behind the diversion structure. Such a release could enhance the amount of sediment available downstream for fish habitat. Applicant should be required to consult with the Department of Fish and Game, the Board and applicant's experts to develop a plan of project operation to enhance spawning gravels downstream from the diversion structure. This plan should be agreed to both by the Department of Fish and Game and the Board.

FIGURE 2

# RAINBOW TROUT
## Spawning

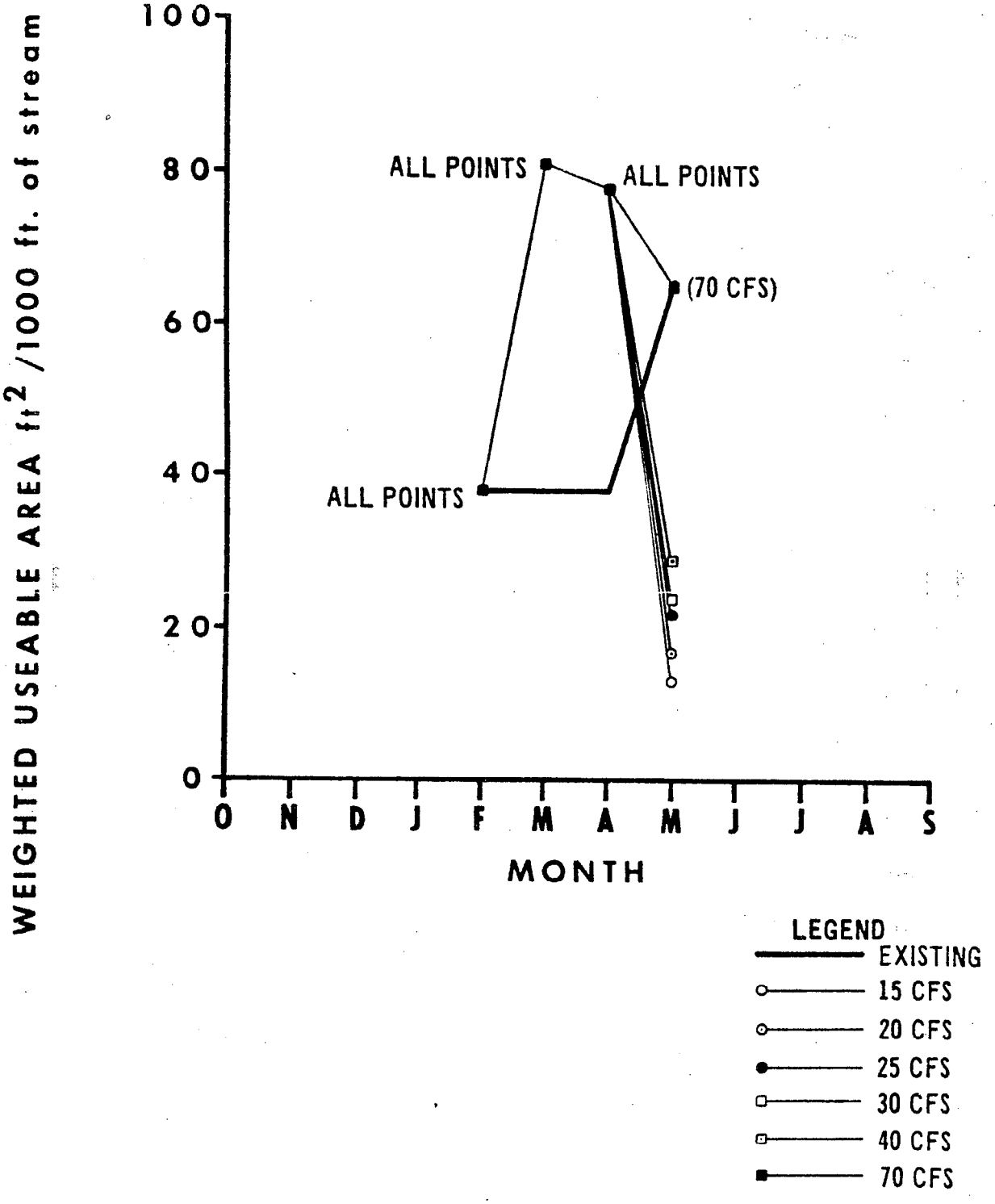

TABLE 2

RAINBOW TROUT SPAWNING

| | PRE - PROJECT | | POST - PROJECT | | |
|---|---|---|---|---|---|
| MONTH | AVERAGE MONTHLY[1] FLOW-CFS | WUA[2] | BYPASS[3] FLOW | WUA[2] | INCREASE OR % (DECREASE) |
| Feb | 224 | 38 | 15 | 38 | 0 |
| | | | 20 | 38 | 0 |
| | | | 25 | 38 | 0 |
| | | | 30 | 38 | 0 |
| | | | 40 | 38 | 0 |
| | | | 70 | 38 | 0 |
| Jul | 180 | 38 | 15 | 81 | 113 |
| | | | 20 | 81 | 113 |
| | | | 25 | 81 | 113 |
| | | | 30 | 81 | 113 |
| | | | 40 | 81 | 113 |
| | | | 70 | 81 | 113 |
| Apr | 151 | 38 | 15 | 78 | 105 |
| | | | 20 | 78 | 105 |
| | | | 25 | 78 | 105 |
| | | | 30 | 78 | 105 |
| | | | 40 | 78 | 105 |
| | | | 70 | 78 | 105 |
| May | 66 | 66 | 15 | 13 | (80) |
| | | | 20 | 17 | (74) |
| | | | 25 | 22 | (67) |
| | | | 30 | 24 | (64) |
| | | | 40 | 29 | (56) |
| | | | 70 | 65 | (1) |

1. AVERAGE MONTHLY FLOW-CFS - Means historical monthly flow in CFS (1959-1982) obtained from NRI Exhibit 5.

2. WUA - Weighted usable area in $ft^2$/1,000 ft of stream.

3. BYPASS FLOW - Takes into account maximum allowable diversion (80 CFS) and minimum flow required for generation (5.4 CFS).

7.9 By letter dated March 14, 1984, the Council expressed concern that applicant's recommendations were based solely on rainbow trout when it is known that brown trout also inhabit Montgomery Creek. The evidence shows that four brown trout were observed spawning upstream from the affected reach of Montgomery Creek. However, during two electrofishing surveys within the affected reach of Montgomery Creek only rainbow trout were caught. Because no brown trout were found by the electrofishing studies the Department of Fish and Game dropped its spawning flow recommendations for the species. (Since brown trout begin spawning in the fall, the Department of Fish and Game's request for a minimum by pass flow of 40 cfs from November until June was intended to include the brown trout spawning season). The Board will accept the decision of the Department of Fish and Game on this issue. Because no brown trout were found in the electrofishing study, analysis of spawning flows for brown trout is not needed and no spawning flows will be required for brown trout.

