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(Federal Power Commission, 1938)

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REPORT
TO
THE FEDERAL POWER COMMISSION
ON
THE APPLICATION OF THE PACIFIC GAS AND ELECTRIC COMPANY
FOR
A PRELIMINARY PERMIT
FOR
THE NORTH FORK FEATHER RIVER PROJECT NO. 1391 - CALIFORNIA
WITHIN THE LASSEN AND PLUMAS NATIONAL FORESTS

By
REGIONAL OFFICE - REGION 5
San Francisco, Calif.
June, 1938

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1. FORWARD

On August 5, 1936, the Pacific Gas and Electric Company filed with the Federal Power Commission an application for a Preliminary Permit covering a power project on the North Fork of Feather River involving lands within the Lassen and Plumas National Forests.

This report discusses the effect of the proposed construction of the power project on lands within the National Forests, and makes definite recommendations regarding the issuance of a Preliminary Permit, together with proper stipulations to safeguard public values.

2. HISTORY

The complete development for power purposes of the North Fork of Feather River was proposed by the Great Western Power Company and a permit obtained for such development from the Department of Agriculture on June 11, 1919. This development proposed utilizing the North Fork of the Feather River from Almanor down to the Las Plumas plant. Under the permit the Caribou project was completed and has been in operation for a number of years.

In 1934, the Secretary of Agriculture advised the Great Western Power Company that the permit of June 11, 1919 would either have to be relinquished, as far as its rights were concerned relative to the proposed and unconstructed plants, or that the company would have to proceed with the construction of one of the proposed additional plants.

On December 28, 1934, the Great Western Power Company filed an application with the Federal Power Commission for a Preliminary Permit covering a complete development differing from that originally proposed between the Caribou and the Las Plumas plants.

Due to the consolidation of properties of various companies controlled by the Pacific Gas and Electric Company, this company filed on August 5, 1936 an application for a Preliminary Permit covering a project which was practically identical with that filed by the Great Western Power Company (Project No. 1297) on December 28, 1934.

On February 3, 1937, the Acting Secretary of the Federal Power Commission advised the Chief, Forest Service, that the Pacific Gas and Electric Company had filed an application for a Preliminary Permit for the Feather River Projects, 3,4,5,6,7, and 8, which projects would develop the North Fork of Feather River between the tailrace of the Caribou plant and the intake of the Las Plumas Plant, both of which have been constructed and have been in operation for a number of years.

In the letter of the Acting Secretary, Federal Power Commission, it was stated that the Commission would be pleased to receive any recommendations which the Forest Service might wish to make relative to the

proposed project, and this report is submitted in acceptance of that privilege.

3. GENERAL DESCRIPTION OF AREA INVOLVED

The application of the Pacific Gas and Electric Company herein reported on includes that portion of the North Fork of Feather River extending from the tailrace of the existing Caribou power house, at about elevation 2975 feet, to the intake of the Las Plumas plant, at about elevation 903 feet. This section of the North Fork of Feather River traverses a deep, steep-walled canyon, the riparian lands being rugged in character and covered with brush and timber.

The Western Pacific Railroad Company right of way follows closely along the bottom of the North Fork of Feather River Canyon between the Las Plumas plant of the applicant and the confluence of the East Branch of the North Fork of Feather River. Scenic and recreational values of this canyon are so high that the railroad company has termed this portion of its line the "Feather River Route" and advertises the area widely for fishermen and recreationists. The scenery of the canyon has proven to be a great attraction to railroad travellers, and despite the lack, until 1937, of highway access, a considerable resort business has developed between Pulga and Howells.

Last year the State of California completed and opened for public use the new eight million dollar Feather River Highway, which follows closely along the river from Pulga to Howells. This project brings through the canyon a large volume of automobile travel and makes readily accessible for general public use and enjoyment the excellent sport fishing and the general recreational and scenic features of the area. Although the highway was not opened until the peak of last year's fishing season had passed, it is estimated that there were 20,000 man-days of trout fishing before the close of the season along the portions of the stream that will be affected by the proposed forebays and diversions.

In the early days mining was carried on extensively along the river, but at present most of the mining which is now active is being carried on in the East Branch and not in those portions of the river involved in the present proposed power project.

Plate 1 shows the general location of the proposed power project and also the location of the new Feather River Highway and the Western Pacific Railroad.

Plates 2 to 8 are views at various points along the North Fork of the Feather River and show sections of the stream which would be dried up during all but the flood period of each season if all of the water were utilized for power purposes.

4. STATEMENT OF FOREST SERVICE POLICY

It is the responsibility of the Forest Service to organize and maintain a balanced program of resource utilization on the National Forests so as to realize the maximum public values from all of them, rather than to allow over-development of a single resource to the exclusion or destruction of other major values. Fulfillment of this responsibility must necessarily provide for coordinated protection and use of the resources involved so that each will permanently yield its full share to the support and enjoyment of a public with varied desires and demands.

Along the North Fork of Feather River within the Lassen and Plumas Forests timber, grazing and mining resources are important but are secondary to the two major uses, power and recreation. The power resource is that involved in the application to the Federal Power Commission for a Preliminary Permit. The recreation resource involves angling, hunting, camping, picnicking, motoring, summer home sites, and resorts and other related commercial uses.

5. CONFLICT BETWEEN PROPOSED POWER DEVELOPMENT AND PRESENT AND POTENTIAL RECREATIONAL USE

(a) Project 3 - Howells: The area along the streambed embraced in this project, together with the forebay portion of Project 4, presents the greatest problem of conflict in use, both as to general recreation and to maintenance of sport fishing. The section below dam 3

is some of the best trout water in the area, and the entire stretch is heavily used by both campers and fishermen. Diversion of the flow of the stream would practically dry up six miles of streambed in the late summer months in low water years and would result in complete destruction of fish life since the flow from side streams is small. A side road from the State Highway parallels the stream and offers a cool, shady, attractive drive to campers, picnickers and fishermen, and there are several fine camping sites along the river. A dry streambed will largely eliminate these attractions with consequent definite loss to those who would enjoy them.

