1616

NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Elephant Butte Historic District
other names/site number N/A

2. Location

street & number roughly extends from Ash Canyon west to Mescal Canyon, and north to Long Ridge ☐ not for publication
city or town Elephant Butte ☒ vicinity
state New Mexico code NM county Sierra code 051 zip code 87935

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this ☐nomination ☐request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☐meets ☐does not meet the National Register Criteria. I recommend that this property be considered significant ☐nationally ☐statewide ☐locally.
(☐See continuation sheet for additional comments.)

Edward Friedman 12/18/96
Signature of certifying official/Title Date

Federal Preservation Officer
State or Federal agency and bureau

In my opinion, the property ☒ meets ☐does not meet the National Register criteria. (☐See continuation sheet for additional comments.)

Willis N. Shelley 10/17/96
Signature of certifying official/Title Date

S.H.P.O.
State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:
☒entered in the National Register.
☐See continuation sheet.
☐determined eligible for the National Register.
☐See continuation sheet.
☐determined not eligible for the National Register.
☐removed from the National Register.
☐other, (explain:)_____

Signature of the Keeper — Date of Action

Beth Boland — 2/10/97

Elephant Butte Historic District
Name of Property

Sierra County, New Mexico
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- ☒ private
- ☐ public-local
- ☐ public-State
- ☒ public-Federal

Category of Property
(Check only one box)

- ☐ building(s)
- ☒ district
- ☐ site
- ☐ structure
- ☐ object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
30	28	buildings
34	1	sites
10	9	structures
0	0	objects
74	38	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

_____

Number of contributing resources previously listed in the National Register

2

6. Function or Use

Historic Functions
(Enter categories from instructions)

EXTRACTION/waterworks
EXTRACTION/energy facility
DOMESTIC/camp
RECREATION AND CULTURE/outdoor recreation
GOVERNMENT/government office

Current Functions
(Enter categories from instructions)

EXTRACTION/waterworks
EXTRACTION/energy facility
RECREATION AND CULTURE/outdoor recreation
GOVERNMENT/government office

7. Description

Architectural Classification
(Enter categories from instructions)

Pueblo
Other: Territorial Revival
Other: gravity dam
No style

Materials
(Enter categories from instructions)

foundation Concrete
walls Sandstone, Steel, Adobe, Stucco, Concrete
roof Wood, Steel, Concrete
other Concrete, Steel

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

Elephant Butte Historic District
Name of Property

Sierra County, New Mexico
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

☒ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.

☐ **B** Property is associated with the lives of persons significant in our past.

☒ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

☒ **D** Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations
(Mark "x" in the boxes that apply.)

Property is:

☐ **A** owned by a religious institution or used for religious purposes.

☐ **B** removed from its original location.

☐ **C** a birthplace or grave.

☐ **D** a cemetery.

☐ **E** a reconstructed building, object, or structure.

☐ **F** a commemorative property.

☐ **G** less than 50 years of achieved significance within the past 50 years.

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

Areas of Significance
(Enter categories from instructions)

ENGINEERING
ARCHITECTURE
ARCHAEOLOGY – NON-ABORIGINAL
ENTERTAINMENT/RECREATION
LANDSCAPE ARCHITECTURE

Period of Significance

1908-1941

Significant Dates

1916

Significant Person
(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

Anglo-American, Hispanic American

Architect/Builder

Louis C. Hill

9. Major Bibliographical References

Bibliography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

☐ preliminary determination of individual listing (36 CFR 67) has been requested.
☐ previously listed in the National Register
☐ previously determined eligible by the National Register
☐ designated a National Historic Landmark
☐ recorded by Historic American Buildings Survey Record #_____
☐ recorded by Historic American Engineering Record #_____

Primary location of additional data:

☒ State Historic Preservation Office
☐ Other State agency
☐ Federal agency
☐ Local government
☐ University
☐ Other
Name of repository:

Elephant Butte Historic District
Name of Property

Sierra County, New Mexico
County and State

10. Geographical Data

Acreage of Property 2443

UTM References
(Place additional UTM references on a continuation sheet)

1. |1|3| |2|9|3|8|6|0| |3|6|7|2|3|8|0|
2. |1|3| |2|9|5|1|1|3|0| |3|6|7|2|0|8|0|
3. |1|3| |2|9|7|6|4|0| |3|6|6|9|5|1|0|
4. |1|3| |2|9|7|6|0|0| |3|6|6|8|9|1|0|

☒ See continuation sheet.

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title David A. Phillips, Jr., Principal Investigator
organization SWCA, Inc. Environmental Consultants date July 19, 1996
street & number 8100 Mountain Road, N.E., Suite 109 telephone (505) 254-1115
city or town Albuquerque state NM zip code 87110

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic district and properties having large acreage or numerous resources.

Photographs

Representative **black and white** photographs of the property.

Additional items
(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name USDI, Bureau of Reclamation, Albuquerque Area Office
street & number 505 Marquette, N.W. telephone (505) 248-5357
city or town Albuquerque state NM zip code 87102

7. Description

The following narrative is based on Phillips et al. (1994) and Phillips and Poague (1996).

SUMMARY PARAGRAPH

Elephant Butte Dam is an enormous concrete gravity dam built between 1911 and 1916. Surrounding the dam is a large number of historic buildings, structures, and archaeological sites dating as early as 1908 (but mostly to 1911-1916) and directly related to the construction and subsequent operation of the dam and reservoir. One building is the original Reclamation Service office building for the project, and many of the archaeological sites represent camps established by dam construction workers. Many surviving buildings and structures date to the New Deal and include CCC-built tourist and fish hatchery buildings, extensive CCC-built landscaping, and a PWA-built hydroelectric power plant.

CONTRIBUTING BUILDINGS AND STRUCTURES: INTRODUCTION

Since 1979, the National Register of Historic Places has included Elephant Butte Dam as entry 79001556, under Criterion A. The original nomination included a circular area 0.25 mile in diameter and centered on the dam, power station, and spillway. The purpose of the current study is to expand the existing nomination to include other contributing properties in the community.

Names of individual properties are followed by their inventory number in parentheses. This number corresponds to the "ID No." on Historic Building Inventory Forms in Appendix B of Phillips et al. (1994). Photographs of the structures are also provided in that appendix. (One structure described in Phillips et al. 1994, a highway bridge [ID No. 79], is unrelated to and lies outside the district.)

PRINCIPAL ENGINEERING FEATURES

Elephant Butte Dam and Spillway (01)

Elephant Butte Dam is one of three features listed in the original National Register nomination. Elephant Butte Dam, built between 1911 and 1916, is a gravity structure (in which water is held back by the mass of the dam). The spillway is at the right (northwest) end of the dam, and the outlet works and power plant are at the left (southeast) end of the dam. The dam foundation is "hard, fissured sandstone in irregular beds, containing pockets and interbedded strata of friable shale," which was treated by a "cement-grout curtain beneath [the] upstream cutoff trench" and "grouting of fissures and springs" (Eisenhart 1979:49).

The concrete used in the mass of the dam consisted of crushed rock and rock screenings blended with sand for aggregate, and a cement blend of Portland (52 percent) and pulverized sandstone (42 percent), along with quarried stones (of boulder size) amounting to 15 percent of total volume. Maximum size of aggregate was 3.5 inches, and maximum size of quarried stones was 8 tons (Eisenhart 1979:49). The following statistics are from Eisenhart:

Dimensions (feet):

Structural Height	301
Hydraulic Height	193
Top Width	18
Maximum Base Width	228

7. Description (continued)

Crest Length 1,674
Crest Elevation 4414.0

Volume (cubic yards):
Total Volume: 629,500
Volume Excluding Spillway 605,200

Outlet Works:
Service: 4 conduits, each controlled by one 60-inch balanced valve.
Sluicing: 2 conduits, each controlled by on 47-inch by 60-inch slide gate.
Power: 6 penstock openings leading to 73-inch steel penstocks, which join in pairs at the face of the dam to form three 96-inch penstocks leading to the power plant.
Capacity at Elevation 4407 (cubic feet per second):
Service 5,300
Sluicing 3,100
Power 2,400

The remnants of the concrete flume used during initial dam construction are visible on the right (west) side of the base of the dam. The only change noticed for the dam itself is the replacement of the original globe lamps at the crest with urn-shaped lamps.

Physically connected to Elephant Butte Dam, the spillway is a separate engineering structure and is the second feature listed in the original National Register nomination. It consists of an uncontrolled concrete ogee weir (upper spillway) and concrete-lined chute (lower spillway) at the northwest end of the dam, with four circular openings (each 10 feet in diameter) through the base of the weir. Each of the openings is controlled by a cylindrical gate (Eisenhart 1979:49). The following data are from Eisenhart:

Crest Length (feet) 295
Crest Elevation (feet) 4407.0
Capacity at Elevation 4415 (cubic feet per second):
Weir 26,000
Conduits 8,750

The weir was completed during construction of the gravity dam (1911-1916); the chute was added in 1921. The floor of the chute is reinforced concrete and is one to two feet thick. The upper walls of the chute are up to 22 feet tall and are gravity walls of concrete with plums. The lower walls are reinforced concrete cantilever walls. Once it narrows, the chute is 50 feet wide and between 15 and 25 feet deep.

Elephant Butte Embankment (82)

The impoundment area for Elephant Butte Dam included a gap in the hills northwest of the dam. This gap was considered for the reservoir spillway, but is in unconsolidated sediments and the spillway was therefore built next to the dam. To plug the gap, construction included a rock and earth embankment about 500 m long, with a triangular cross-section. Construction took place in 1914 and 1915.

In a typical section (Station 13+35), and as first built, the embankment was about 60 m wide; the downstream third was built of rock fill and the upstream third was built of rolled damp earth. Burns (1922:92) described the embankment as follows:

7. Description (continued)

> The section adopted was a combined earth and rock fill, with a crest length of 20 feet and a maximum height of 59 feet. The axis was on a tangent... to take advantage of the favorable topographic feature. The upstream, or water side, section of the embankment is an earth fill with 3:1 and 1/4:1 slope overlapping against the rock section on the downstream side. The water face was covered with a crushed stone cushion and hand placed rock riprap, 1 foot and 2 feet normal to the slope respectively, with a heel trench 3 feet deep and 4 feet wide at base. The downstream section is a rock fill face with face slope 1-1/4:1, the face hand laid, fine rock placed adjoining earth section and larger toward the face, and with a toe trench 5 feet deep and 5 feet base.

The dry-laid sandstone in the upstream face of the embankment weathered quickly, and in 1921 the Reclamation Service added a reinforced-concrete facing and toe wall. (Preliminary excavation work for the latter began in late 1920.) The construction crew shoveled and sluiced 6,200 cubic yards of gravel into the voids between the sandstone facing, built an 8-inch grid of reinforcing bars, and poured an average of 4.5 inches of concrete on the face. The concrete toe wall was 2 feet thick and 5 to 13 feet deep. Also in 1921, a concrete parapet wall was added to the top of the upstream face (Burns 1922:93-94, 98).

In 1985 and early 1986, the embankment was stabilized with a berm placed along the downstream side of the bank (BOR 1986: 13; Boyd and Etchieson 1986:15). Berm fill was taken from the original borrow pits. The berm is about 280 m long, 38 m wide at the base, 30 m wide at the top, and 6 to 9 m tall. Currently, a paved roadway extends along the top of the embankment.

Power Station (03)

The power station is the third feature mentioned in the original National Register nomination (as a noncontributing building, due to its age at that time) and was built between 1938 and 1940. The structure has poured concrete foundations and walls. Large structural glass windows are present on the dam side and river side, while metal casement windows are present in the other walls. Doors include large folding steel doors with multiple lights and a steel entry door with a large light. The entry door may be a recent replacement.

The main part of the building is 120 feet by 46 feet by 79 feet tall, and houses three generators whose upgraded capacity is 9,000 kW apiece. A 40-ton crane is built into the structure to service the generators.

The east extension is 87 feet by 19.5 feet by 44 feet tall. The lower story of this section includes a tool room, a transformer vault, a terminal cabinet and storage room, a storage battery room, and a pump room. The upper story includes the office, a switch gear room, the main control room, bathrooms, and a fan room.

The south extension is 75 feet by 22 feet by 22 feet tall, with an unused basement level of two rooms. This part of the building includes an oil storage room and an air compressor and oil purifier room.

On the roof of the building are electrical switchyards. Behind the power station is a retaining wall of rough stones in cement mortar; the wall resembles CCC rock work elsewhere in the district.

HATCHERY GROUP

Except for the pump house and community jail from the dam construction era, the contributing elements in this group were built by the CCC.

7. Description (continued)

Masonry-Lined Arroyo and Small Bridges (68, 69)

One CCC task was to improve the road from the base of the dam to the hatchery area (Fiock 1938:18). Where this road crossed an arroyo, the CCC lined the sides and bottom of the arroyo with rough masonry (stones in cement mortar) and built a pair of identical small bridges. The bridges are poured concrete flat bridges, and are thus simple engineering features. What is distinctive is a masonry veneer on both sides of each bridge, simulating a structural arch with keystone. As such, the bridges and lined arroyo are examples of the local CCC masonry work, which dates between 1934 and 1941.

Fish Hatchery Residence (66, 67)

ID No. 66 was built between 1937 and 1939, in the Pueblo revival style. Walls are finished with cement stucco. The roof is flat; drainage is through rectangular sheet metal *canales* at the front and rear. Windows are aluminum frame replacement units in openings with exposed massive wood beam lintels. Doors include one vertical plank door and one flush wood replacement unit, in openings with massive wood beam lintels. Chimneys and two corner porches are present.

The wiring and plumbing diagram for the building has survived and is dated September 1938. Based on the diagram, the interior includes a living room, a dining room, a kitchen, three bedrooms with closets, a bathroom, a hallway, and an interior stairway leading to a basement.

ID No. 67 is a small outbuilding connected to ID No. 66 by a wall finished in cement stucco. The foundation is concrete and the walls are concrete block with a random-pattern cement stucco finish. The roof is flat and drains to the side through a single sheet-metal *canal*. The parapet is simple. The door is missing, but a screen door remains. This outbuilding appears on the original plot plan for the hatchery.

CCC rock work curbs and yard pavements are present in this part of the hatchery area. A large stone and cement barbecue grill is in the back yard and may also be a CCC product.

Hatchery Office Building (63, 64)

ID No. 64 was built between 1937 and 1939 and is a hatchery office building in the Pueblo revival style. The building incorporates a double vehicle bay flanked by offices, one of which has an exterior chimney. Walls are rock in cement mortar, with cement stucco finish. A battered buttress is present next to the vehicle bay.

