

DATA SHEET

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FOR NPS USE ONLY	
RECEIVED	JUN 20 1978
DATE ENTERED	APP 4 1979

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

Percha Diversion Dam

AND/OR COMMON

Percha Dam

2 LOCATION

STREET & NUMBER

Located two miles northeast of Arrey (3.2 km)

NOT FOR PUBLICATION

CITY, TOWN

Arrey

CONGRESSIONAL DISTRICT

2

STATE

New Mexico

VICINITY OF

CODE
035

COUNTY
Sierra

CODE
051

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input checked="" type="checkbox"/> AGRICULTURE
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL
<input checked="" type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT
	<input type="checkbox"/> BEING CONSIDERED	<input checked="" type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY
			<input type="checkbox"/> MUSEUM
			<input type="checkbox"/> PARK
			<input type="checkbox"/> PRIVATE RESIDENCE
			<input type="checkbox"/> RELIGIOUS
			<input type="checkbox"/> SCIENTIFIC
			<input type="checkbox"/> TRANSPORTATION
			<input type="checkbox"/> OTHER:

4 OWNER OF PROPERTY

NAME

U.S. Bureau of Reclamation

STREET & NUMBER

Department of the Interior

CITY, TOWN

Washington, D.C.

STATE

VICINITY OF

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC.

Sierra County Courthouse

STREET & NUMBER

CITY, TOWN

Truth or Consequences

STATE

New Mexico

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

New Mexico State Register of Cultural Properties

DATE

December 9, 1977

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR
SURVEY RECORDS

Historic Preservation Section, New Mexico State Planning Office

CITY, TOWN

Santa Fe

STATE

New Mexico

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Percha Diversion Dam, located at the head of the Rincon Valley, is a concrete ogee weir structure, eleven feet high above the apron and seventeen feet above the bottom of the concrete cut-off. This weir is 350 feet long, equipped with two 8 x 20 ft. tainter sluice gates at the west end, eight intake gates in the west heading, and one in the east. The project required 23,367 cubic yards of excavation and 4,346 cubic yards of concrete. Major dimensions are as follows:

Structural Height	-	18.5 ft.
Hydraulic Height	-	8 ft.
Weir Crest Length	-	350 ft.
Total Crest Length	-	2,720 ft.
Crest Elevation	-	4,103 ft.
Volume	-	43,200 cubic yards

The Percha Diversion Dam was the third diversion dam constructed in the Rio Grande to divert water released from storage at Elephant Butte Reservoir. The entire main portion of the structure, including weir and headgates, was constructed east of the channel of the Rio Grande without interfering with the flow of the river, which was used for irrigation throughout the completion of the lower project.

A double earthen embankment was constructed across the river section and the structure was built on medium coarse sand which existed at the site. The earthen embankment performs as a dike, and also carries the diverted water into the Arrey Canal across the river bed from the headgates of the dam to the west bank of the river. The canal is concrete-lined and the earth fill is protected with riprap against river cutting. The canal crosses over the Rio Grande in the Garfield Flume and under the river in the Hatch Siphon and the Rincon Siphon.

The spillway is an overflow weir and the diversion capacity of the structure is 350 cubic feet per second.

This project, though sixty years old, has required very little repair over the years and it stands in very good condition at the present time.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input checked="" type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input checked="" type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1916 - 1918

BUILDER/ARCHITECT L.M. Lawson (Project Manager)

STATEMENT OF SIGNIFICANCE

Percha Diversion Dam, located two miles south of Caballo Dam on the Rio Grande, was a significant off-shoot of the celebrated Elephant Butte Project. As an integral part of the U.S. Bureau of Reclamation's endeavors to increase the irrigation and power capacity of the Rio Grande during the first two decades of this century, Percha Dam stands today as an important engineering landmark.

The project was designed to divert water into the Rincon Valley Main Canal. This canal carries water for the irrigation of more than 17,000 acres throughout the Rincon Valley. The dam was begun in July 1916, but construction was postponed the following winter because irrigation water proved to be plentiful. The project was completed in January 1918 and a month later the diversion dam became operational. Principal figures in the building of Percha Diversion Dam were L.M. Lawson, Project Manager, and Homer J. Gault, Construction Engineer. Funds appropriated for the building of the dam amounted to \$139,000.00.

The Rio Grande Project presently furnishes an irrigation water supply for approximately 178,000 acres of land, and electric power for communities and industry in the area. Drainage water from project lands provides a supplemental supply for 18,330 acres of Warren Act land in Hudspeth County, Texas. Project lands occupy the river bottom land of the Rio Grande Valley in south-central New Mexico and far west Texas. About sixty percent of the lands receiving water are in New Mexico, and forty percent are located in Texas.

The principal engineering features of the Rio Grande Project include Elephant Butte and Caballo storage dams, six diversion dams (Percha, Percha Arroyo, Leasburg, American, Mesilla, and Riverside), 141 miles of canal, 462 miles of laterals, 457 miles of drains, one hydroelectric power plant, 490 miles of transmission lines, and eleven substations.

The project is separated into three divisions: the Power and Storage Division; the Las Cruces Division, which comprises the New Mexico portion of the project area in the Rincon and Mesilla Valleys, and approximately ten thousand acres of the Texas portion at the lower end of the Mesilla Valley; and the Ysleta Division in the El Paso Valley in Texas.

Percha Dam is one of the best preserved works in the Rio Grande Project and the best maintained diversion dam in the system.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Lawson, L.M. "Percha Diversion Dam." Reclamation Record, Vol. IX, No. 5 (May, 1918), 234. (Available at Library, Texas Tech University)

Reclamation Project Data. Washington, D.C.: U.S. Government Printing Office, 1961, pp. 630-31; 635. (Available at Library, Texas Tech University)

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 3 acres

UTM REFERENCES

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1	3
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2	8,4	5,2,0
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3,6	3,8	8,5,0
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ZONE EASTING NORTHING

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ZONE EASTING NORTHING

VERBAL BOUNDARY DESCRIPTION

The boundary is the outer edge of the dam itself. The length of the boundary along the upstream and downstream sides is 2720 feet. The width of the rectangular boundary is 50 feet.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

William L. Cumiford, Project Manager

ORGANIZATION

History of Engineering Program

DATE

March 7, 1978

STREET & NUMBER

Box 4089 Texas Tech University

TELEPHONE

(806) 742-3591

CITY OR TOWN

Lubbock

STATE

Texas

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

Thomas W. Mel...

TITLE

State Historic Preservation Officer

DATE

6-9-78

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

Charles A. ...

DIRECTOR, OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION

DATE

8-8-79

KEEPER OF THE NATIONAL REGISTER

ATTEST:

Marcella Sheff

DATE

7-2-79

KEEPER OF THE NATIONAL REGISTER