(b) Project 4 - Camp Rogers: The best camping sites available along the North Fork of Feather River are situated within the area to be flooded by this project. The extreme fluctuation in water surface in the reservoir necessary to properly utilize and develop the potential powers of this stream will make the reservoir useless for recreation and support of game fish. Several naturally attractive recreational areas below the dam will be greatly depreciated in value if the stream is dried up. Dam 4 will flood several miles of excellent fishing areas and will divert the river from an additional 4 miles of stream which provides first-class angling. The entire project area is heavily used by both fishermen and campers. The newly constructed transcontinental highway is located immediately

along the river throughout this project and the stream now contributes to the scenery and makes possible the growth of stream-side trees and other vegetation, thus adding greatly to the attractiveness of the drive. Diversion of the stream and drying up of the river will largely eliminate these pleasant features and will have a very detrimental effect on the scenic value of this stretch of major highway.

(c) Project 5 - Rock Creek: This section of the stream is now very accessible to anglers as the new Feather River Highway follows along the river the complete length of the project and it is, therefore, subject to heavy use, particularly by fishermen from the Sacramento Valley. Recreational sites are few and therefore are more important--acre for acre. The contribution of the stream to the beauty of the drive and to the maintenance of vegetation and other factors of a pleasant environment are extremely important. Side stream contributions within this project are inadequate to maintain recreational values and fish life. Hence, development of the project, which involves complete diversion of the river for a distance of four miles would result in irreplaceable loss of major scenic values enjoyed by large numbers of people and in destruction of sport fishing.

(d) Summary of Projects 3, 4 and 5: As described in the foregoing sections, there is a definite conflict between power development and recreational use. It is difficult to express with conviction the exact dollars and cents value of the present and future recreational

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use. It is very important, however, both socially and economically. It is also difficult to prescribe at this time the exact restrictions in power development that will provide in reasonable degree an opportunity for continued recreational use, and that will at the same time place the least burden upon power costs. For these reasons, a complete study of the area should be made, involving probably several years of investigation. The minimum amounts of water that must be by-passed the dams should be determined, and further engineering examinations should be made to see if Dam 4 cannot be relocated or modified in design so as to prevent flooding valuable camping areas.

It is recommended, therefore, that the part of the application applying to Projects 3, 4 and 5 be denied without prejudice to the applicant later filing an amended application at such time as the then market requires. It is believed that such a denial at this time will not work a hardship on the applicant, since it has been admitted that the power to be developed by the remaining projects will adequately supply the prospective market until the power to be available from the Shasta Dam can be delivered to the interconnecting system of the applicant. It is recommended, however, that during the period prior to filing of a further application and in the preparation of the plans to accompany such application, the applicant cooperate with the Forest Service and other public agencies in determining the amount of continuous flow of water in the canals below the dams which will maintain fish life and sport fishing and will protect scenic values, and in investigating possibilities for changing the location of design of Dam 4.

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(e) Project 6 - Cresta: Fishing in the waters included in this project is largely confined to early season use. The stream is less attractive physically and, being at lower elevation, becomes warm in midsummer. The channel is wider; there is less fast, rough water, and the quiet stretches are inhabited by coarse fish. Hence, the conflict of the proposed development with angling and recreational use is much less important than in the three upstream projects. The Feather River Highway traversing the North Fork of Feather River Canyon adjoining this project is located immediately on the river bank, and the streambed is directly in view of tourists on the highway. Diversion of all the water would have a serious detrimental effect on the scenic value of this route in this area, and it is recommended that a stream of not less than 25 second feet be allowed to flow continuously in order to maintain the scenic attraction of a living stream in this area.

(f) and (g) Projects 7 and 8 - Pulga and Poe: The waters involved in these projects are fished principally during the early part of the fishing season. During summer months high temperatures and slower waters make these areas less desirable than the upstream portions of the river as habitats for trout. Also, waters of Project 8 are at present rather inaccessible. The transcontinental highway does not parallel that portion of the river covered by Projects 7 and 8, below Pulga, except for about $1\frac{1}{2}$ miles, and the scenic and recreational

values, therefore, lie largely in the contributions of water to a broad general picture. Loss of early season fishing areas throughout both projects and scenic values on the limited part of the river from the highway crossing to dam 7 are the principal conflicts with the proposed developments. In weighing all of the public values involved in the proposed power developments, these conflicts are recognized, but the high value of complete development of these waters for power purposes is believed to outweigh the detrimental effect of such development.

(h) Summary of Projects 6, 7, and 8: The proposed development of Projects 6, 7 and 8 will, to some extent, detrimentally effect the recreation and scenic values of the North Fork of Feather River in the respective areas involved. It is believed, however, that the power values involved outweigh the detrimental effect of such a development on scenery and recreation, and it is recommended that insofar as the application applies to these three projects, that it be granted with the stipulations mentioned in paragraph (e) above, namely, that a continuous flow of not less than 25 second feet be provided in the river below Dam 6. Since the proposed dam site is but a short distance above the mouth of Grizzly Creek, and since this stream will contribute, if untrapped, at least a portion of the required flow, the stipulation may be made applicable only below the mouth of Grizzly Creek.