The office roofs are flat and drain to the side through rectangular sheet-metal *canales*, while the vehicle bay roof has a rear drip line. At the front and rear of the vehicle bay, the exposed roof beams are trimmed to resemble *zapatas*.

The windows are wood casement style with massive exposed wood beam lintels. They include eight windows with 2 v(ertical) by 2 h(orizontal) lights (one window is boarded up), one tandem window formerly with 2 v. by 2 h. lights per sash (but now with a single large light), one triple window with 2 v. by 2 h. lights per sash, one window with 3 v. by 2 h. lights, and one tandem window formerly with 3 v. by 2 h. lights per sash (but now with single large lights).

Doors have massive exposed wood beam lintels. The three entry doors are vertical plank and the two vehicle doors are sliding vertical plank.

ID No. 63 is a storage building connected to ID No. 64 by a rock wall and wood vehicle gate. The foundation is concrete; the walls are concrete block with a cement stucco finish. The roof is flat with a rear drip line, and consists of roll roofing over wood planks over wood beams. Windows are wood double-hung (4/4, 2 v. by 2 h. per sash). The door is a wood two-panel model.

7. Description (continued)

Both buildings appear on the original plot plan for the hatchery.

Pump House (65)

The original pump house for the water supply at Elephant Butte, this structure was started by 1911 and is rectangular with a round turret at one corner. In November 1939, the structure was reconditioned for use as the pump house for the hatchery (Bainbridge 1940:55). At present it used only for casual storage.

The walls are poured concrete and are finished with cement stucco. The roof is flat, with a simple parapet and drainage is through rectangular sheet-metal canales at the rear. Two wood casement windows are present, along with a large vertical-plank sliding door and a replacement vehicle roll-up metal door. The building's woodwork is deteriorating but the basic structure is sound. A cactus is growing on the roof.

A September 1911 photograph shows that when first built, ID No. 65 consisted of the turret (with crenelated parapet) and an attached wood or corrugated-metal building. A May 1912 photograph shows the structure in its present form, but with bare concrete walls and the crenelation extended onto the rectangular part of the building. The crenelation is most likely intact under the current stucco work. The original windows were wood double-hung models. As solidly built as it is, ID No. 65 could easily be restored to its original appearance.

Hatchery Pond Area (71)

This area is the remains of the hatchery ponds and related features, which were built between 1937 and 1939. Fourteen fish ponds were built, ranging in size from about 125 by 50 feet to about 220 by 120 feet. The ponds have been backfilled in places but the basic configuration continues to be obvious. Also present are a series of concrete raceways (about 50 by 15 feet), and four stone-lined drainage ditches (each about 200 feet long),with culverts, to channel storm runoff through the pond area to the Rio Grande.

Holding House and Hatchery (61)

This severely rectangular building appears on the original plot plan for the hatchery and was apparently built between 1937 and 1939. The building has a concrete foundation and concrete block walls finished with cement stucco. The roof is flat and drains through two sheet-metal canales at the rear. Windows are structural glass at the front and southwest elevations; the rear and northeast elevations each have a metal casement window (of 3 vertical by 3 horizontal lights). The main entry door is steel with four lights (2 v. by 2 h. lights); two similar doors are present in the northeast elevation. The building is next to the Rio Grande, below the level of the adjacent road; stone steps lead from the road down to the main entry.

Community Jail (60)

This thick-walled, all-concrete building was built in 1911 and measures 20 by 10 feet. It has been referred to, inaccurately, as the last surviving structure from the Elephant Butte townsite (see ID No. 65). The walls are uncoated and the parapet is crenelated. Two small barred window openings are present, one on each side of the door. The latter has a wood core with sheet metal sheathing, and has a small barred opening. The interior includes four barred cells; handwriting on the walls reveals details of the lives of prisoners.

In later years, the building was used for storing explosives (the words "Powder House" are painted on the outside of the door). The original plot plan for the hatchery (ca. 1935) labels the building as a "U.S.B.R. Explosive House."

7. Description (continued)

WATER TANK HILL GROUP

Water Tank Hill is dominated by the structure that inspired its name, but also includes a CCC-built picnic area and several buildings and structures. At some point after 1934, the BOR leased recreational home sites on the hill.

The Water Tank (54)

This hilltop structure, a local landmark, is a concrete water tank that measures 47 feet in diameter and is 23.5 feet tall. Walls are 12 inches thick. Capacity is 300,000 gallons. The conical roof consists of replacement composition shingle sheathing over a wood frame, set on wood cribbing at the top of the concrete wall. A square wood vent structure is present at the peak.

The tank, which is still in use, is popularly identified as the first structure built during construction of Elephant Butte Dam. This assertion is correct; the tank was built from August 1908 to May 1909 (Gault et al. 1913:13), before work was temporarily halted due to litigation.

CCC Rock Work (57)

On top of Water Tank Hill, next to the tank, is a small CCC-built picnic area. It includes a serving table and two picnic tables (with benches) made of concrete slabs on stone-and-cement supports. Also present is a large barbecue pit made of stones in cement mortar, randomly placed large sitting-stones, and dry-laid stone curbs. Elsewhere on the hill is a series of retaining walls of large dry-laid stones. ID No. 57 was not directly dated but is clearly derived from CCC activities between 1934 and 1941.

HOSPITAL CANYON GROUP

In Hospital Canyon, the CCC built four cottages, two of which have survived and are currently used as staff housing by Elephant Butte State Park. (The other two were between ID Nos. 39 and 40). The Hospital Canyon housing area also contains CCC rock curbs which were not recorded separately.

State Parks Housing, No. 15 (39)

This Pueblo Revival structure, completed in 1941, has a glassed-in porch at one side of the building. Walls are stone in cement mortar, covered with cement stucco. The roof is flat, with a drip line to the rear. Windows are aluminum frame replacement units set in openings with exposed wood beam lintels. Entry is by a wood-frame French door.

The porch has a wood beam and plank ceiling; the exposed "beam ends," which are fakes, are trimmed to resemble *zapatas*. One rectangular sheet-metal *canal* drains the roof. The porch floor consists of flagstones set in cement mortar.

The lower walls of the enclosed porch extend from the main building walls. The room is glassed in with sliding wood windows (each sash having 2 vertical by 3 horizontal lights).

The original plans for the building have survived and are dated January 1941; they are labeled Design A. The original windows appear to have been wood casement windows and the original door a wood five panel model. The specified configuration of the enclosed porch was an open concrete porch with a screen wall on one side. The specified foundations are rock in cement mortar. The interior included a living room, kitchen, two bedrooms with closets, and bathroom.

7. Description (continued)

The garage was built in 1947 (BOR 1948:30), but the materials and style fit well with those of the CCC-built residence. Walls are stone set in cement mortar. The roof is flat, with a drip line to the rear. The two car doors are wood panel vertical-opening doors with exposed wood beam lintels. Two windows with exposed wood beam lintels are present; one has a fixed wood frame and the other is boarded up.

State Parks Housing, No. 18 (38)

This structure, completed in 1941, is the mirror image of ID No. 39. The front porch has been enclosed, however, and the entry could not be seen. A small, recent porch has been added next to the enclosed porch. This recent addition has concrete block posts and a corrugated metal shed roof.

The garage resembles that at Housing Unit No. 15, except that both windows are boarded up. The garage presumably was also built in 1947.

LAKE SIDE GROUP

The following properties are described in their order of distribution from northwest to southeast along the shore of Elephant Butte Lake.

Pergola (34)

This impressive pergola built by the CCC includes supporting pillars of partly dressed stone in cement mortar. The pillar foundations are of the same materials. The current woodwork consists entirely of replacement beams (square primary, round secondary) of treated wood; the remnants of old vines are growing at the bases of a few pillars, suggesting that the CCC planted the vines to cover the pergola. A photograph taken in July 1983 (BOR 1983) shows round beams and more extensive vines. The pergola dates between 1934 and 1941, most likely between 1938 and 1940.

Rest Rooms (33)

This rock-walled structure was built by the CCC. The roof is flat and drains to the rear. The parapet is simple and has a coping of coursed, shaped, brick-sized stones in imitation of Territorial Revival dentile courses. Windows are wood casement; doors are flush. Both windows and doors have massive beam lintels and concrete sills. Floors are concrete slab. Matching stone privacy walls extend from the sides of the building. Concrete wheelchair ramps have been added to the facility but are unobtrusive. The rest rooms date between 1934 and 1941, most likely between 1938 and 1940.

Concession Building (32)

In 1937 and 1938, the CCC built a concession building which currently serves as restaurant and bar. The building has a shallow V shape; the southern section is 39 feet long and 47 feet wide, while the northern section is 39 feet long and 40 feet wide.

The walls are of stone in cement mortar, covered with cement stucco. The parapet is simple and includes a coping of dressed, coursed, brick-sized stones. The roof is flat; drainage is through rectangular sheet metal *canales*, which are primarily at the rear of the building but also at the side. The original windows have pedimented lintels and wood casements. Entry is by wood French doors. The interior floors are concrete slabs.

7. Description (continued)

Formerly, a *portal* extended across the front of the building. This was screened in during the early years of operation (Boyd and Etchieson 1986:102, Fig. 18). At some point after July 1983, when the building interior was remodeled and the dining area expanded, the *portal* was glassed in with large picture windows (cf. BOR 1983); however, the visual effect is similar to that created by the historic porch screening.

The porch ceiling consists of wood beams and plank decking; the beam ends are exposed and trimmed to resemble *zapatas*. The porch floor consists of large flagstones set in cement mortar.

The building is identified as Territorial Revival style, based on the coping and pedimented lintels. A building plan dated March 1937 indicates the original layout of the interior. Included were a concession room (with lunch counter, two tables, and store counter and shelves), kitchen, office, large lounge with fireplace, mens' and women's bathrooms and dressing rooms, attendants' quarters (two rooms), a storage room, a telephone room, and hallways. The elevation drawings were last revised in February 1938 and call for panel doors with hand-carved friezes and portal posts with corner flutes and capitals.

Reclamation Service Office Building (41)

Behind the concession building, a short way up a canyon, is the original administration building for Elephant Butte Dam. Historic documents usually refer to it as the "Office Building." The surviving floor plan is dated February 1911 and a photograph dated September 1911 shows the completed building. The building is 100 feet long by 49 feet, 9 inches wide, including the 10 foot wide porch. The building is on a slope; the main floor is at grade on the building's west side and above grade on the east side.

The foundation is concrete. Walls are adobe, with a patterned cement stucco finish dating to the original construction (9/11). The roof is hipped with gablet, sheathed with wood shingles painted green. An interior brick chimney protrudes from one end of the roof. The building includes a porch extending across the entire rear of the structure, under the main roof.

The main floor includes eleven rooms plus men's and women's toilets and a cross-shaped interior hallway. On the plans, main floor rooms are identified as a drafting room, a print room, a vault (with 12 inch thick concrete walls), a telephone room, a storeroom, a disbursing room, a timekeeper's room, a chief clerk's office, and three engineer's rooms. The lower floor incorporates two walk-in basement rooms accessible from the east side. The southern basement room contained the furnace, which vented through the chimney.

Access to the building is by a single door from the west side of the building. On that side, access to individual rooms is from the hallway; on the east side, access is from both the hallway and the porch. An additional doorway provides access to the porch from the hallway; in all, seven doors are present in the upper level of the east elevation. Access to each basement is through a single door.

Twenty-six windows are present on the main floor, in every room except the vault. Five additional windows are present in the two basement rooms.

A pre-CCC inventory describes the building as having 11 rooms, 4575 square feet of net interior space, 1100 square feet of porch space, and two bathrooms. The building interior was remodeled by the CCC to serve as a hotel; later, it was again used as offices by the BOR, until the new administration building became available in 1973. The building was then used by the Youth Conservation Corps until 1980. At present, doors and windows are boarded over to protect the building, but the building is sound (Kline 1994).

7. Description (continued)

Boat House (30)

The plans for this CCC-built boat house were last revised in December 1937; the building was completed in 1939. The boat house forms an arc against a hillside; from east to west, the boat house originally included a locker room, a locker/*portal* area, a workshop, a second *portal* area incorporating a forge and bathroom, and an oil storage room. The boat house is 136 feet long and varies in width from 9 feet, 3 inches to 21 feet, 6 inches.

The foundation consists of (1) concrete and (2) rock in cement mortar. Walls are stone; the parapet is simple and has a coping of shaped and coursed brick-sized stones. The roof is flat and was built on wood beams; the original decking was apparently wood planks, but these have been replaced in most of the building with plywood sheets. Floors are concrete slabs.

Wood casement windows are present throughout and incorporate in-swinging sashes of 4 (vertical) by 2 (horizontal) lights. Exposed beam lintels are present over the window openings, to which welded rebar security grills have been added in recent years. Entry doors are wood vertical plank; large doors are wood vertical plank swinging doors with inset hand-carved friezes. The two *portales* have exposed beam ends carved like *zapatas*; two of the posts retain the strip molding "capitals" called for in the building plans.

The building is identified as Territorial Revival style based on the coping and "capitals." A drainage ditch, lined with stones set in cement mortar, is present behind the building; a visually similar retaining wall extends part way up the face of the hill. The boat haul rails that once extended into the central unit of the building are preserved at the edge of the lake.

A July 1983 photograph (BOR 1983) shows a gas pump (no longer extant) in front of the boat house.

Lake Side Landscaping (31, 40)

An area of extensive CCC masonry work, terracing, and landscaping is present in the lake side recreation area and extends into the hills behind. Work on the landscaping probably took place from the arrival of the CCC in 1934 until its departure in 1941. Some of the stone work in this area borders on the Cyclopean. In the field, part of the landscaping complex along the lake shore was recorded separately (as ID No. 31), and will be described first.

ID No. 31 represents continuous CCC masonry work (rough stones in cement mortar) in an arc along the edge of Elephant Butte Lake, opposite the pergola, concession building, and boat house. The principal feature is a continuous retaining wall that forms the current lake edge and is topped by a pipe safety rail (possibly a later addition). At the boat house end, built into the retaining wall, are 10 stone benches facing the lake. Opposite the concession building are steps and a zigzag pedestrian ramp leading down into the water. Opposite the pergola are three built-in benches and oversized steps, the latter forming bleacher-style seating.