8.0 Geo-Physical Effect of the Proposed Construction

8.1 The applicant proposes to construct 6,600 feet of pipeline along the north side of Montgomery Creek Canyon within a 16-foot wide access corridor. The pipeline will cross very steep slopes and concern has been expressed that construction of the pipeline will cause excessive siltation of Montgomery Creek and will reduce the stability of the steep slopes. The BLM Special Use Permit and Shasta County Use Permit contain provisions for mitigating the effects of construction on the affected land areas. It is the responsibility of these agencies to enforce the provisions of their permits. The Central Valley Regional

Water Quality Board has granted the applicant a waiver for the Montgomery Creek project.

8.2 Since the Regional Board has waived 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.

9.0 Compliance with the California Environmental Quality Act

9.1 Shasta County is lead agency for the project under the provisions of the California Environmental Quality Act (CEQA). On July 8, 1982, Shasta County adopted a Mitigated Negative Declaration and approved Use Permit 81-82 for the Montgomery Creek project.

The mitigated negative declaration and use permit identifies potential project impacts in the following areas:

a. Fish and Wildlife.

b. Cultural Resources.

c. Water Quality.

The use permit included conditions to avoid or mitigate all the impacts identified.

In making this Decision the Board has considered the mitigated Negative Declaration and will, in the public interest, adopt conditions to mitigate or avoid significant project effects within its jurisdiction.

10.0 Public Access

The applicant plans to provide for public access through the pipeline access corridor to the public lands at the Pit No. 7 Reservoir. Applicant has stipulated with the BLM (as included in the appendix to the BLM Right of Way Grant for the project) as follows:

> "The Holder agrees to permit public access to the pipeline and access corridor via the existing Montgomery Creek Falls road. The Holder further agrees to permit pedestrian traffic by the public to public lands for all lawful purposes via the pipeline and access corridor from sunrise to one hour after sunset."

This term should be included in the water right permit for the project with a proviso that it is not to be interpreted as precluding permittee from taking reasonable security measures.