6. SUMMARY OF RECOMMENDATIONS

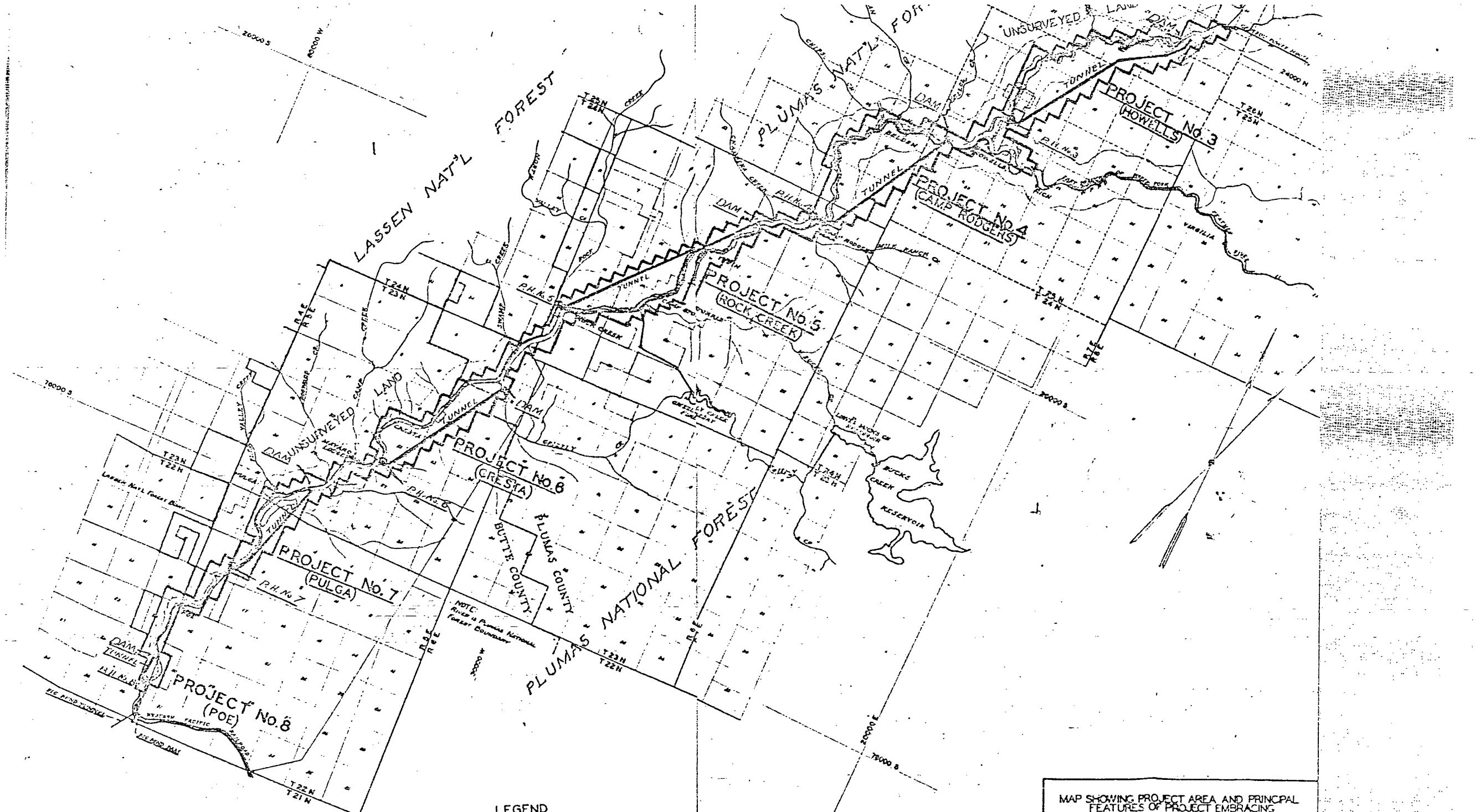
- (1) It is recommended that a Preliminary permit be issued to the applicant covering Projects 6, 7 and 8, as covered by the application, with the stipulation that when a license is issued the license will require a discharge from the diversion dam of Project 6 so as to provide a visible flow at all times of not less than 25 second feet in the stream channel between the mouth of Grizzly Creek and the forebay of Project 7.
- (2) It is recommended that the application be denied as to Projects 3, 4 and 5 without prejudice to future application at such time as the power market warrants and certain further studies have been made, and the development found to be in the public interest.

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Note*

This plan is obsolete but retain this copy of it
in our original report copy.

P L A T E S



LASSEN NAT'L FOREST

PLUMAS NAT'L FOR

PROJECT No. 5
(ROCK CREEK)

PROJECT No. 3
(HOWELLS)

PROJECT No. 4
(CAMP RODGERS)

PROJECT No. 6
(CRESTA)

PROJECT No. 7
(PULGA)

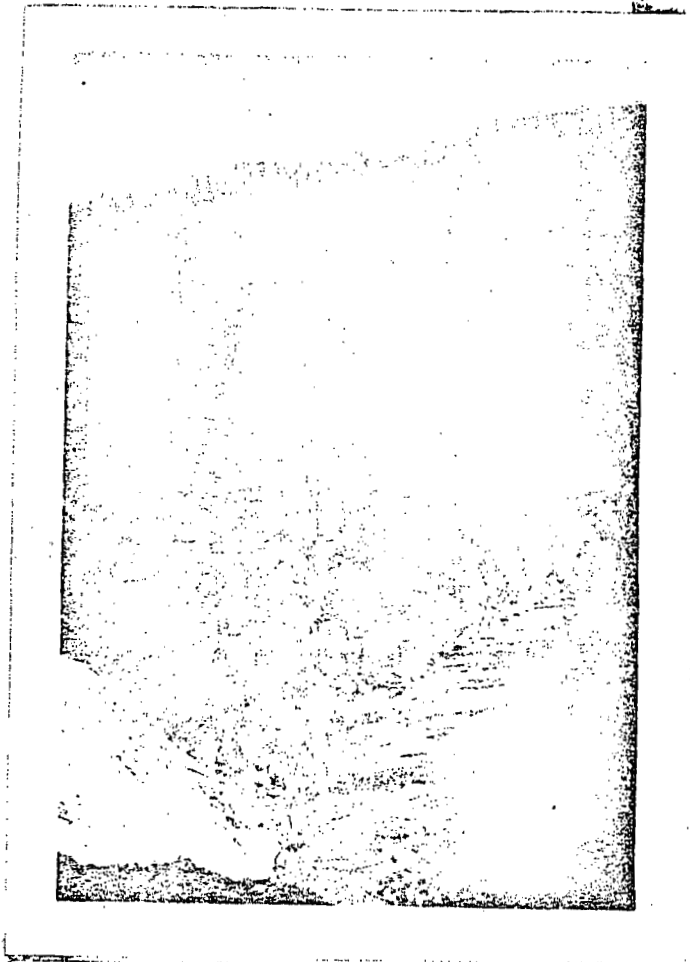
PROJECT No. 8
(POE)

LEGEND

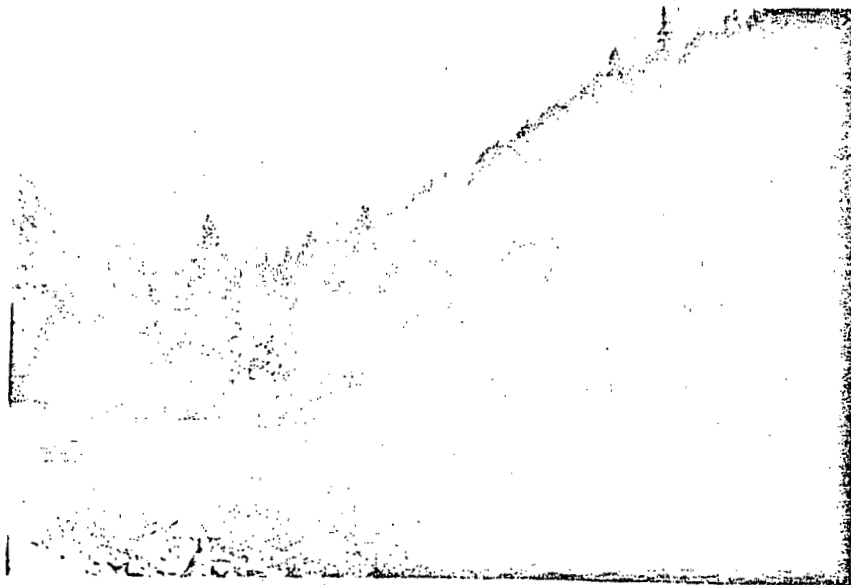
- NATIONAL FOREST BOUNDARY
- PROJECT BOUNDARY
- ▨ PATENTED LANDS
- ▨ FOREST RESERVE
- ▨ POWER SITE WITHDRAWALS
- ▨ UNPERFECTED CLAIMS