ID No. 40 represents additional CCC masonry work that extends from the boat house southeast along the lake shore to the campground, and south into the adjacent hills. The CCC concentrated its work around the old BOR administration building (ID No. 41), and around other early structures--the Reclamation Service hotel and cottages--that were present at the time of the work but were later razed. In these areas, the hillsides have been massively terraced, which must have required the hauling and placement of large amounts of fill behind the retaining walls. The rock work consists of dressed and rough stone, either dry-laid or in set in cement mortar, forming retaining walls, stairways, and curbs; one segment incorporates a concrete block marked "CCC/1939."

7. Description (continued)

The location of the former Reclamation Service hotel is now used as for parking. The location of the former cottages is used as a picnic area, but the picnic tables are recent all-concrete models--not the CCC-built rock-and-concrete tables present in the campground and on Water Tank Hill.

Elsewhere in the area marked as ID No. 41, the rock work consists primarily of curbs along roadways. The entire area is dominated by mature trees, many of which must have been planted by the CCC. Given the contrast with the bare hills surrounding the lake, the overall effect is of an oasis.

Lake Side Tourist Cabins

East of the concession area and marina is a series of tourist cabins built by the CCC. The cabins were built between 1939 and 1941 (possibly by 1940), in the Pueblo Revival style; shared elements include flat roofs, walls with rounded corners and simple parapets, and exposed wood beam lintels over windows and doors. Foundations are concrete (?), walls are stone with cement stucco finish, and roofs are flat. Main roof drainage is by gutters and downspouts at the rear. Interiors have been completely remodeled and the original chimneys, while still present, are capped off. Originally, the walls had exposed stone work but at some point between 1980 and 1983 the cabins were stuccoed (cf. BOR 1983).

All of the cabins have flat roofs, with drainage through sheet-metal *canales*. Porch ceilings are of wood beams and plank decking, with protruding beam ends shaped to resemble zapatas. Porch floors are cement slabs. Low wing walls often extend from the porches.

Two types of door are present. The apparent original doors are wood five panel models with brass trim (knobs, large guard plates around the knobs, and large kick plates with vent holes). On several of the structures, wood flush models are present and may be replacements; they have the same brass trim, which may have been recycled when the door was replaced.

The cabins come in the following variations:

1) Small cabin; main portion of building L-shaped; corner porch with exposed beam ends to side of building: Cabins 1, 3, 7, and 9.

   1b) Similar design, but with one-room extension; main portion has T-shaped plan: Cabins 11 and 13.

   1c) Similar design, but with larger porch and the exposed porch beam ends to front of building: Cabin 12.

2) Main portion of building L-shaped; one window in front elevation; corner porch with exposed beam ends to front of building; long wing wall extends to side from front of building: Cabins 4, 6, and 10.

3) Main portion of building L-shaped; one large and one small window in front elevation; corner porch with exposed beams to front of building; wing wall extends to front from corner of building: Cabins 14 and 15.

4) Main portion of building rectangular; porch across front of building with exposed beam ends to front of building; stepped wing wall extending to right: Cabins 2, 5, and 8.

Descriptions of individual cabins will focus on elements not shared by all of them. The orientation of Cabin No. 1 is close to due north; to fit the curve of the lake edge, the other cabins are progressively oriented more to the northeast. The cabin area includes a number of mature trees (and stumps) most likely planted by the CCC.

7. Description (continued)

Cabin No. 1 (11)

This building with its corner porch has a five-panel door. As is common in this design, two short, low wing walls extend from the corners of the porch.

Cabin No. 2 (12)

This building has a flush wood door. The porch extends across the front and is partly enclosed by a low wall, the line of which is continued past the porch to create a low, stepped wing wall. The wing wall incorporates a concrete block marked "CCC/1940."

Cabin No. 3 (13)

Except for orientation, Cabin No. 3 is identical to Cabin No. 1.

Cabin No. 4 (14)

This building incorporates a corner porch partly enclosed by a low wall. A scalloped, L-shaped wing wall extends from the front of the building to enclose an open extension of the porch. Entry is through a wood five-panel door. One exposed beam end is missing.

Cabin No. 5 (15)

Except for orientation, Cabin No. 5 is identical to Cabin No. 2, including the presence of a concrete block marked "CCC/1940."

Cabin No. 6 (16)

Except for orientation, Cabin No. 6 is identical to Cabin No. 4.

Cabin No. 7 (17)

Except for orientation, Cabin No. 7 is identical to Cabin No. 1.

Cabin No. 8 (18)

Except for orientation, Cabin No. 8 is identical to Cabin No. 2.

Cabin No. 9 (19)

Except for orientation, Cabin No. 9 is identical to Cabin No. 1.

Cabin No. 10 (20)

Cabin No. 10 is almost identical to Cabin No. 4 but is oriented more to the east, has a stepped and scalloped wing wall instead of a scalloped wing wall, and has a flush door rather than a five panel door.

7. Description (continued)

Cabin No. 11 (21)

This cabin appears to be a variant of the design for Cabin 1. It includes a one-room extension built to the side. Entry is by a wood flush door.

Cabin No. 12 (22)

This cabin does not match any other one, though it somewhat resembles the design for Cabin 1. Differences include a larger corner porch, exposed porch beam ends to the front of the building instead of to the side, an interior rather than corner chimney location, and the presence of stone steps at the edge of the porch. Entry is by a wood five-panel door.

Cabin No. 13 (23)

This cabin resembles Cabin 11. It lacks the low, small wing walls at the corners of the porch; instead, a low wall was built across the front of the porch. This wall incorporates a concrete block marked "CCC/1940." Entry is by a wood five-panel door.

Cabin No. 14 (25)

Cabin No. 14 has a low stepped wing wall at the corner of the porch. The building incorporates a concrete block marked "CCC/1940." Entry is by a wood five-panel door.

Cabin No. 15 (26)

Cabins Nos. 14 and 15 are mirror images of each other, and the space between them is paved with flagstone steps. The only difference is that Cabin 15 lacks the concrete marker present in the wall of Cabin 14.

Campground (28)

Southeast of the tourist cabins, the CCC crews rebuilt the existing BOR motor camping area. The campground, which is still in use, is centered on a pipe flagpole set in concrete. The road from the concession and cabin area splits and passes on both sides of the flagpole to form a D-shaped ring of pavement. Inside this ring is a large barbecue pit built of stones set in cement mortar; the pit incorporates a concrete block marked "CCC/1939" (reflecting the completion date for this project). Also present are a large serving table and nine picnic tables, built of concrete slabs on supports of large stones in cement mortar. A number of large quarry stones are set about as sitting-stones. Many of the stones are spaced in a circle, "fairy-ring" style.

Outside the ring of pavement, where the car camping spaces are located, are six low, small (individual) barbecue pits made of rough stones in cement mortar. A number of mature trees are present and presumably were planted by the CCC.

HILLS GROUP

Early Utility Building (51)

ID No. 51 has a foundation of rock set in cement mortar; walls are exposed adobe brick. The gable roof is corrugated metal over wood rafters. At the center of the peak is a gable-roofed wood vent structure. Windows are single wood sashes (with 2 vertical by 3 horizontal lights) in openings with concrete lintels and sills. The vertical plank doors have concrete lintels. One large door is present; it is a vertical plank out-swinging double door.

7. Description (continued)

The building is shown on a 1934 BOR map and is therefore at least 60 years old. Along with the Water Tank (ID No. 54) and the Reclamation Office Building (ID No. 41), the building appears to be one of three East Camp structures predating the arrival of the CCC. During field recording we believed that ID No. 51 dated to the original construction of Elephant Butte Dam, but the building does not appear on maps predating 1934.

NON-CONTRIBUTING BUILDINGS AND STRUCTURES: INTRODUCTION

The following buildings and structures are non-contributing elements of the district, in many cases because of their age. In addition, the Elephant Butte Dam and Community incorporates an infrastructure of paved and unpaved roads, electrical transmission lines, and water and sewer lines. Elements of this infrastructure are over 50 years old, but unless specifically mentioned they do not appear to involve relevant engineering features or historic associations. Photographs of the buildings and structures are included in Appendix A of Phillips et al. (1994).

DAM MAINTENANCE YARD GROUP

This group, located at the base of the dam, is enclosed by a recent chain-link fence that was not recorded as a separate feature.

Records Storage Shed (02)

A small utility building is present between the base of the dam and the power house. The building has a concrete slab foundation supported on steel beams; the walls and gable roof are of steel. This is most likely the building mentioned in a report on activities in 1961:

> During August, first work was begun on construction of a small building between the power plant and the dam into which the domestic water chlorination equipment will be relocated in order to remove the chlorine hazard from the water plant (BOR 1962:6).

The building is currently used for records storage.

Chlorination Room (04)

This small building is used for chlorination of the water supply at the base of the dam. It has a concrete slab foundation, concrete block and cement stucco walls with metal vents, and a flat roof with roll roofing over wood beams. The windows have aluminum frames; a wood flush entry door is present. Since ID No. 4 is the functional replacement for ID No. 2, it almost certainly postdates 1961.

Warehouse and Welding Shop (05)

This building has a concrete slab foundation, steel walls, and a steel gable roof; it incorporates aluminum frame windows, large steel roll-up doors, and steel flush entry doors. The building was completed in June 1973 (BOR 1974:8).

7. Description (continued)

Machine Shop (06)

This building closely resembles the previous one. It has a concrete slab foundation, steel walls, and a steel gable roof, and incorporates aluminum frame windows, large steel roll-up doors, and steel flush entry doors. The building was completed in November 1973 (BOR 1974:8).

New Administration Building (07)

The building that houses the offices for the Rio Grande Project's Power and Storage Division does not resemble any other buildings in the proposed district. The building has a concrete foundation, concrete "slump block" walls, and a flat roof. The parapet has a coping suggestive of the Territorial Revival style. Windows and glass doors have aluminum frames and are set in arched openings. The building was completed in June 1973 (BOR 1974:8). Associated landscaping is also clearly recent and includes a metal flagpole, crushed cinder bedding, yucca and cactus, large pieces of petrified wood, and a 1976 monument to the designation of the dam as an A.S.C.E. landmark.

Storage Shed (08)

This storage building has a concrete slab foundation and steel walls and gable roof. Three open bays are present, along with one closed bay with a large steel roll-up door. The closed bay incorporates a steel flush entry door. The building is clearly less than 50 years old; Miller (1981) dates it to the 1960s or 1970s. Based on its similarity to ID Nos. 5 and 6, the building dates to about 1973.

Carpenter Shop (09)

The carpenter shop has a concrete slab foundation and steel walls and gable roof, the latter with five turbine vents along the peak. Two large steel roll-up doors are present, along with two steel flush entry doors with large lights. This building is clearly less than 50 years old; Miller (1981) dates it to the 1960s or 1970s. Based on its similarity to ID Nos. 5 and 6, the building dates to about 1973.

Flammables Storage Shed (10)

This building has a concrete slab foundation and steel walls and low gable roof. It is open-ended, with two hurricane-fence panels as out-swinging "doors." The building is on one corner of a much larger slab, which is being used for open-air storage. Given its appearance and similarities to the other buildings in the yard, this structure is less than 50 years old. Based on its similarity to ID Nos. 5 and 6, the building dates to about 1973.

HATCHERY GROUP

Southwest Region 4 Headquarters (62)

This state parks structure is a recent attempt at Spanish-Pueblo Revival style. The foundation is concrete; walls are finished with cement stucco. The roof is flat and drains through metal *canales* at the rear, except at the building's southwest end (where a shed roof has been incorporated into the design). Windows have anodized aluminum frames. Entry is through steel flush doors with large lights.

7. Description (continued)

The *portal* has a concrete slab floor; the ceiling consists of beams and plank decking. The beam ends are exposed and trimmed to resemble *zapatas*. The posts are wood 4 by 6 inch lumber, with small *zapatas*; the posts and bearer beam are joined with metal plates and bolts.

The building is not marked on the 1980 photorevised version of the local USGS topographic sheet, so it probably dates to that year or later.

Small Utility Building (70)

This building is about 6 feet tall and about five feet square in plan. The foundation is concrete; the walls are painted concrete block. The roof is flat with roll roofing and wood fascias. Two small openings in the walls are covered with metal plates. This appears to be a small pump room or similar structure. The age could not be documented, but given its construction materials and style it most likely dates to 1950 or later.

Steel Water Tank and Pump House (72)

A steel water tank and adjacent pump house are located on the berm of one of the ponds of the abandoned hatchery. The tank is bolted together. The pump house is on a concrete slab base; it has painted concrete block walls, a flat roof with a turbine vent, and steel flush swinging double doors. The tank and water tank appear to postdate the establishment of the state park in 1964, and most likely are part of a water supply system installed in 1968 (BOR 1969:6) or 1980-1981 (BOR 1983).

Walled Picnic Shelters (73)

Five identical, partly enclosed picnic shelters have been built along the top of a berm of the old fish hatchery, next to the Rio Grande. The foundations are concrete slab and the walls are concrete block finished with cement stucco. The roofs are built-up shed roofs with a low pitch, on square primary and secondary beams and plank decking. The shelters postdate the founding of the state park in 1964, and in fact appear to be quite recent. Shelters of this type were documented by a 1973 BOR inspection (BOR 1983).

Metal Picnic Shelters (74)

These two picnic shelters are in the same area as those recorded as ID No. 73, but appear to be older; they probably date to the early years of the state park (i.e., 1964 or later). The sheds consist of corrugated metal sheets over steel beams, which are resting on four metals posts set in concrete. Under each shed is a separate concrete slab.

Stream Gaging Station (75)

In the hatchery pond area, next to the Rio Grande, is a small utility building that contains automated equipment for a stream gaging station. The foundation is concrete and the walls are painted concrete block. The roof is a flat concrete slab. The door is a steel flush model. Near the utility building, a steel cable is suspended across the Rio Grande from two steel supports with concrete bases. A small cable car is present.

The first permanent gaging station was established at the dam in 1916, and a 1935 BOR map indicates a station in place at the location of ID No. 75. However, the current utility building and cable structure are replacement structures and appear to be quite recent.

7. Description (continued)

State Parks Rest Rooms (76)

At the downstream end of the old hatchery area is a state parks rest room building built in 1980 and 1981 (BOR 1983). The concrete slab foundation supports walls of painted concrete block. The roof is flat with wood fascias. At each of the two entries is a porch/privacy wall consisting of concrete block walls and pillars and a corrugated metal roof over exposed wood beams. The doors are steel flush models. Unobtrusive wheelchair access ramps have been added.