11.0 Time Limits

On June 23, 1984, the applicant's exemption from licensing by the Federal Energy Regulatory Commission (FERC) will expire unless a second extension of time is granted by the FERC. If the exemption expires, the applicant will have to file an application for a license with the FERC in order to proceed with its project. Therefore, two years after the permit is issued is a reasonable time period for the applicant to obtain financing and commence construction. Construction can be completed within four years after the permit is issued. Complete application of the appropriated water to the authorized use can be accomplished by December 1 of the seventh year after construction is completed. Therefore, the permits issued for this project should contain terms and conditions setting these time periods as limits within which the applicant may obtain necessary governmental approvals, arrange financing and commence construction, complete construction, and completely apply appropriated water to the authorized use.

12.0 Conclusion

Based on the foregoing findings, the Board concludes that Application 27352 should be approved for power purposes and a permit issued to Northern Resources, Incorporated, subject to the terms and conditions in the following order.

ORDER

IT IS HEREBY ORDERED that Application 27352 be approved for power purposes and that a permit be issued to the applicant subject to vested rights. The permit

shall contain standard permit terms 6, 10, 11, 12, and 13 (a copy of the Board's standard permit terms is available upon request) in addition to the following terms and conditions.

1.0 The water appropriated under the permit issued on Application 27352 shall be limited to the quantity which can be beneficially used and shall not exceed 80 cubic feet per second by direct diversion from Montgomery Creek, to be diverted from January 1 through December 31 of each year.

The equivalent of the continuous flow allowance for any 14-day period may be diverted in a shorter time, provided there be no interference with other rights.

2.0 Water diverted under this permit is for nonconsumptive use and is to be released to Montgomery Creek immediately below the powerhouse upstream from the Pit No. 7 Reservoir within the SW1/4 of the NE1/4 of Section 34, T35N, R1W, MDB&M.

3.0 Permittee shall obtain full project financing and commence construction of the project within two years after the date of this permit and shall thereafter prosecute the project with reasonable diligence. In no event shall permittee commence construction in Montgomery Creek or divert any water from Montgomery Creek unless it has financing to completely construct the project.

4.0 Project construction work shall be completed by December 1, 1988.

5.0 Permittee shall make complete application of the water to the authorized use by December 1, 1995.

6.0 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 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 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 the 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 application.

7.0 For the protection of fish, wildlife, and riparian vegetation, permittee shall:

a. Bypass a minimum of 20 cubic feet per second from January 1 through December 31. The total streamflow shall be bypassed whenever it is less than 20 cubic feet per second.

b. Monitor stream flow release by a recording gage, located immediately downstream from the diversion site. The recording gage shall be acceptable to the Board. The daily record of maximum and minimum flows shall be provided to the California Department of Fish and Game annually by December 31 of each year for the preceding October 1 - September 30 water year.

c. Install a fish screen of a type and in a location that is acceptable to the Department of Fish and Game. The fish screen design shall be approved, prior to project construction, by the California Department of Fish and Game. The screen shall be approved in writing by the Department of Fish and Game prior to project operations.

d. Enter into a stream alteration agreement with the Department of Fish and Game, and/or obtain a Department determination that measures to protect fishlife have been incorporated into the plans for construction of such diversion works 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 or water diverted until permittee obtains this agreement or determination. Construction, operation, and maintainance costs of any required facility is the responsibility of permittee.

e. In order to prevent fish stranding, the amount diverted shall be gradually increased at a rate not to exceed 30 percent of the stream flow per hour.

f. Incorporate a mechanism that will automatically and immediately stop the diversion of water in case of a pipeline rupture.

g. Design and construct transmission lines in such a way that they are not a hazard to raptors.

h. Prior to the beginning of construction, to ensure that the pipeline does not impede wildlife movement, have the final

pipeline configuration approved by the California Department of Fish and Game.

i. For the life of the project, allow access without prior notification to agents of the California Department of Fish and Game for the purposes of ensuring proper operation and maintenance of fish and wildlife protective measures.

8.0 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 requirement.

9.0 Permittee shall allow public access to the pipeline and access corridor via the existing Montgomery Creek Falls Road. Permittee shall allow pedestrian traffic by the public to public lands for all lawful purposes via the pipeline and access corridor from sunrise to one hour after sunset. This term shall not be construed to prevent implementation of reasonable security measures to protect the project facilities.

10.0 Permittee shall consult with the Department of Fish and Game and the Board to develop a plan of project operation which will enhance spawning gravels downstream from the diversion structure. This plan shall be accepted in writing by the Department of Fish and Game and by the Board.

11.0 a. 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.

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

c. 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.

Dated: MAY 17 1984

CAROLE A. ONORATO, Chairwoman

WARREN D. NOTEWARE, Vice-Chairman

KENNETH W. WILLIS, Member

DARLENE E. RUIZ, Member