MAP SHOWING PROJECT AREA AND PRINCIPAL FEATURES OF PROJECT EMBRACING DEVELOPMENTS 3, 4, 5, 6, 7 & 8 OF GREAT WESTERN POWER COMPANY ON NORTH FORK OF FEATHER RIVER

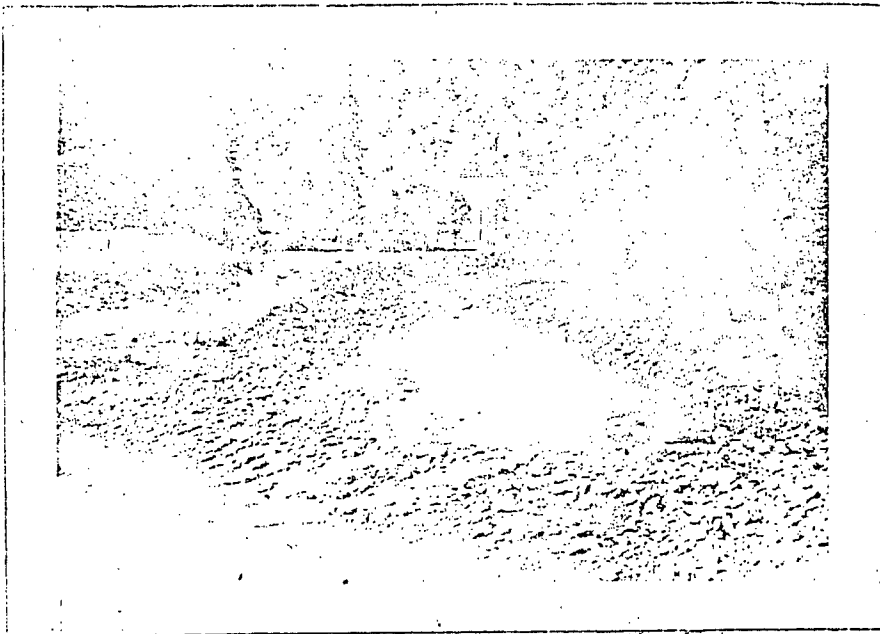
Scale: 1 inch = 20,000 feet



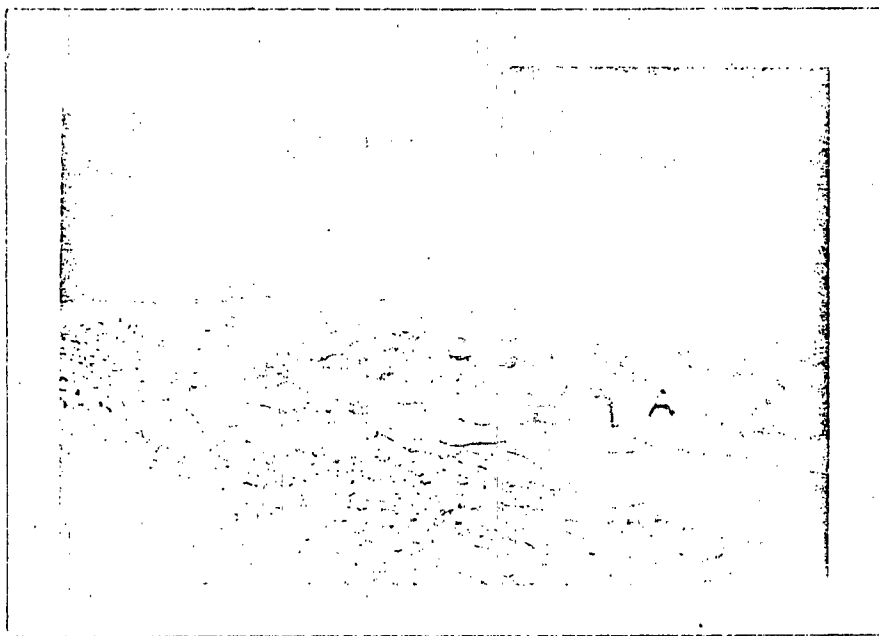
Looking upstream from a point about 6.6 miles up from Howells between Howells and Caribou. This view shows rapid flowing stream with riffle which is an excellent habitat for game fish. On left bank is an area very desirable for campground and summer homes. This section would be dried up by Project #3, eliminating fishing, making the area undesirable for recreational use.



Looking upstream at campground at Belden Bar. This is a very attractive campground within an area of excellent fishing and good scenery. A dry river bed will eliminate fishing, destroy scenic values, and render valueless the investment of several thousand dollars in this campground. Project #4 will result in drying up this area.



After construction of Rock Creek Dam. Looking upstream from approximately the same point that the picture on the opposite page. Taken near the drinking fountain about one-half mile below Rock Cre

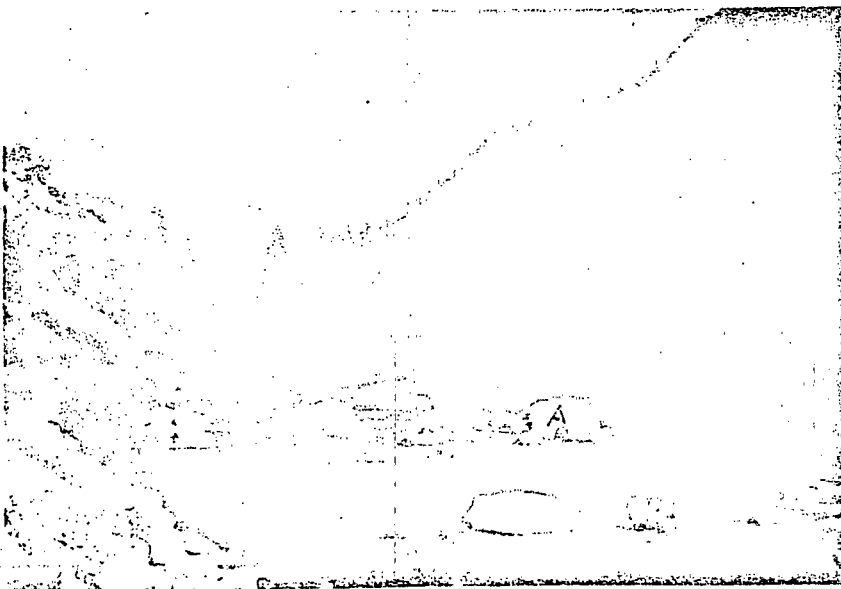


After construction of Rock Creek Dam. Looking upstream from approx the same point that the picture on the opposite page was taken. T about 50 feet above Rock Creek Power House. The bolder marked "A" same in each picture.