State Parks Housing

Two residences are located at the mouth of a side canyon at the downstream end of the hatchery complex. Two residences are also shown in this area on a 1940 building plan for the hatchery complex, but ID Nos. 77 and 78 appear to be sited differently than the planned buildings. Given their metal casement windows, ID No. 77 and 78 almost certainly postdate World War II.

ID No. 77

The foundation of this residence is concrete; walls are concrete block finished with cement stucco. The roof is flat and is drained by rectangular sheet metal *canales*, one to each side. The parapet is simple. A small porch is present and is drained to the front by two rectangular sheet metal *canales*.

Windows are metal casement in various configurations: one window has 5 v(ertical) by 4 h(horizontal) lights, six have 4 v. by 2 h. lights, two have 3 v. by 3 h. lights, and two have 3 v. by 2 h. lights. The front door is a flush wood model with three small lights.

The associated garage has a concrete foundation and walls of concrete block finished with cement stucco. The roof is flat and drains to the rear through two sheet metal *canales*. Openings include a single vertical-opening metal car door, a wood door with four panels and a large light, and a metal casement window (3 v. by 3 h. lights).

BOR documents at Elephant Butte Dam date the construction of this building to 1952--but also mention maintenance work in 1943 and 1944. The building appears on the 1958 version of the local USGS topographic sheet. Given the use of metal casement windows, the 1952 building date is correct, not the 1943 and 1944 dates for maintenance work.

ID No. 78

This structure is similar to ID No. 77. The foundation is concrete. Walls are concrete block with a cement stucco finish. The roof is flat, with drainage through two rectangular sheet metal *canales* at the rear. A small front porch is present; the porch roof is drained by a single rectangular sheet-metal *canal.*

The metal casement windows include four configurations: one with a large picture window flanked and topped by smaller lights, three with 3 v(ertical) by 3 h(orizontal) lights, four with 3 v. by 4 h. lights, and one with 2 v. by 2 h. lights. The front door is a wood flush model and the rear door is a wood multi-panel model with four lights.

An outbuilding was partly visible just behind the house. It has a concrete foundation, walls of concrete block finished with cement stucco, a flat roof, and a wood five-panel door. Also present are two recently erected carports. The first carport (for one vehicle) has a concrete floor, frame walls finished with wood panel siding, and a flat roof. The second carport (for two vehicles) is of wood post-and-beam construction, with open sides and a corrugated metal roof.

7. Description (continued)

BOR documents at Elephant Butte Dam date the construction of this building to 1960. The building does not appear on the 1958 version of the local USGS topographic sheet, but also does not appear in the 1980 photorevision that it must predate.

WATER TANK HILL GROUP

Communications Complex (58)

Next to the tank on Water Tank Hill is a small and clearly recent set of structures for microwave and other radio communications. The most prominent structure is a tall wood pole to which two antennas are attached. Next to the pole is a small utility building with a concrete foundation and wood frame walls finished with cement stucco. The hipped roof is wood frame with wood plank decking and roll roofing. A second small utility building, which is quite recent, is made of fiberglass with a flat roof. It is resting on concrete slabs and sports an antenna on its roof.

Vacation Homes

Prior to 1986, four houses were present on Water Tank Hill (Boyd and Etchieson 1986). Only three houses were seen in 1993-1994. No houses are shown on a 1935 BOR map but all three houses are shown on a 1948 BOR map in Boyd and Etchieson (1986:94, Fig. 12). As mentioned in Section 8, the access road to these houses was not completed until March 1938. The houses are therefore likely to be 46 to 56 years old; given their wood double-hung windows they may be more than 50 years old. The houses are on BOR land but are privately owned.

Tattman Cottage (55)

The name provided is from an undated map produced in the middle of this century. The house is on top of Water Tank Hill near the tank. Walls are coated with cement stucco; an exterior chimney is present. The roof is flat. Windows are varied, including wood double-hung (3/1 and 1/1), wood casement, and large wood picture windows. The door is a flush wood replacement unit. The house is two stories tall; it is on a slope, with the upper story and main entry at the level of the adjacent road. An open porch is attached to the east side of the house, while a single-story extension is present on the west side.

Unidentified House (56)

This house is on top of Water Tank Hill, next to ID No. 55. Walls are finished with cement stucco. The main portion of the house has a flat roof and simple parapet; the rear addition includes a hipped roof with composition shingle sheathing. Windows are primarily wood double-hung models (3/3, 3/1, and 1/1), but aluminum frame replacement windows are present in the front elevation.

Like ID No. 55, this is a two-story house on a slope, with the upper story at the level of the adjacent road. The main entry has a wood flush replacement door. At the rear of the structure is a recently built open wood porch; a rock wall is present along the front and part of one side of the building.

Vance Castle (53)

The name given for this house is currently posted at the front. A 1949 plane table survey by "ALJ" shows "Harvey Cottage" on the north side of the hill and "Patterson Cottage" on the northwest side of the hill. One or the other of these is likely to be ID No. 53.

7. Description (continued)

This structure may have started out as a rectangular gable-roofed structure to which later historic additions were made. The main portion of the house has walls finished with cement stucco and wood double-hung (1/1) windows.

The enclosed porch, a possible addition, gives the building an overall T shape; it has board and batten walls and a gable roof. The porch incorporates multiple wood double-hung (1/1) windows. A small entry room with a gable roof and board and batten walls is the second possible addition.

The roof as a whole has composition shingle sheathing. The doors were not clearly seen. A retaining wall is present in front of the building, next to the road, and stone stairs lead up to the house from the road.

HOSPITAL CANYON GROUP

State Parks Housing, No. 24 (37)

A local resident claimed that this structure was about 10 years old (ca. 1984). However, the residence appears to be one of two units built by the BOR in Hospital Canyon between April and October 1950 (BOR 1951:48). This building and the second unit (No. 25, since demolished) are shown on a 1963 BOR map. Walls are concrete block with a cement stucco finish. The roof is flat and drains at the rear. Windows are aluminum frame and may be replacements. The doors include a wood panel door with a single large light and a wood flush door with two small lights.

The associated garage apparently was built in 1950 (BOR 1951:48) and is also shown on the 1963 BOR map. The garage has concrete block walls and a flat roof. The car doors are wood panel vertical-opening doors with lights.

Small Floating Boat House (36)

A floating metal boat house with a low gable roof is present opposite the State Parks housing in Hospital Canyon. Access from the shore is by a section of floating dock and a small truss pedestrian bridge. The boat house is small and appears to be quite recent.

LAKE SIDE GROUP

Marina (35)

Opposite the concession building is an extensive floating dock complex that serves as a self-contained marina. The entire complex, which includes a metal building (the office and store), appears to be recent.

Cabins Nos. 16 and 17 (24)

This structure is located between Cabins 13 and 14 in the series of CCC-built cabins along the shore of the lake. It is the only duplex in the series and differs in several other respects from the remaining cabins. We first thought that the structure was built by the CCC but the building plans date to 1949 and the structure is therefore recent.

The original metal casement windows are still present; doors are wood flush models; no chimneys are present; and exposed beam ends are present over the front windows (the only example of this window treatment noted). In the Cabin 16 porch, the steps are to the front; the exposed beam ends and *canal* are to the side and a low wall extends across the same side. In the

7. Description (continued)

Cabin 17 porch, the steps are to the side; the exposed beam ends and *canal* are to the front and a low wall extends across the front of the porch. Based on the plans, each unit included a living-dining room, two bedrooms, a kitchen, and a bathroom.

Boat Ramp and Small Dock (27)

A concrete boat ramp drops into the lake opposite Cabins 14 and 15. Next to the ramp is a small floating dock. Neither feature has any important attributes. The dock appears to be quite recent. Inscribed in the concrete of the ramp is a date of 1989.

Sewage Treatment Plant (29)

A small sewage treatment plant is present in an old dam quarry area south of the CCC-built campground. It consists of a small metal utility building and various sewage treatment features within a fenced area. The treatment plant began operation in 1970 (BOR 1971:8).

HILLS GROUP

Within this group, ID Nos. 49 and 50 are in a fenced area currently used as a state park maintenance yard. The fence, which consists of chain-link fencing topped by barbed wire, was not recorded separately. Based on a pair of 1950 maps, the current fence was not put in place until that year at the earliest.

Pump House (42)

This small isolated building is not shown on 1935 or 1956 BOR maps. The building is associated with the three water tanks described as ID No. 43, and therefore probably dates to 1950 or later. The building foundation is concrete and the walls are concrete block with cement stucco. The roof is flat; it is sheathed with roll roofing and drains to the rear. The northern and eastern elevations each contain a small steel casement window (of 2 vertical by 2 horizontal lights). The door is a wood three panel model with a large light; a screen door is also present.

Three Water Tanks (43)

On the hilltop above the pump house (ID No. 42) is a set of three tall steel water tanks with guy wires. Crude stone-and-cement valve boxes are present at the bases. The towers appear to be recent. The local topographic map (USGS 1980) indicates that at least one tank was present on this hill in 1958, but nothing is shown for this area on 1935 or 1956 BOR maps. According to Rio Grande Project records (BOR 1951:49), three water tanks were installed at Elephant Butte Dam in 1950; this date will be used as being approximately correct.

Neff Cottage (44)

The name for this structure, a private recreational home on a leased lot, comes from an undated map prepared at mid-century. Foundation and wall types for this house are unknown; walls have a cement stucco coating. The gable roof has exposed rafters and is covered with roll roofing. An exterior-wall chimney is present. On the main part of the structure, windows are wood double-hung (3/1; upper sash, 1 vertical by 3 horizontal lights) and are all originals. The front entry door could not be observed.

The all-wood front porch is covered with a hipped roof. A rear addition has a shed roof with roll roofing, metal casement windows (4 vertical by 2 horizontal lights), and a wood five panel door.

7. Description (continued)

The house is not shown on a map prepared during dam construction, or on a 1935 BOR map, but records at the dam show the property being leased by 1951. Thus, the building is between 43 and 59 years old. Based on its architectural elements, the house is likely to be at least 50 years old. It is on a BOR lease lot but is privately owned.

NOAA Weather Station (45)

This hilltop weather station incorporates various instruments inside a chain-link fence with a concrete base. A short segment of dry-laid masonry wall is present outside one end of the station. The weather station is shown at this location on a 1934 BOR map (and on later maps) but all features of the station appear to be recent.

Hilltop Housing (46-48)

Three identical homes with garages are present on a hilltop; they are rectangular in plan, with a hipped roof. A 1948 drawing shows a proposal for this housing; construction took place between April and October 1950 (BOR 1951:48).

ID No. 46: the foundations of the southernmost house are of concrete. Walls could not be inspected closely but appear to be concrete block (the material specified in the plans just mentioned). The walls are finished with cement stucco. The roof has exposed rafters and composition shingle sheathing.

Windows are metal casement; the front door is a wood three-panel model with a large light. A small open porch (or "stoop") of concrete is present at the rear entry.

The garage has concrete block (?) walls finished with cement stucco; the roof is hipped. The two car doors are wood panel vertical-opening doors with multiple lights; the entry door is a wood three-panel model with a large light; windows are metal casement.

ID No. 47: this is the middle unit of the three. The house and garage are identical to those at ID No. 46, except that the garage is closer to the house in order to fit the terrain.

ID No. 48: this is the northernmost unit of the three. The house and garage are identical to those at ID No. 46, except that due to the terrain the garage was built almost against the house.

Garage and Shop (49)

Located in the Camp BR-54 area, this nondescript utility building is shown on a 1948 BOR map but not on a ca.1940 BOR map. ID No. 49 is therefore between 46 and ca. 54 years old. It does not appear to be part of CCC camp BR-54 and was therefore probably erected after World War II.

The foundation is concrete; walls are corrugated steel over wood frame. The gable roof is corrugated steel over exposed wood rafters and includes three turbine vents along the peak. Windows are aluminum frame replacement units, except for one wood casement window (of 2 vertical by 3 horizontal lights) at the bathroom. The three vehicle doors include one original door (a vertical plank swinging double door) and two replacement doors (wood frame and plywood swinging double doors). The entry door is a wood vertical plank double door.

7. Description (continued)

Warehouse (50)

Like ID No. 49, this is a nondescript utility building in the Camp BR-54 area and is shown on a 1948 BOR map but not on a ca. 1940 BOR map. ID No. 50 is therefore also between 46 and ca. 54 years old; similarly, ID No. 50 does not appear to be part of CCC camp BR-54 and was therefore probably erected after World War II.

The building has a concrete foundation and walls of corrugated steel over wood frame. The gable roof is corrugated steel over wood rafters, with five turbine vents along the peak. Windows are metal casement. The large doors are metal swinging double doors, with eight lights (2 vertical by 4 horizontal) in each door. Most of the lights in the structure are original, and are safety glass; the replacements are plain window glass.

At one end of the warehouse is a concrete storage platform, which was built in 1953 (BOR 1954:79).

Storage Shed (52)

This badly deteriorated building is shown on a 1948 BOR map; the map lettering is faded but may read "POW HOUS" (for powder house?). It is labeled as a "shed" on a 1950 map. ID No. 52 is therefore at least 46 years old and may date to the CCC era or earlier.

The building measures only about 12 by 9 feet in plan. The partly fallen walls are adobe brick on wood timber foundations. Boyd and Etchieson (1986) noted a dilapidated wood floor which was absent in 1994. The gable roof has wood rafters and wood plank decking; the sheathing is no longer present. The gables are wood, with a wood vent in the rear gable. The door is missing. At present, the interior is littered with small core samples.

CONTRIBUTING ARCHAEOLOGICAL SITES

Of the sites listed below, LA 39379 through LA 103972 were recorded by previous studies and LA 108181 through LA 108205 were recorded during a recent archaeological survey of the historic district (Phillips and Poague 1996). (LA 108183 [EB-3] is outside the historic district boundaries and therefore was excluded from the nomination.)

One type of site (or of feature within sites) is CCC-derived trash dumps. These often includes mixed materials from the dam construction period (1911-1916) and the period of CCC activity (1934-1941). Besides disposing of their own trash, CCC crews often collected and disposed of dam construction period trash in the same dumps.

LA 49043, Elephant Butte Cemetery (81)

Although marked cemeteries are ordinarily not considered eligible for the NRHP, this property is included here for reasons discussed in Section 8.

Set in a flat upland area east of the dam, LA 49043 is the Elephant Butte Cemetery. The site is about 40 m in diameter, with poorly defined limits (there is no perimeter fence). The cemetery was first recorded as a site in 1984 (Lekson 1984); the site was visited during the historic structures survey (Phillips et al. 1994:87-88) and again during the archaeological survey of the district (Phillips and Poague 1996).

With one exception, the Elephant Butte Cemetery was used only during dam construction (1911-1916). The cemetery has deteriorated over the years and is slowly disappearing as a structural feature -- here, it is included as an archaeological site.

7. Description (continued)

Only a few graves are well-marked, but at least 39 graves are present. Graves are oriented with feet to the east and usually consist of low mounds of rock with or without markers. The surviving markers are mostly of wood, concrete, or sandstone. Rarely, graves are enclosed by metal fencing; traces of wood fencing are also present.

The best-preserved inscription probably reflects general mortality during dam construction: *Salvador Ramires/nacio en 1887 el 17 de/Febrero -- y murió el/4 de enero de 1915 a/os 28 años de edad -- /Un recuerdo de su esposa e/hijo -- /Martina Castrellon* ("Salvador Ramires, born in 1887 on February 17 -- and died on January 4, 1915 at 28 years of age -- a memento from his wife and son -- Martina Castrellon").

One grave in the cemetery postdates the others -- that of R. J. Schmalhausen ("1861-1932"). The grave has a granite marker set in concrete and is enclosed with a pipe fence. Schmalhausen was Superintendent of Construction for the dam and was buried in the cemetery at his request (Boyd and Etchieson 1986; Anonymous 1986).

The site contains a sparse historic artifact scatter, which consists primarily of pieces of glass associated with specific graves. Artifacts include an amethyst bottle base; pieces of amethyst, milk, clear, and aqua glass; pieces of plain white china; and a lard bucket. These items are consistent with active use of the cemetery during dam construction.

LA 49044

LA 49044 is in Ash Canyon southeast of the Reclamation Service administration area. The site was first recorded in 1984 by David Kirkpatrick, Steve Lekson, and Karl Laumbach (Lekson 1984) and was revisited during the archaeological survey of the district (Phillips and Poague 1996). LA 49044 consists of two stone structures, a rock wall, and a sparse historic artifact scatter on a narrow terrace overlooking an arroyo to the north.

The main feature is a three-room structure of dry-laid sandstone blocks. The feature measures about 12 by 3 m. The surviving walls range in height from one rock to 1 m. No evidence of the roof was seen. A low rock wall is present about 1.25 m northeast of the structure; the wall consists of rocks that are about 30 cm across and are stacked two wide by three to four high.

About 20 m east of this structure was a scatter of burned rocks which may be the remains of an *horno* or campfire.

A second stone structure, probably a storeroom, is dug into the side of the slope west of the main structure. The storeroom measures about 3 by 4 m, with surviving interior walls up to 75 cm tall.

A sparse historic artifact scatter is concentrated between the two stone structures and across the site. Artifacts located include china, amethyst glass, wire nails (i.e., machine-cut nails), a barrel hoop, a sanitary can, a hole-and-cap can, a hinged-lid tobacco can lid, and miscellaneous pieces of metal. The site appeared to contain shallow deposits at most.

The original field date for the site is 1900 to the 1920s, but the site most likely dates to the period of dam construction, 1911 to 1916.

LA 49045

LA 49045 was recorded by David Kirkpatrick, Steve Lekson, and Karl Laumbach in 1984 (Lekson 1984) and was revisited during the archaeological survey of the district (Phillips and Poague 1996). The site is on a rocky ridge finger in Ash Canyon and consists of a two-room stone structure and a sparse historic artifact scatter in a 22 by 16 m area. The site was probably a residence used during the construction of Elephant Butte Dam (1911-1916).

7. Description (continued)

The historic structure consists of two rooms built of dry-laid sandstone rocks (up to 75 cm across). The structure measures about 8 by 3 m; one room is about 5 by 3 m and the other is about 3 by 2 m. There are three to 11 courses of stonework standing; the walls are about 50 cm thick. A large amount of wall fall is present both inside and outside the rooms. The feature may have been disturbed by recreation visitors using Elephant Butte Reservoir -- recent hearths are present near the feature -- as well as by erosion. The feature appears to have deteriorated since it was first recorded.

The original recorders noted an amethyst glass medicine bottle neck; a second amethyst glass bottle fragment; and a hinged-lid, Prince Albert brand, tobacco can. The SWCA crew found an amethyst glass bottle neck fragment, eight other pieces of amethyst glass, a metal strap with a lock (possibly from a trunk), and three sheet metal scraps. The sheet metal is most likely roofing material.

LA 51765 and 54915, South Camp (Elephant Butte Townsite)

South Camp (the Elephant Butte Townsite) has been recorded as two archaeological sites. LA 51765 was recorded in 1985 (Laumbach et al. 1985) and LA 54915 was recorded in 1986 (Boyd and Etchieson 1986). Both sites were revisited during the archaeological survey of the district (Phillips and Poague 1996).

LA 54915

LA 54915, on the left (south) bank of the river, included the main part of the Elephant Butte Townsite. Part of the original construction community was erased by construction of a fish hatchery and N.M. 51. (The remains of the fish ponds [ID No. 71] can be considered an archaeological element of this site, as well as a structural element.) The following is an abbreviated site description; for a full description, see Phillips and Poague (1996).

The main part of the Townsite was on the low terrace where the fish hatchery was later built, and thus there is no trace of most of the construction camp on this side of the river. The camp extended up the adjacent slopes and canyons, however, and extensive remains are present in these areas, including (at a minimum) the following: the remains of seven or eight stone structures, a concrete foundation, five tent pads, a retaining wall, five locations with one or more check dams, an unidentified rock feature at a rock shelter, an unidentified rock alignment, a culvert lines with concrete and dressed stone, three small quarries for building stone, an extramural hearth, three unidentified depressions, and a portion of the dump for the townsite.

The last of these features is also the most extensive. A 1913 Reclamation Service map shows the town dump as three loci in a side canyon south of the Townsite; Boyd and Etchieson (1986) included two of the loci in LA 54915 (the third locus is LA 108201, described below). Thousands of artifacts are present and have accumulated to an unknown depth. These artifacts include container and window glass (amethyst, aqua, and brown; rarely, green), institutional and domestic china, Oriental porcelain, buttons, bricks, sewer pipe fragments, mule shoes, sanitary cans, solder-top cans, hole-in-top cans, friction lids, lard buckets, tobacco cans, wire nails, and miscellaneous pieces of metal. The deposits are ashy. In addition, many of the features have associated concentrations of surface artifacts.

Many of the features and artifacts date to the period of dam construction (1911-1916) but the CCC period is reflected in the remains of the fish ponds and probably in the rock-and-concrete culvert and the check dams on the adjacent slopes.

LA 51765

The Reclamation Service laid out a few lots on the the right (north) bank of the river, but occupation of this portion of the Elephant Butte Townsite (recorded as LA 51765) may have been fairly disorganized. The occupation area began at the Rio Grande but extended uphill, along a road built to connect the Townsite with Hot Springs and Cuchillo. Construction of a power

7. Description (continued)

transmission line and associated roads in 1939 destroyed part of the site but extensive structural remains and trash scatters are still present. A collection by Boyd and Etchieson (1986) yielded artifacts typical of the dam construction area. The archaeological survey for the historic district defined 87 formal features and an extensive surface artifact scatter; the following is abbreviated from Phillips and Poague (1996).

LA 51765 contains (at the least) the remains of 56 stone-walled structures, most of them with one or two rooms. The structures were usually set into the steep slope and were built of rough sandstone in mud mortar. Based on the surviving evidence, such structures had wood window frames and were roofed using mesquite vigas and sheet metal. Also present are the remains of (at the least) a privy; four tent pads; 10 retaining walls (most of them for the old road from Elephant Butte to Hot Springs and Cuchillo); eight unidentified rock alignments that could be the remains of structures, tent pads, or retaining walls; several features of unknown function; and a CCC-era trash dump.

The artifact assemblage at LA 51765 numbers in the thousands and includes container and window glass (amethyst, aqua, brown, cobalt, green, and clear), institutional and domestic china, European and Oriental porcelain, milk cans, solder-top cans, hole-in-top cans, sardine cans, friction-lid cans, friction lids, lard buckets, tobacco cans, pieces of stove pipe, wire, scraps of sheet metal and tar paper, scrap lumber, slag, and clothing remnants. Many artifacts occur in concentrations at the individual features. The trash dump contains a mix of artifacts from the dam construction and CCC periods, reflecting CCC attempts to dispose of old dam construction debris as well as of its own trash.

LA 53605, North Camp

LA 53605 was first recorded in 1986 (Gossett and Gossett 1986; Boyd and Etchieson 1986). As currently defined (Phillips and Poague 1996), it subsumes three other sites: LA 39379 (Gossett and Gossett 1986; Boyd and Etchieson 1986:75), LA 46632 (Koczan 1984), and LA 78634 (Rorex 1990). The site includes the structural remains of the embankment construction camp, the borrow pits used for embankment fill, and numerous small dumps. The archaeological survey for the historic district defined 21 formal features and an extensive surface artifact scatter; the following is abbreviated from Phillips and Poague (1996).

The features include at least six tend pads and five possible tent pads; the remains of a powder house, three rock structures, and two possible rock structures; a dugout; two retaining walls for roads; a rock pile of unknown function; a rock alignment of unknown function; a grave; and three CCC dump piles. Boyd and Etchieson (1986:15-16) first located Feature 7, the remains of a structure which had a concrete foundation, adobe walls with interior cement plaster finish and exterior cement stucco finish, and possibly composition roofing. The authors identified the structure as a powder house used during excavation of fill for the embankment, but were puzzled at the use of adobe (a non-approved material) in construction. Feature 21 (formerly, LA 78634) measures 2 by 1 m and is an isolated historic grave that presumably dates to construction of the embankment in 1914 and 1915. Local sandstone was used for the unmarked headstone and the rocks covering the grave. Three pieces of amethyst patterned glass were found at the grave site. As is common throughout the district, the CCC trash dump piles contain a mix of remains from the dam construction and CCC periods, reflecting CCC attempts to clean up the debris left when the dam was completed.

The surface artifact assemblage at LA 53605 numbers in the thousands and includes glass (soda pop, other container, window and insulator; colors include amethyst, aqua, brown, clear, cobalt, green, milk, and red), bottle caps, institutional and domestic china (including CCC-derived pieces marked "U.S.Q.M.C."), sanitary cans, milk cans, meat cans, juice cans, spice cans, friction-lid cans, friction lids, tobacco cans, lard buckets, blasting powder cans, paint cans, car parts, springs, wire nails, wire, miscellaneous pieces of metal (including sheet metal), scraps of lumber, coal, slag, and remnants of clothing. In many cases, artifacts are concentrated at the formal features.

7. Description (continued)

The site dates primarily to construction of the embankment in 1914 and 1915 but, as noted, also contains CCC trash dumps that date between 1934 and 1941. The borrow pits were re-used for the 1985 reinforcement of the embankment (ID No. 82; Boyd and Etchieson 1986:15).

LA 74221

LA 74221 is on the same mesa as the Elephant Butte Cemetery (LA 49043). The site was recorded in 1989 (Hammack 1989) and measures 20 m by 10 m. Estimated maximum site depth is 10 cm.

The site includes a tent base outline, consisting of a rectangular cleared area with lines of rocks on three sides. The outline measures about 6.5 by 2.5 m. A rock fire circle (about 1 in m diameter) is present near one end of the outline. Scattered artifacts are present and include amethyst glass, brown bottle glass, hole-in-top cans, a spring, and a nail. The field date for the site was 1900 to 1920.

LA 74222

LA 74222 is on a rocky slope near the rim of Jose Canyon; it was recorded in 1989 (Hammack 1989) and measures 21 m by 5 m. Estimated maximum site depth is 10 cm.

The site includes a tent base outline, consisting of a rectangular cleared area with a line of rocks on one side. The outline measures about 10.5 m by 4.5 m. The few associated artifacts include brown bottle glass, pieces of sheet metal, grommets, nails, and pieces of wood slats. The field date for the site was 1900 to 1920.

LA 74223

LA 74223 is also located a swale on the rim of Jose Canyon. The site was recorded in 1989 (Hammack 1989) and measures 20 by 20 m. Estimated maximum site depth is 10 cm.

The site includes a tent base outline, consisting of a rectangular cleared area with lines of rocks on all four sides. The outline measures about 9 by 8 m. A hearth or horno, consisting of a circle of rocks about 1 m in diameter, is present 8 m east of the tent outline. The associated artifacts include sheet metal, wire, pieces of milled wood, slat, wire nails, and amethyst glass. The field date for the site was 1900 to 1920.

LA 103971, East Camp (the Hill)

LA 103971 measures 1350 m in diameter and centers on the Reclamation Service administration building; part of this site is under Elephant Butte Lake. A number of standing structures in this area are described separately; the site number is used to designate the archaeological component of the East Camp. The site was first recorded during the historic building survey for the district (Phillips et al. 1994) but detailed recording did not take place until the archaeological survey (Phillips and Poague 1996). The following is a summary based on both studies.

All that is left of the construction facilities at the east end of the dam is a series of foundations visible at low water. In Hospital Canyon, a large concrete foundation remains from the old hospital. As late as 1958 (USGS 1980), a number of the original buildings in the old administration area were still present, but have since been removed. The former Reclamation Service housing area (on a ridge southeast of the administration building) is currently used as a picnic area. A few traces of the old houses are visible at ground level, including the front steps. Based on the visible remains, the houses had foundations of rock set in cement mortar, and the porches were set on low piers of concrete with distinctive black angular inclusions. Also present

7. Description (continued)

in the old housing area are concrete slabs indicating that at least five garages were present. At least three of the garages had rock walls. Two of the garages, on the northeast side of the housing area, were built against a tall retaining wall of rock in cement mortar, into which a concrete block marked "CCC/1939" is set. Sawed-off stubs of roof beams for the two garages are embedded in the wall.

At the time of construction, the railroad spur to the dam entered the East Camp from the southeast. Within the reservoir area, the only trace of the old rail bed is a lake-level terrace on which the CCC built the series of tourist cabins. The quarry at the east end of the camp now holds a campground and sewage treatment plant.

In the Camp BR-54 area, as late as 1958, two homes were present on a hill southwest of the current parks maintenance yard and an outbuilding was present across the arroyo from the yard (USGS 1958). These structures had been demolished by the time of the 1993-1994 field studies.

In 1994, archaeological survey of LA 103971 documented 58 formal features, including (at the least) 12 retaining walls, 11 loci with check dams or similar water control devices, the traces of up to five possibly permanent houses, the remains of three to six rock-walled structures, a tent pad, foundation from three homes, four loci of CCC masonry work, a concrete "cap box" (for blasting caps), a slag and trash dump, a coal and trash dump, pile of bricks, a small quarry, an old road, a culvert, and miscellaneous features.