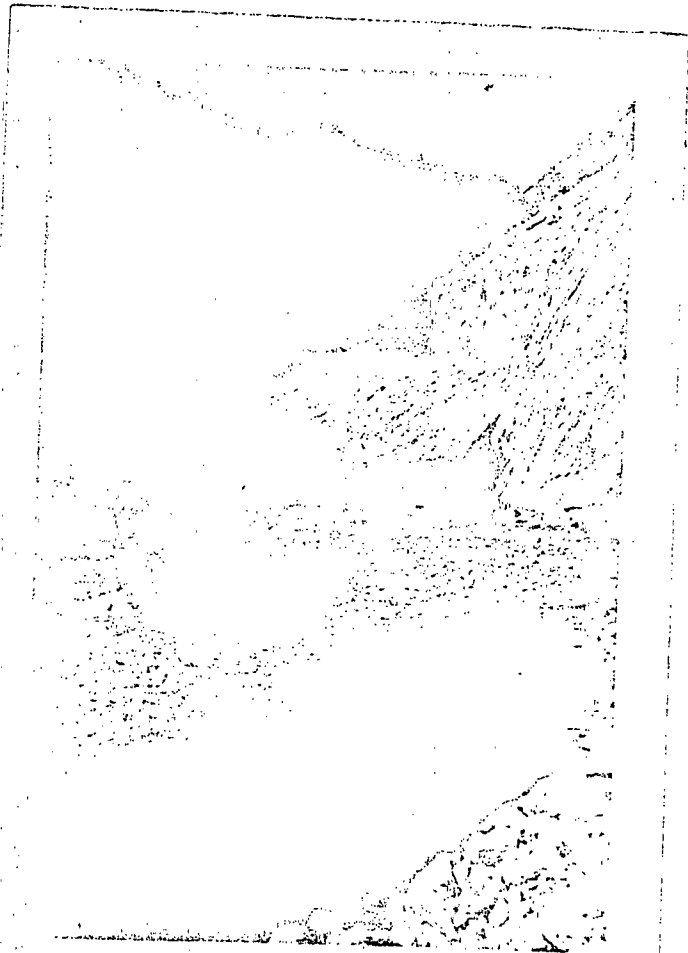
Taken at
drinking fountain
below
Upper Dam
 $\frac{1}{2}$ mile.

Looking upstream from a point 5 miles below Howells. An excellent fishing riffle and a fine habitat for trout. The rocky hills, of little beauty in themselves, when combined with the swift-flowing water, and the stream side vegetation, make a very pleasing scene. Riffle will be destroyed by Project #4.



Taken about
50 feet above
Rock Creek
Power House.

Looking upstream from a point just below Bucks Creek. This portion of the stream is a fine fishing area, also practically "makes" the scenic value. Completion of Project #5 will dry up this part of the stream bed.



Looking up stream after the construction of Cresta Dam from about the same point that the picture on the opposite page was taken. Cresta Dam in the background. Note the absence of white water in present stream.



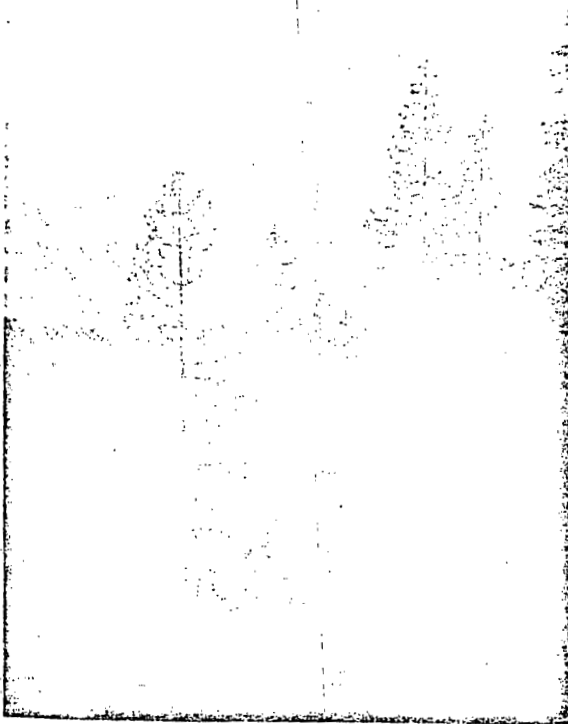
Looking upstream from
between two tunnels 1/4 mile
above Grizzly Creek. A
large volume of rushing
water for maintenance of
fish, and to give life to
rugged scenery.