Artifacts at LA 103971 number in the hundreds rather than the thousands, reflecting its use by the Reclamation Service managerial elite as well as CCC efforts to clean up this area for recreational use. The artifacts include container and window glass (clear, amethyst, aqua, brown, cobalt, and greeen), institutional china, a few cans (sanitary, friction lid, tobacco, and vegetable), wire nails, pieces of stovepipe, miscellaneous pieces of metal, and scraps of lumber. As is to be expected in an area that continues in use, modern litter is also present.

LA 103972, Ash Canyon Railroad Grade (80)

A segment of the old railroad spur from Engle to Elephant Butte Dam has survived in Ash Canyon, southeast of the community of Elephant Butte. The segment includes the old road cut and bed, but no rails or engineering features. The segment is first apparent where State Road 51 diverges from the old bed, and ends at the spot where a large wood trestle bridge once crossed Ash Canyon. The railroad spur was built between 1908 and 1911 and is included because of its direct association with the construction of the dam. On the hilltop to the north are archaeological sites that probably represent living areas for the manual laborers who built the railroad.

LA 108181 (EB-1)

Sites with "EB-" designations were newly recorded in 1995 (Phillips and Poague 1996).

This site measures 400 by 50 m and consists primarily of a low-density scatter of historic artifacts along a dirt road. (The site also includes four pieces of flaked stone, presumably aboriginal.) Historic artifacts include glass (aqua, amethyst, green, and clear), hinged-lid tobacco cans, sanitary cans, wire, and a metal strip. Two features are present: a 1.5 m by 0.5 m ash stain, probably a hearth, and a 2.5 m diameter rock pile. The age and cultural affiliation of the features are unknown. Most of the site is probably derived from travel along this road between 1908 and 1916.

7. Description (continued)

LA 108182 (EB-2)

LA 108182 measures 20 by 12 m and consists of historic artifacts on the edge of (and extending down into) a canyon. Artifacts include glass (amethyst and iridescent), lard buckets, condensed milk cans, sanitary cans, rectangular meat tins, and other cans. Ax-cut junipers are also present. The site may be the remains of a temporary camp and most likely dates between 1911 and 1916.

LA 108185 (EB-5)

A historic road, LA 108185 extends above and north of Ash Canyon; the location suggests that LA 108185 was an Engle-Elephant Butte route cut off by the rising waters of Elephant Butte Lake. The road is about 3 m wide and was traced for about 1 km. At least three short segments of the road include a retaining wall of up to four courses of shaped but dry-laid sandstone. Artifacts noted along the road included one piece of amethyst glass and two cans.

LA 108185 was most likely built to provide access between upper Ash Canyon and the upland areas to the north of that canyon. As such, the road most likely dates to about the period of dam construction, 1911-1916.

LA 108186 (EB-6)

This site measures 20 by 14 m and is a scatter of about 28 artifacts, including sanitary cans, two pieces of amethyst glass, and a lard bucket. The site lacks features and therefore may be a single-episode trash dump. The site most likely dates to the period of dam construction, 1911-1916.

LA 108187 (EB-7)

A large historic site on a ridge east of Ash Canyon, LA 108187 contains 22 tent outlines, 17 hearths, and several thousand historic artifacts. The artifact assemblage numbers in the thousands and includes glass (amber, amethyst, aqua, blue-green, green, clear, cobalt, and milk), plain and decorated china, terra cotta wares, cans (blasting powder, blasting cap, sanitary, friction lid, meat, sardine, and talcum powder), other metal (buckets, nails, and wire) and food bone.

LA 108187 is most likely a tent camp occupied during road, railroad, and dam construction between 1908 and 1916. The site was not one of the government-organized camps, however, and is not mentioned in the documents on dam construction. The amount of trash related to food preparation and consumption suggests that persons in this camp prepared their own food rather than use a government mess hall, which may indicate that the camp was used prior to establishment of the mess halls in 1911.

LA 108188 (EB-8)

LA 108188 is the remains of a telephone or telegraph line; it may be the original telephone line from Elephant Butte to Engle and in that case dates to 1911. The line was traced for about 1 km. Remains include the poles, most of which have fallen and are rotting. The poles were originally about 6 m tall and about 19 cm in diameter. The lower ends of the poles were braced with juniper posts that were about 2 m tall and 16 cm in diameter; the poles and bracing posts were attached with bolts. Many of the poles retain their wood cross-ties, each of which supported two threaded wood insulator posts. The insulators and wires from this line were most likely reclaimed when the line went out of use (possibly during CCC work at the dam, i.e., no later than 1941). Though artifacts occur in the same general area as the line, no artifacts appear to be directly associated with construction of the line.

7. Description (continued)

LA 108189 (EB-9)

A small roadside trash dump on a slope, LA 108189 measures 21 by 17 m. The 35 to 40 artifacts include two pieces of amethyst glass, cans, a lard bucket, baling wire, and about 15 pieces of metal. The cans include 10 condensed milk cans, a hinged-lid tobacco can, and sanitary cans (the last opened with a Yankee style can opener). The trash was most likely dumped between 1908 and 1916, along what was then the road between Elephant Butte and Engle.

LA 108190 (EB-10)

LA 108190 measures 240 by 60 m. Features on the site include a tent pad, a possible outdoor hearth, and a rock alignment of unknown function. Some 300 to 500 artifacts are present on the site, including glass (amethyst, clear, green, amber, white frosted), plain and decorated china, two spoons, baking powder lids, tobacco cans, meat tins, part of a pocket watch, small gears, spice tins, bottle caps, buckets, sanitary cans, fragments of a porcelain doll, and shell and porcelain buttons. The artifact assemblage suggests that the site was used during the dam construction period (1911-1916), and are most consistent with use of this location by a family.

LA 108191 (EB-11)

At LA 108191, the remains of a stone cabin with a crude fireplace, an extramural hearth, and a scatter of historic artifacts. The site measures 140 by 40 m. The cabin measures 4.5 m by 3 m; the fireplace had a home-made stovepipe consisting of blasting powder cans wired end-to-end. The extramural hearth is a U-shaped feature built of stacked sandstone. About 200 to 300 artifacts are present on the site, including glass (amethyst, aqua, olive), china, cans (sanitary, matchstick-filler, hole-in-cap, blasting powder, hinged-lid tobacco), lard buckets, metal pipe, scraps of lumber with wire nails, wire, and two pieces of food bone. The site most likely dates to the period of dam construction, 1911-1916.

LA 108192 (EB-12)

This site is the Reclamation Service's Quarry No. 2, which was established in 1912 and shut down at the end of 1915. Rock was quarried from the slope of Ash Canyon; the face of the canyon has been cut back about 150 m. The quarry operation included three derricks and a railroad spur with double tracking (Phillips 1996:117), but no trace of these was seen. Features at the site, which measures 280 by 150 m, include a fallen wood signpost and a rock cairn. Between 400 and 500 artifacts were seen at this site, including amethyst container glass, pieces of an aqua glass insulator, china, 386 blasting powder cans, steel cable, large bolts, a .44 caliber shell, pieces of slag, and miscellaneous pieces of metal.

LA 108193 (EB-13)

A historic artifact scatter, LA 108193 overlooks Ash Canyon and measures 43 by 32 m. The assemblage includes glass (amethyst, brown, and green; the last from a champagne bottle), sanitary cans, a meat can, a friction lid, a horseshoe fragment, wire, and scraps of lumber. The site also includes a possible set of initials ("BO" or "BD") laid out on the ground with loose rocks. The site most likely dates to the period of dam construction (1911-1916) and is either a campsite or a dump area next to a historic road (LA 108194).

LA 108194 (EB-14)

Based on Reclamation Service records, LA 108194 is most likely a section of wagon road (including a sandstone retaining wall) built between Engle and Elephant Butte in 1908. The road runs along the eastern edge of lower Ash Canyon and descends into the reservoir; clearly, the road was designed to be used only until the reservoir filled, and thus went out of use by 1916. LA

7. Description (continued)

108194 was traced out for about 1 km, but the active dirt road that connects LA 108194 to State Route 51 may be an extension of the site.

Two features were defined at this site. The first is a retaining wall for the road. The wall extends 16 m and at is highest point is 2.5 m (about 12 courses) tall. Unshaped sandstone rocks, from 20 to 75 cm across, were stacked to create the retaining wall in a hairpin turn where the road crosses a drainage. The second feature is a historic pictograph that is 35 cm from top to bottom, 21 cm wide, and reads as follows:

X
J

Between 20 and 30 artifacts were seen along the road, including a whole amethyst glass bottle, five pieces of amethyst glass, a piece of aqua glass, a condensed milk can, a sanitary can modified to serve as a cup or pail, and a horseshoe. The artifacts appear to be litter from construction or use of the road.

LA 108195 (EB-15)

This site is a 35 by 26 m scatter of historic artifacts in the bottom of Ash Canyon. About 230 artifacts were seen. The assemblage is dominated by amethyst and aqua glass, but also includes milk, cobalt, and brown glass; china; sanitary cans; hinged-lid tobacco cans, and miscellaneous metal artifacts. The lack of features suggests that the site is a trash dump from the dam construction era (1911-1916).

LA 108196 (EB-16)

In part, State Route 51 follows the bed of the railroad spur between Engle and Elephant Butte. At LA 108196, a 32 m long by 6 m tall retaining wall of large, unshaped, dry-laid sandstone blocks is present. The retaining wall may date to construction of the railroad (completed in 1911) but more likely represents CCC stabilization work along the highway (and thus dates between 1934 and 1941). The wall is in good shape and continues to function as a retaining wall for the roadway.

LA 108197 (EB-17)

This CCC trash dump measures 100 by 40 m and consists of a scatter of artifacts, primarily glass and metal, on slope of a hill. Some artifacts are washing down slope, but the dump is mostly intact. About 50 historic artifacts were noted, including clear glass, china (with "McNicoll" trademarks), two white ceramic electrical insulators, a belt buckle, a dozen sanitary cans, two milk cans, slag, and scraps of lumber. Some of the glass is melted, indicating that the bottles had been thrown into a fire. Based on the artifacts, the dump was created by the CCC between 1934-1941. The site also yielded an aboriginal projectile point that is too irregular to classify.

LA 108198 (EB-18)

LA 108198 is a 50 by 35 m trash dump on a slope. The site includes a 3.5 by 3 m pile of slag and trash, as well as a general trash scatter. About 60 artifacts are present, including glass (amethyst, clear, and brown) and a hinged-lid tobacco can. The presence of 1937-1951 style Coca-Cola bottle glass and bottle caps indicate that the material was dumped by the CCC, possibly after cleanup work at dam construction activity areas. The site therefore appears to date between 1934 and 1941.

7. Description (continued)

LA 108199 (EB-19)

LA 108199 is a CCC trash dump that measures 210 by 160 m and extends along the slope of a canyon. Within the site, two discrete piles of slag and trash are present; each measures about 3 by 2 m. Most of the artifacts were found at the dump piles, but a thin scatter of artifacts occurs across the remainder of the site. About 250 artifacts are present, including container glass (amethyst and clear), clear window glass, china, sanitary cans, scraps of lumber with nails, a fishing spool, miscellaneous pieces of metal, and pieces of concrete. (The site also yielded on Native American artifact, a crude biface or core of chalcedony.) The artifact assemblage is most consistent with CCC cleanup work (including of old dam construction debris) between 1934 and 1941.

LA 108200 (EB-20)

LA 108200 is a CCC trash dump that measures 90 by 55 m and extends down a slope. Within the site, 7 by 3.5 m a pile of slag and trash is present, along with a general scatter of artifacts. The 125 or so artifacts at the site include Shenango brand army-issue and McNicoll brand china, confirming that this is a CCC dump. The assemblage also includes amethyst glass (probably derived from CCC cleanup efforts), clear and green glass, sanitary and milk cans, lumber scraps, and other items.

LA 108201 (EB-21)

LA 108201 is a 101 by 66 m trash dump in a side canyon south of the Elephant Butte Townsite. A December 1913 map shows three dumps extending north-south within the side canyon; Boyd and Etchieson (1986) recorded the northern two dumps as part of LA 54915 and the southernmost dump is LA 108201.

No features were observed, but the multiple concentrations of trash contain thousands of artifacts. Ceramics are dominated by institutional style plates, cups, and saucers. Metal artifacts include hinged-lid tobacco cans, condensed milk cans, sanitary cans, and hand-soldered meat tins. Glass includes large amounts of aqua and amethyst glass. A few domestic items were noted, including a doll's head and glass from toiletry bottles. The many diagnostic artifacts are entirely consistent with the dam construction period, 1911-1916.

LA 108202 (EB-22)

LA 108202 is a garbage dump in 1 750 by 550 m area, containing piles of historic to recent slag and trash dumped over a 50 year span. The site includes three loci and 27 features south of the location for CCC Camp BR-54-N. Two loci are (A and B) on a bluff; it appears that enrollees drove trucks to the top of the bluff and dumped trash over the edge. A third locus (C) consists of a series of dump sites spread over several small hills.

The features are generally small, shallow dump piles with slag and burned historic trash. Tens of thousands of historic artifacts are present at the site, along with one possibly prehistoric artifact – a gray chert secondary flake. Artifacts include materials such as glass, china, earthenware, metal, wood, rubber, concrete, shell, plastic, and leather. Locus A measures 135 by 70 m and consists of materials from the CCC period, with a few items from the dam construction period mixed in; four discrete dump piles were documented at this locus. Locus B measures 200 by 75 m and consists of similar materials; eight discrete dump piles were documented at this locus. Locus C is 625 by 300 m and includes CCC trash, dam construction period trash (dumped there by the CCC), and trash that appears to derive from lake side concessions and residences; in this locus, dumping apparently began during the CCC period and continued until the 1960s. Locus C contains 14 discrete dump piles, along with a rock retaining wall along a segment of dirt road. Although recent materials are present, it appears that most of the trash within the site derives from CCC activities between 1934 and 1941.

7. Description (continued)

LA 108203 (EB-23)

A historic utility line, LA 108203 was traced out for about 1200 m. The surviving alignment consists of poles that are mostly standing and extend from the south end of the hatchery area towards the old Reclamation Service administrative area. The poles are about 6 m tall and 20 cm in diameter, and are spaced about 45 m apart. No artifacts are associated with the line. The utility line was most likely built around the time of dam construction (1911-1916) and taken out of use during CCC work in the area (1934-1941).