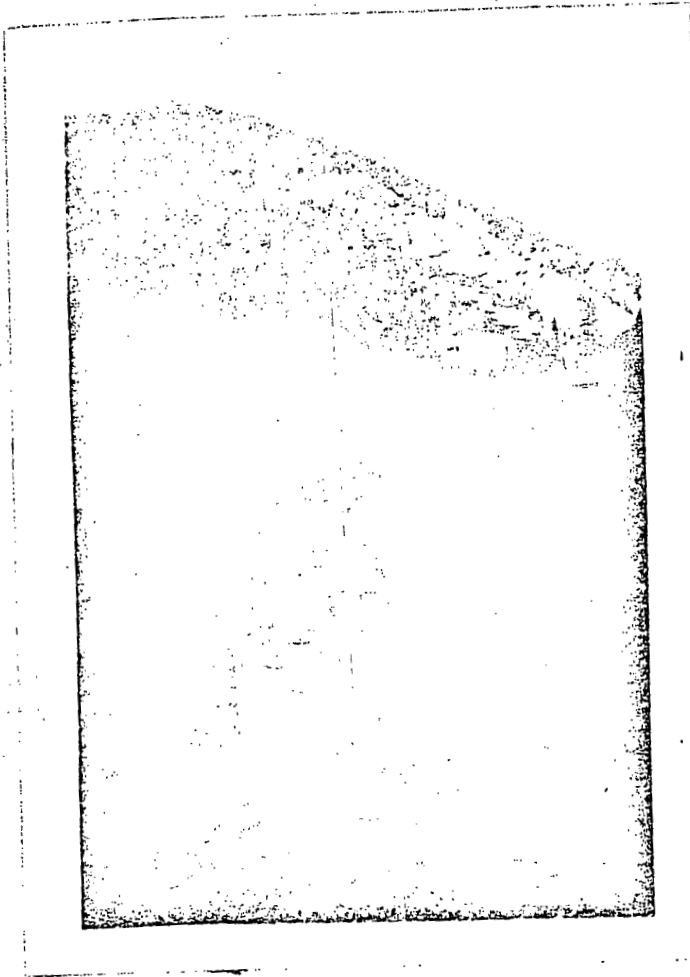
Stretch of fast
water near Grizzly
Creek which will be
dried up by the dam
of Project #6.



Looking downstream at a point above Rocky Bar Creek.
Foreground will be dried by Project #6

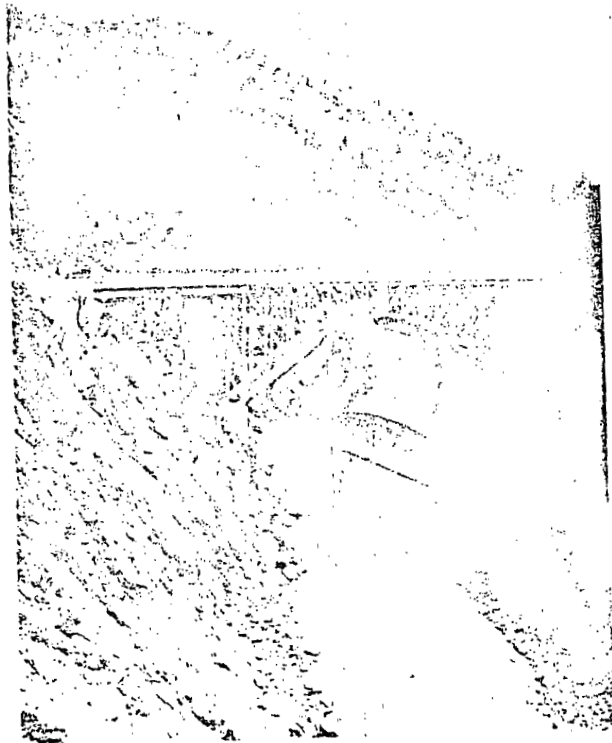


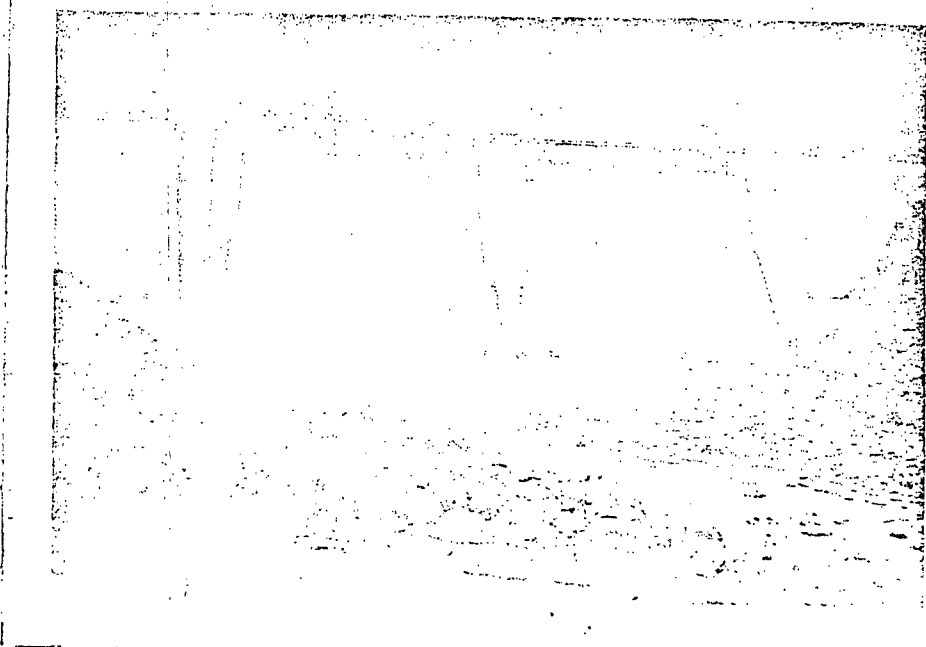
Looking upstream from
the recently completed
highway opposite Poe
Siding. The flowing
Stream is the final
touch that makes this
scenery spectacular.



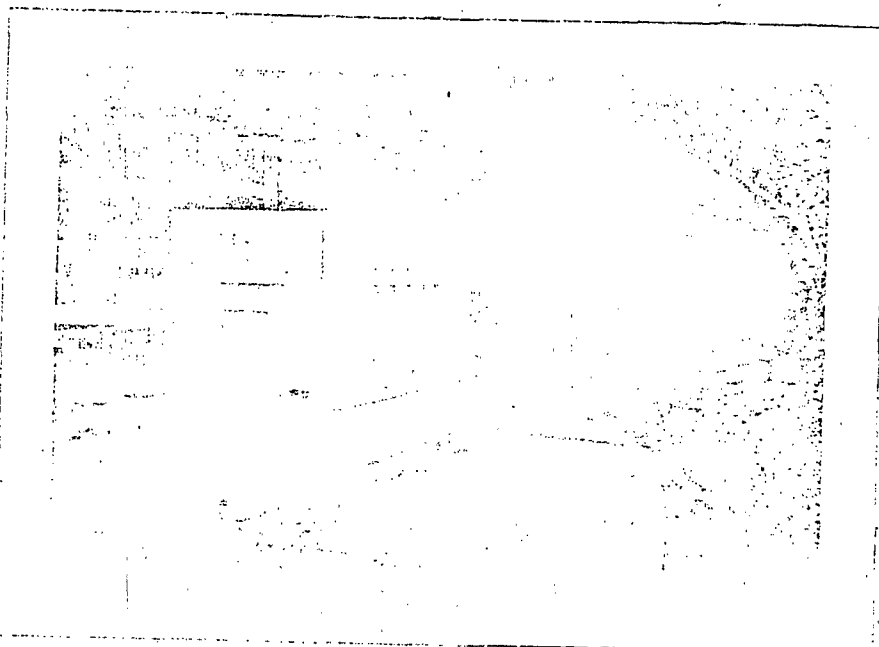
Looking upstream toward
Pulga from near highway
bridge. A dry, rocky
stream bed would thor-
oughly ruin what is other-
wise a very pleasant scene.

Looking upstream at
Pulga bridge. Stream
will be dried by
Project #7

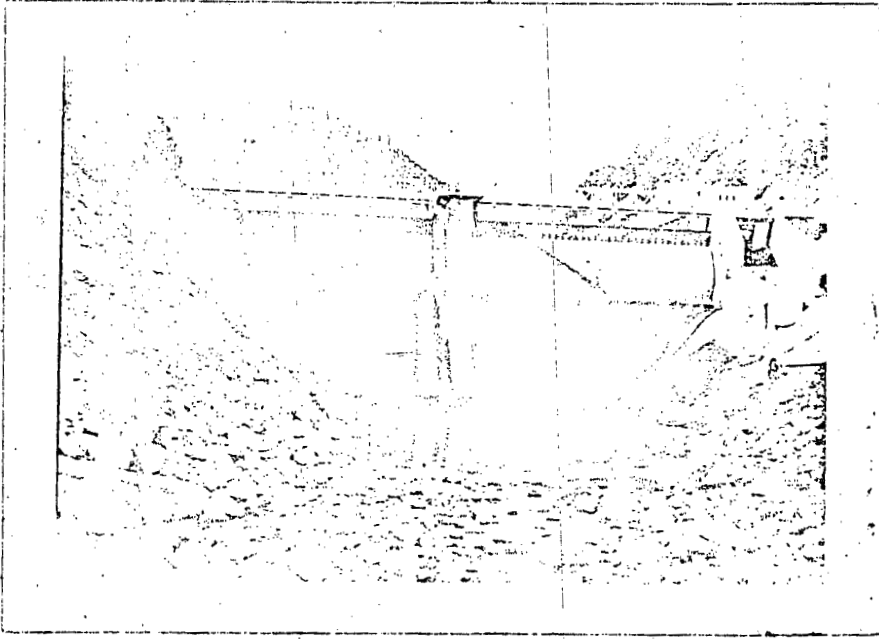




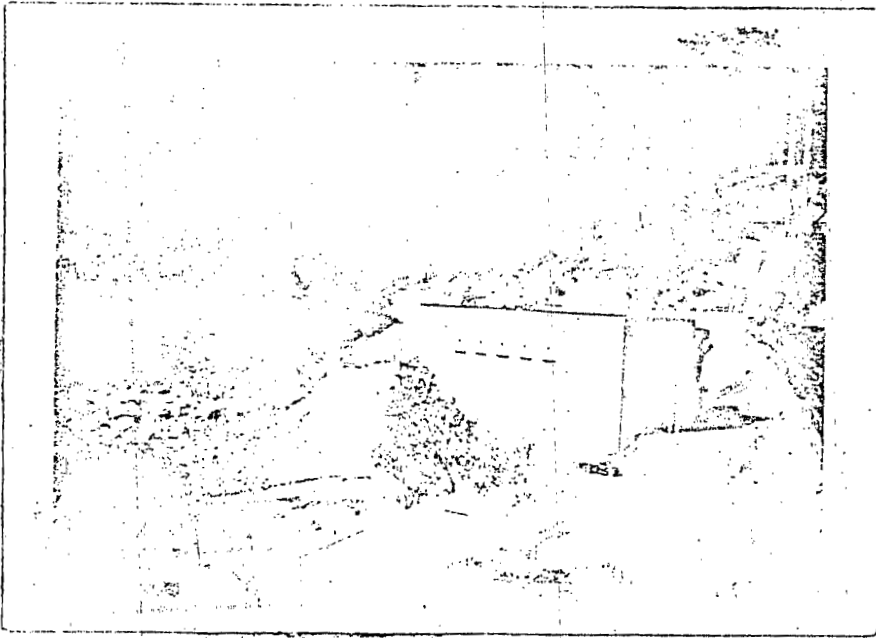
Rock Creek Dam



Rock Creek Power House. Showing contrast between discharge from power house and the flow in the natural stream bed at the extreme right.



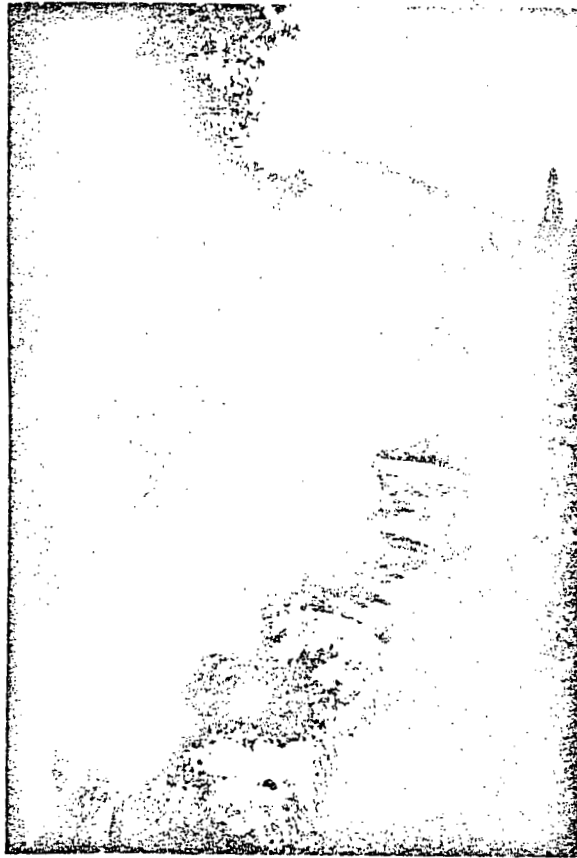
Cresta Dam. Showing the low flow in the natural stream channel below.