LA 108204 (EB-24)

This site appears to be a small dump containing material from both the dam construction and the CCC eras. The site measures 42 by 28 m and is located on a gentle slope. Within the site is a slag and trash pile and a general artifact scatter. The artifact assemblage consists of some 100 to 120 items, including glass (amethyst, aqua, and clear), china, cans (milk, juice, friction-lid, maple syrup, blasting powder, and hinged-lid tobacco), and a lard bucket. The dump was most likely created by the CCC, between 1934 and 1941.

LA 108205 (EB-25)

The segment of State Route 195 between Elephant Butte Dam and the Embankment was built during dam construction and continues in use today. The segment includes a number of retaining walls of dry-laid sandstone, which were either built or improved on by the CCC between 1934 and 1941. A typical retaining wall consists of 10 to 15 courses of dry-laid, undressed, sandstone masonry. The rocks used average about 30 by 25 by 15 cm. The associated road litter includes thousands of artifacts with dates from 1935 to the present, including beer cans and pieces of variously colored glass.

NON-CONTRIBUTING ARCHAEOLOGICAL SITE

LA 108184 (EB-4)

LA 108184 measures 180 by 90 m and is located on the crest and adjacent slope of a hill. The site includes 15 tent pads that are associated with historic trash that occurs primarily in two small dump areas. The trash consists primarily of glass (clear, rose, green, and milk), condensed milk cans (1931-1945 range), and miscellaneous pieces of metal.

Given the lack of amethyst glass and other early-1900s artifacts, this site is probably not a campsite related to dam construction. Instead, it appears to be a group camp (such as a Boy Scout camp) related to recreational use of the Elephant Butte Lake area.

8. Statement of Significance

The following narrative is based on Phillips et al. (1994) and Phillips (1996).

SUMMARY PARAGRAPH

The Elephant Butte Historic District is an example of the impact of federal public works projects on the early twentieth century West. The centerpiece of the district is Elephant Butte Dam, a concrete gravity dam completed in 1916. Structures associated with dam construction include the original Reclamation Service headquarters building and archaeological sites representing camps of the people who built the dam. A second burst of construction took place during the New Deal, when the Civilian Conservation Corps established two camps within the district and built a number of structures and extensive landscaping to enhance the lake's recreational value. Also during the New Deal, the state's first major hydroelectric power station was built at the base of the dam. Although the unifying thread for the district is its historical importance, elements of the district are also important for their architectural and engineering values or for their ability to contribute important information through archaeological study.

BACKGROUND TO DAM CONSTRUCTION

> *When the matter was in fair shape and blocked out... Mr. French and I went down and presented it to the people of El Paso and the people in Las Cruces. I found, however, great criticism... the government had never built any dams and they did not believe that it would ever build any* (Davis 1916:555).

In the late 1800s, entrepreneurs proposed irrigation schemes throughout the West but almost all of the schemes were resounding failures. Western rivers were too wild and their flows too variable for small-scale irrigation efforts. The only solution was federal projects based on large dams that would regulate stream flow accumulated over several years. On June 17, 1902, President Roosevelt signed the Federal Reclamation Act into law and began the era of federal involvement in Western irrigation. Initially, reclamation work fell under the Geological Survey but in March 1907 the Reclamation Service became a separate program of the Department of the Interior. On June 30, 1923, the program was reorganized and became the Bureau of Reclamation (Golzé 1952:25-28).

Elephant Butte Dam was one of the first federal reclamation efforts in the West, and was a direct response to repeated irrigation shortfalls in southern New Mexico, west Texas, and northern Mexico. The basic problem was heavy irrigation use of the northern Rio Grande. Initial colonization of the San Luis Valley of Colorado began in 1851, and by 1870 farmers had 50,000 acres of the valley under irrigation. In 1879, the figure was 122,000 acres, and in 1890 it was almost 300,000 acres. Meanwhile, New Mexican farmers were expanding into new areas and by 1880 were irrigating about 183,000 acres (Hundley 1966:19). By the time the Rio Grande reached El Paso, the water was running out:

> By 1890, the combined irrigated acreage upstream from El Paso had increased two and one half fold to 500,000 acres, while less than 50,000 acres were being irrigated in the El Paso-Juarez Valley (White 1968:215).

The problem was aggravated by heavy logging in the watershed of the Rio Grande--made possible by the arrival of the railroad in 1880-1881. Deforestation caused runoff to peak earlier in the spring, before it was needed by farmers (White 1968:216-217).

By the late 1800s, Mexican farmers along the Rio Grande faced repeated shortages of water. After the U.S. government failed to resolve the problem after a shortage in 1894, the Mexican minister in Washington pressed for $35,000,000 in damages--

8. Statement of Significance (continued)

claiming treaty rights to Rio Grande water and a right of prior appropriation under international law (Hundley 1966:22; White 1968:215-217; La Mar 1984:31-34). In response, the U.S. government argued that it was not legally obligated to consider the Mexican claims (Hundley 1966:23-24; White 1968:216). Nonetheless, in 1896 Secretary of State Richard Olney secured passage of a bill that directed the International Boundary Commission to study the division of Rio Grande water between the two countries.

Whether farmers were in southern New Mexico, west Texas, or Mexico, the basic solution was obvious: build a dam to store winter and early spring runoff and release that runoff during the growing season. After a water shortage in 1888, citizens of El Paso turned to a well-known Army engineer, Anson Mills, for their answer. In 1890 Mills proposed an international dam at the El Paso narrows (Hundley 1966:21). In 1896, the International Boundary Commission (Anson Mills being the U.S. Commissioner) recommended a dam at the same location (Hundley 1966:24-25; White 1968:216). The dam would have provided irrigation water for the El Paso and Juarez areas but would have flooded the lower Mesilla Valley and would have interfered with railroad and other transportation in the El Paso area.

The El Paso Narrows dam competed directly with an existing private effort. In 1893, Nathan E. Boyd had organized the Rio Grande Dam and Irrigation Company to build a private dam at Elephant Butte. The proposed location was about 1,500 feet upstream from today's dam (Davis 1916:554). Unable to raise enough local capital, Boyd turned to British investors in 1894. Two years later, the company proposed to store water for Mexican as well as U.S. users, but the Mexican minister strongly protested a dam at Elephant Butte in the belief that no water would reach the Juárez Valley and the area would have to be abandoned. Anson Mills supported the Mexican position, and Secretary of State Olney decided to oppose Boyd's venture (Hundley 1966:25-26).

Olney's attack on the Rio Grande Dam and Irrigation Company hinged on a technicality. The company had the permission of the Department of the Interior to build its dam at Elephant Butte, but if the Rio Grande was a navigable river they would also need the permission of the Secretary of War. The issue went to court and stayed there. At first, the Rio Grande Dam and Irrigation Company was enjoined from building a dam but the injunction was lifted in 1897. However, the company was unable to proceed and in 1903, due to its failure to complete the project, it lost its right to the dam site.

Even before the U.S. Reclamation Service was formally established in June 1902, it became involved in the controversy. Rather than take sides, some individuals asked the head of the U.S. Geological Survey (then responsible for federal irrigation matters) to determine which dam site was best for development of the river as a whole. No government funding was available, so the Santa Fe Railway (which had an economic interest in both New Mexico and Texas) paid for the study. In April 1902, Arthur P. Davis inspected the dam sites and a month later he reported in favor of the Elephant Butte location (Davis 1916:554). A dam at Elephant Butte could serve irrigation projects in New Mexico, Texas, and Mexico—satisfying all concerned parties–while not flooding the Mesilla Valley or disrupting existing railroad lines. Moreover, the resulting reservoir was large enough to hold water for the entire region even allowing for a high rate of sedimentation.

The real fight was not about dams but water; the dispute died out in 1904 when Davis and his assistant, J. A. French, convinced everyone that a dam at Elephant Butte would provide enough water for everyone (Davis 1916:555; Hundley 1966:28). In 1906, Congress authorized the Rio Grande Project and extended the Reclamation Act to Texas (Gault et al. 1913:2-6; Englehart 1979:2-9; La Mar 1984:35). In the same year, the United States and Mexico agreed to a division of Rio Grande water in which 60,000 acre-feet from Elephant Butte Reservoir would be provided to Mexico each year (Gault et al. 1913:3; Hundley 1966:29; Smith 1968:219). In effect, the U.S. guaranteed water to Mexico without admitting that country's claims (Hundley 1966:29-30).

Ira Clark (1975, 1983) reviewed the same controversy from a more strictly legal viewpoint, and made an important observation. Prior to the Elephant Butte controversy, the federal government had all but surrendered control of U.S. waterways to the states. Faced with the need to resolve squabbles over the Rio Grande, the federal government found legal mechanisms by which it

8. Statement of Significance (continued)

could take back a great deal of its control over those waters -- and it uses those same legal mechanisms to this day. Thus, Elephant Butte Dam is a symbol of an important moment in the development of national water law and in the changing balance of power between the federal government and the states.

CONSTRUCTION OF ELEPHANT BUTTE DAM AND COMMUNITY

The dam for the Rio Grande Project was first referred to as Engle Dam, after the nearest railroad stop, but quickly became known as Elephant Butte Dam. Field studies for construction of the dam began in 1903, when the Reclamation Service (then under the Geological Survey) mapped the dam area and conducted test borings of the bedrock. Lands for the Rio Grande Project were first withdrawn in December 1905, and Congress authorized the first million dollars for the project in 1907. Field crews completed additional mapping, geological studies, and engineering tests in 1907 and 1908 (Gault et al. 1913:12; Boyd and Etchieson 1986, Appendix II) but dam construction was delayed due to disagreements with the Victorio Land & Cattle Co. over the purchase price for the land. In 1911 the government acquired the area, which is in Pedro Amendaris Grants Nos. 33 and 34, by condemnation (Gault et al. 1913:2-6; Eisenhart 1979:31-48).

Renewed preparations for dam construction began in 1911; Appendix D of Phillips (1996:115-125) provides a month-by-month history of that construction. Key personnel for the project included Arthur C. Davis, Director of the Reclamation Service, Louis C. Hill, supervising engineer; Homer J. Gault and E. H. Baldwin, successive construction engineers; and Fred Teichman, design engineer.

Access: Roads and Rails

As of 1908, an existing wagon road apparently connected the dam site with Engle, but in that year a new road was built and a number of wagon roads were graded in the dam area (Gault et al. 1913:12-13; USRS n.d. e). Because of the cost of wagon freighting, however, the project included construction of a 13-mile spur of the Atchison, Topeka, and Santa Fe Railway between the dam site and Butte Junction. The spur descended to level of the dam along the north face of Ash Canyon, crossed to the south face on a wood trestle bridge, and continued on a grade later used as a site for CCC-built tourist cabins. From there the railroad crossed a second trestle bridge at Hospital Canyon and entered the construction plant.

Myrick (1990:32) states:

> Maps of New Mexico in the few years prior to World War I sometimes indicate a branch from Butte Junction (near Engle) to the Elephant Butte Dam... Built in 1904 to bring in construction materials, the branch was abandoned in 1917, having completed its purpose.

Myrick's starting date is too early. Survey of the rail spur took place from March to May 1908 (with some re-survey in December) and grading of the westernmost mile of railroad bed began in November 1908. In February 1909, the Reclamation Service and the Santa Fe entered an agreement under which the Service would build the railroad bed and the railway company would lay the track and operate the line. One-fifth of the rail bed was ready when work halted in May 1909, due to the government's inability to buy the reservoir area (Gault et al. 1913:12-14; Charles 1916:323). Construction of the roadbed resumed in July 1910; the first track was laid in December 1910 and the first freight reached camp in March 1911 (Charles 1916:323).

As agreed, the Santa Fe operated the spur:

8. Statement of Significance (continued)

> There are three trains a week to the camp. A few passengers are carried, but most of the passenger traffic between Engle and the camp is by automobile. The railroad fare between Engle and the dam is 56 cents... by automobile it is $2 each way...
>
> The rolling stock consists of four 16-ton locomotives, twenty 60,000 capacity flat cars for hauling plum rock from the quarries to the dam, 39 K. and J. 6-cubic-yard dump cars for hauling crusher rock and sand, 4 small cars for transporting quarry force to and from work, 1 Buda 8-passenger motor car for special passenger service between the camp and Butte Junction, and 2 sight-seeing cars (Charles 1916:323).

Once the rail spur began operation, cement made up about half the rail shipments by weight--followed by coal, storehouse supplies, food and merchandise, lumber, forage, and explosives. Most of the coal was used as fuel in the production of concrete (Miller 1991). The Reclamation Service used the motor car to transport VIPs to and from the dam site (Anonymous 1986).

The Water Tank

According to local tradition, the first structure to be built at the dam site was the 300,000 gallon concrete tank (ID No. 54) on Water Tank Hill--providing water for construction efforts. This tradition is verified by a Reclamation Service report (Gault et al. 1913:13) that dates construction of the Water Tank from August 1908 to May 1909 (i.e., before work was halted due to the failure of purchase negotiations). At the same time, a mile and a half of four-inch water line was laid to connect the tank to a well and the construction camp.

The Construction Plant

A construction plant was built on the north and west flanks of Water Tank Hill. Identified features include a coal-fired electric power plant with cooling tower, a cement mill, storage for Portland cement and sand cement, a cement lab, crushing and milling plants, a hoist for the concrete cars, lumber sheds, warehouses, machine and carpenter shops, blacksmith shops, tool houses, an electrical shop, a railroad motor car house, oil houses, a coal platform, coal bins, and storage buildings (USRS 1916b, 1916f, 1916g, n.d. h). The primary function of the construction plant was the manufacture of 621,550 barrels of sand cement, usually consisting of 52 percent Portland cement and 48 percent pulverized sandstone (Coghlan 1916).

Construction of the Gravity Dam

The designer for Elephant Butte Dam was Louis C. Hill, assisted by Fred Teichman. Hill also served as supervising engineer and later consulting engineer for the dam; previously he had been supervising engineer for Roosevelt Dam.

Large wood towers were built on hilltops on either side of the dam site and cableways were strung between the towers to allow materials to be hauled to or from the work in the canyon below (USRS 1916f). Construction of the dam began with a reinforced concrete flume placed along the right (west) bank of the Rio Grande, to contain the river during construction (USRS n.d. d). Flume capacity was 16,000 c.f.s. Coffer dams at the upper and lower ends of the flume kept the construction area dry. The exposed river bed was cleaned down to bedrock to provide a base for the dam (USRS n.d. b); sand removed from the bed was hoisted to the construction area, hauled up Ash Canyon along the railroad, and dumped for use in making concrete. The bedrock was grouted with concrete to seal the base of the dam (USRS n.d. g).