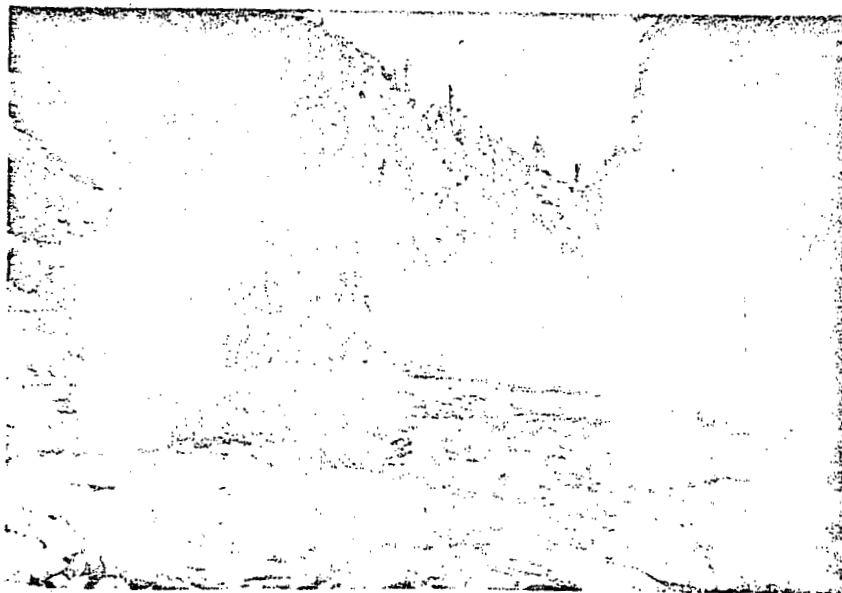
Cresta power house. Note small flow among boulders in natural stream at extreme left.

REFERENCES

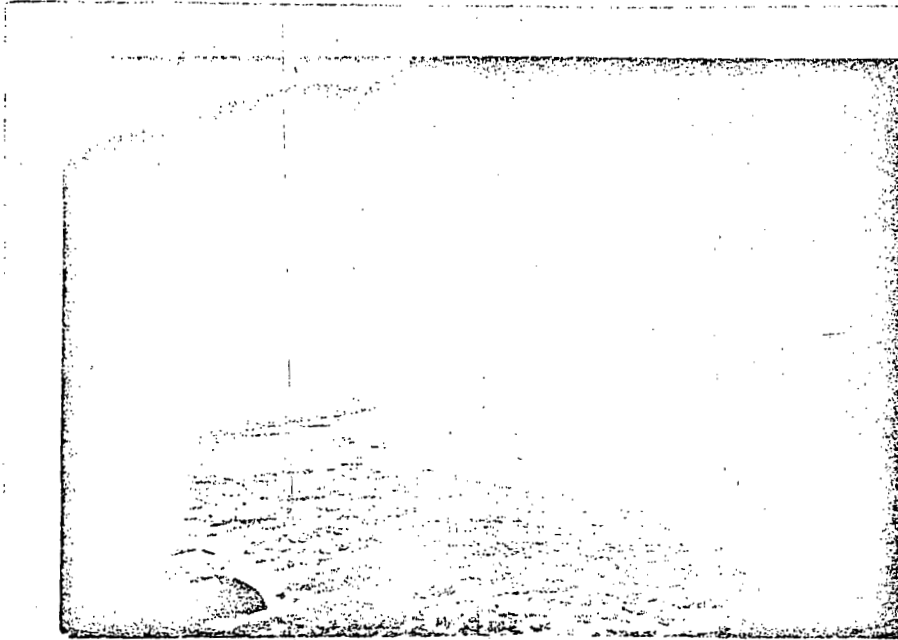
- (1) J. W. McCrillis, owner of Belden Resort. Oral communication with Hanson and Wales.
- (2) U. S. Forest Service. Plumas Forest Headquarters at Quincy. Data secured largely by Ranger H. A. Kloppenburg of the Quincy Ranger district.
- (3) W. T. Fowler, Secretary-Manager of the Oroville Chamber of Commerce. Oral communication with Hanson and Wales.
- (4) Surface Water Supply of the United States. 1944. Part II. Pacific Slope Basins in California. Geological Survey Water-Supply Paper 1011. p. 301.
- (5) 1942 Angling Catch Records. Unpublished report by Brian Curtis. California Division of Fish and Game.
- (6) U. S. Dept. of Interior, Bureau of Reclamation, Region II, Branch of Project Planning. Division of Hydrology, Special Studies Section, Unpublished Compilation of Annual Runoff Data, North Fork Feather River Drainage Area.



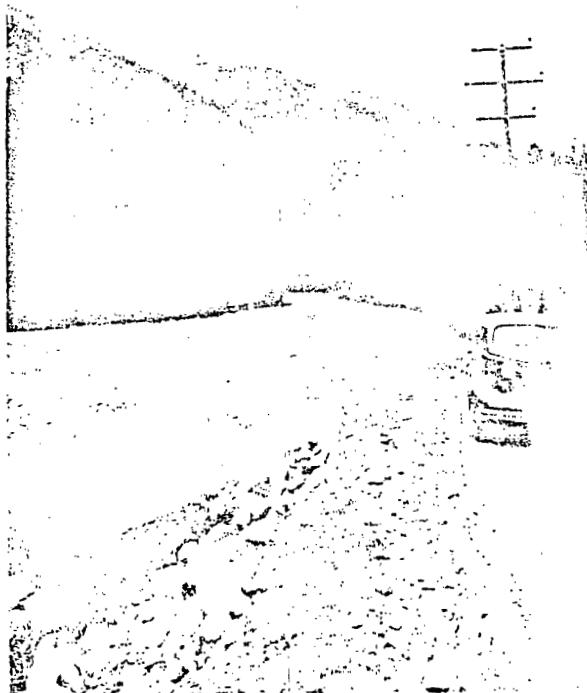
Looking downstream from a point on Caribou road 6.6 miles above Howells. A large volume of swiftly flowing water which makes an ideal habitat for trout. This area will be dried up by Project #3.



Looking upstream from a point on Caribou road 3.3 miles above Howells. Completion of Project #3 will eliminate this riffle.



Looking downstream from a point on Caribou road 2.3 miles above Howells. A beautiful riffle, with an abundance of fast-running, well aerated water. Picnic or camp areas on the sides. Project #3 would eliminate this riffle and its trout population and the stream side vegetation, and the camping spots will be rendered valueless.



Looking downstream at a stretch of excellent fishing water about 1 mile above Gansner Bar. This portion of stream bed will be dried up by Project #3.