The dam was built in sections and poured in levels. For each level, sandstone "plums" were placed to make up about 15 percent of the dam volume and sand cement was poured around them. The upstream face of the dam was waterproofed with Portland cement mortar applied with a cement gun, in four layers each about 1 inch thick; the coating was applied from rafts in swaths as the water rose behind the dam (Anonymous 1916; USRS n.d. g).

8. Statement of Significance (continued)

Some shifts worked at night, using arc lights. Water storage began in 1914 and the first water deliveries from the dam took place in 1915 (La Mar 1984:37). The dam was finished on May 13, 1916 (Blanchard 1916:245) but the official dedication ceremony (featuring the placement of the final light pylon) was on October 16, 1916 (Anonymous 1986). One of the speakers was Arthur P. Davis, who had inspected the dam site in 1902--and who, on that day, was the Director and Chief Engineer of the service (Davis 1916).

Construction of the Upper Spillway

During the main phase of dam construction, 1911-1916, only the upper spillway was built (USRS 19163). Although construction of the gravity dam relied heavily on mechanical equipment, the spillway location was excavated exclusively by older methods--picks, shovels, and wheelbarrows, along with mules and carts.

Construction of the Embankment

The embankment was built between October 1914 and June 1915 (USRS n.d. c; Boyd and Etchieson 1986, Appendix II). Rock for the embankment came from quarries at the east end of the structure, while earth fill came from borrow pits just downstream. Production of fill was partly mechanized and made use of blasting, an electric crusher, and a steam shovel to scoop up earth fill. In contrast, transportation and placement of fill involved mostly mule and muscle power, including pick and shovel work and mule-drawn fresnos and carts. A steam-powered roller was used, however, to compact embankment fill after wetting by a mule-drawn water tank. The upstream face of the embankment was riprapped with hand-laid sandstone on a crushed stone base, while the downstream face was covered with hand-laid sandstone. A seepage cutoff trench was also excavated (in part by power equipment) and filled with puddled and compacted earth.

Construction of the Original Hydroelectric Plant

The original hydroelectric power plant at Elephant Butte was designed to serve only the immediate vicinity of the dam. Construction began in July 1915; the powerhouse contained a Francis type horizontal turbine built by the Trump Mfg. Co, a General Electric ATB type 12-pole, 150 kilowatt generator producing 2300 volts at 600 RPM, a high pressure triplex pump, and electrical equipment. Power had to be flowing by the time the dam was completed, since the temporary coal-fired plant was inside the limits of the reservoir. Operation began on November 12 but the plant broke down on November 21 and did not return to service until January of the following year (USRS n.d. h).

THE DAM CONSTRUCTION COMMUNITY

Because nearby communities such as Hot Springs (renamed Truth or Consequences in 1950) were unable to provide a labor force or housing, the Reclamation Service established temporary construction camps at the dam site.[1] Transportation from Engle was provided by a mule-drawn wagon (or automobile, for those who had or could hire one), while the trip into Hot Springs involved a roundabout ride from the base of the dam to the embankment area and from there down a canyon to town (Anonymous 1986). Not surprisingly, the community included a large store with butcher's shop and bakery, mess halls, and

[1]Hot Springs began as Palomas Springs, initially "a desolate place, inhabited only by health-seeking campers" (*Sierra County Advocate*, Aug. 14, 1914). In the late 1800s, cowboys from the Bar Cross Ranch built a bath house at one of the Hot Springs, raising fears that the popular spot would soon become private property. One of the health-seekers, Fount Sullivan, had the land withdrawn by the government; as a result, individuals could place tents or buildings by the springs but not own any land there (Sierra County Historical Society 1979). As Elephant Butte sprang into life, the informal community developed several businesses and was reorganized as a conventional community, Palomas Hot Springs in 1914. In the same year, the name was changed to Hot Springs (*Sierra County Advocate*, Nov. 12, 1914).

8. Statement of Significance (continued)

stables for the employees' horses. Elephant Butte was run as a "company town"; all commercial establishments were either operated or approved by the government.

Three separate camps were established; this nomination will arbitrarily refer to them as the South, East, and North Camps.

South Camp

The primary residential area was on both sides of the Rio Grande just below the dam, and was called the Elephant Butte Townsite or just the Townsite. Some of the buildings lined the main street, which ran along the east side of the river and was flanked by 240 surveyed lots. Other buildings were on the hills to the east, on undivided land. West of the river were 25 additional lots. The two sides of the camp were joined by a small, six-span, pony-truss bridge on wood piers. Eisenhart (1979:52) states that the camp population was about 450 persons, but the number of people present must have varied greatly during the life of the camp.

A December 1913 map of the townsite is reproduced in Boyd and Etchieson (1986:4-6, Figs. 2-4). Based on Miller's (1991) analysis, residences included 157 tents, 15 "frame tent houses," 25 stone buildings, 59 adobe buildings, and 4 buildings of unknown type.

Buildings named on the map included a pump house for the water works (ID No. 65), a post office, a government bunkhouse, a government mess hall, the community store, the theater and confectionery (the latter may be Hedrick's [1968] ice cream parlor), two tennis courts, croquet courts, two churches (one Catholic), a series of frame houses, store houses, a "Mexican" bunk house, the jail (ID No. 60), an adobe cottage, a blacksmith shop, and a corral. The town dump was in the side canyon west of Coyote Canyon, and is included in the defined limits for LA 54915.

East Camp

At the northwest end of East Camp, next to the dam site, were the construction facilities described earlier. To the southeast was an area labeled Officer's Hill on one map but more commonly known as the Hill. This was an area designated for permanent administrative and recreational facilities, and several permanent buildings were therefore included in construction plans (Stanton 1916:431). The Reclamation Service administration building (or "Office Building") is the only surviving structure from this complex and is described elsewhere (ID No. 41). Also present were a hotel, mess hall, hospital, laboratory, 14 cottages, a small cluster of tents, a powder house, a cap house, a pony corral, and two tennis courts. Except for Cottage No. 14, the buildings were built of adobe brick. The buildings had electric lights, running water, and sanitary sewer connections (Boyd and Etchieson 1986:97). All of the buildings had a porch.

The Reclamation Service administrative complex was built in the first half of 1911. A September 1911 photograph shows the completed buildings and electric power lines but no landscaping. In 1921 photographs the area is almost unchanged.

A small school house, serving the children of the Reclamation staff, was also present in the administration complex. This building is not described in the BOR records found, but is shown on dam construction era maps and was described by Hedrick (1986) as a one-room wood building.

The hospital was in Hospital Canyon (also known as Spring Canyon), far from other structures--a reminder that in those years, infectious disease was a serious concern.

8. Statement of Significance (continued)

The powder house was also isolated, of course--it was in the same canyon where CCC Camp BR-54 was later established. A cap house (for blasting caps) was built nearby and a corral was built where the maintenance yard for Elephant Butte Lake State Park is found today.

The East Camp extended into lower Ash Canyon, an area now under water (Anonymous 1986). This part of the camp, which apparently was for Hispanics, included about 30 tents (many in rows) and about five frame buildings. At least one power line extended into the area. A map indicates that the area included "Mexican Bunk House No. 2" and two "restaurants." Many of the buildings were later relocated to the south camp (Miller 1991).

Since quarrying was done along the railroad line, rock was easily hauled to the dam site. Quarry No. 1 was in East Camp at today's campground (ID No. 28) and sewage treatment plant (ID No. 29); Quarry Nos. 2 and 3 were at the far end of the Ash Canyon trestle bridge. Also at the far end of the bridge was a blacksmith shop. The shop's blacksmith probably resharpened drill bits, did harness and tool repair, and performed other support tasks for the quarries.

As detailed in Section 7, a number of small camps (now archaeological sites) existed east of the main construction areas. The written records are silent about "East Camp outliers," so their exact role remains unclear. We can point out that in the 1930s, during construction of Hoover Dam, a shanty town (named Railroad Pass) sprang up just outside the federal reservation, to house job-seekers and their families and to provide dam workers with services prohibited within the reservation: drinking, gambling, and prostitution (White 1995). The "East Camp outliers" at Elephant Butte are different in being on the federal reservation, so the government could have suppressed openly vicious behavior; perhaps the outliers were merely home to job-seekers and those who preferred their solitude.

North Camp

A third construction camp was established at the east and south ends of the embankment during construction of that feature. Miller (1991) counted 15 Reclamation Service buildings, 17 private buildings, two stables, and a large corral in this camp. One of the stables was an enormous shed for the mules being used to build the embankment. Population of the North Camp was about 165.

A 1916 report provides a number of details about the North Camp:

> For the mess, office, and bunk houses, tents with board floors and half sides were built. The bunk houses were furnished with steel bunks, mattresses, tables, stoves, and chairs. Electric lighting was used in all Government buildings. The repair shops, storage houses, and tables were built of corrugated sheet iron, and powder houses of stone. A pipe line for water supply from the main dam, a telephone line, and an electric power line from the central station had previously been built...
>
> Sanitation was taken care of by the officers of the main camp, who made regular inspections and enforced the rules. Ample means were provided throughout to encourage cleanliness and sanitary living. A bathhouse with showers was in constant use.
>
> ...Fire hydrants and hoses were distributed to reach all parts of the camp.

At the end of construction in 1915,

8. Statement of Significance (continued)

> Tents were taken down and equipment repaired and stored. Lumber from tents and the sheet iron buildings still in place were sold to the highest bidders among neighboring ranchmen (Boyd and Etchieson 1986, Appendix II).

Social History of the Construction Community

Elephant Butte was a government-planned, government-run community that appeared and then largely disappeared in the course of a few years (Table 1). The peak population was over 4,000 (USRS 1915b), but the average population was about 1,800; the ratio of family members to employees was about three to one (USRS 1916b). The community included a strong hierarchy; surviving documents and photographs make it clear that skilled construction and supervisory jobs were dominated by "Americans" and that most unskilled labor was provided by "Mexicans," who made up about two-thirds of the population (USRS 1916a). The two groups were segregated. At the North Camp, for example,

> ...Separate camps for the American and Mexican employees were built. Mexican employees with families, as usual, erected their own camp. For the few American families, tents with board floors and half sides were provided.
>
> ...a mess was provided for men without families, and means furnished at 25 cents each. There was also a Mexican boarding house provided by a private family, the Reclamation Service providing the building and cooking range. This establishment operated by a Mexican family, furnished meals at a lower rate than the Reclamation Service mess, and was more agreeable to the Mexican workers.

We know little about the families of dam workers. One glimpse of community life, by Hedrick (1986), comes from the daughter of the Superintendent of Construction and is concerned primarily with life on the Hill. One of "The Dam Kids" (Anonymous 1986), Hedrick attended school in a small wood building below the Reclamation homes. Her memories included Sunday School, movies and ice cream at Elephant Butte Townsite, dances (about once a month) at the hotel near her home, bridge parties and tennis tournaments on the Hill, picnics, boating, fishing, and swimming. At one point, an action movie was shot at the partly built dam. Hedrick claimed that "Life was never dull for us children, at least we thought not."

For the Anglos at least, Fourth of July meant picnics in a cottonwood grove at the junction of Ash Canyon and the Rio Grande. Baseball games, pitting dam employees against residents of Hot Springs, took place downstream from the Townsite. Trips into Hot Springs (to take the baths, among other things) took the better part of a day; the alternative was to escape to El Paso by railroad.

If Sophie Hedrick lived up on "the Hill," E. R. Bowman belonged to the Townsite below the dam. Bowman was born about 1910 and lived in the camp from 1911 to 1916; his father was the town barber. In 1979, just after Bowman's death, his reminiscences appeared in print. Bowman (1979:116-120) describes life in the Townsite as follows:

> On the back end of every other lot line a cesspool was dug and covered by a duplex out-house. A water line was run through every lot from one end of the Townsite to the other and a faucet was connected to the line in each lot. A box was built around each faucet... Poles carrying electric lines were erected down both sides of the street, making electricity available to the lots...
>
> Our house was a roughly built frame house, painted white with a tar paper roof. It had a living room, two small bedrooms, and a screened in sleeping room [that] could be closed in with a canvas awning in case of bad weather. The kitchen was the largest room, and covered the back of the house. We had a small ice box, no refrigerators in those days, and we had a screened window box where some foods were kept to keep the flies

8. Statement of Significance (continued)

> off when the supply of ice was low. We had a coal oil stove in addition to the big kitchen stove, which could burn either coal or wood. One of the most unpleasant memories I had [was] the flies. Sometimes they were so thick in our kitchen we were afraid to breathe with our mouth open, and the only things we had to fight them with were a fly-swatter and some fly-paper.
>
> Our lot was enclosed with a red picket fence, except in one corner where the chicken coop served as the barrier, with a small area in the yard enclosed for them. I was a regular visitor to the hen house, where I checked the nests to see if the hens had laid some eggs... Our chickens were a big help to our food problem, as the Commissary would be low on meat and fowl many times...
>
> My father worked long hours at the shop... My mother did all the laundry, scrubbing the clothes and linens on an old fashioned washboard, using orange naphtha soap that was hard on the hands. She would then rinse the soap out and hang the clothes on the line to dry. All waste water was just dumped out into the back yard. The ironing was done with large, heavy irons that were heated on the kitchen stove. It took two irons; as one was used the other was being heated. My brother Dale was born in October 1912, and as "Pampers" had not yet been invented we almost always had laundry on the line until the diapers weren't needed.
>
> Entertainment at Elephant Butte was very limited, but Mr. R. J. Schmalhausen, the Superintendent of Construction, did what he could to improve on our life there. He had two tennis courts build up on the "Hill" and helped to promote parties and dances, and was the umpire for the baseball games that were played... On the beautiful summer evenings... many people, particularly women and children, enjoyed strolling up the road to the Dam to watch the work being done. Walking was about the only means of transportation. Very few had horses, and it was not until the last two years of [dam construction] that automobiles began to appear. The roads in the area were just wagon trails... During the last two years of the camp we had a motion picture house. The seats were benches, and the pictures were not very clear as the motion picture industry had not progressed very much, but it was a popular entertainment...
>
> Sheriff Putnam and his wife had the only mason built house. It was made of rock and they had beautiful rugs on hardwood floors and fancy mahogany furniture. We went to visit them one evening and their son Rodey played a Victrola for me. It was one with a megaphone and had cylinder shaped records, with a picture on the megaphone of a little black and white dog... We had a church in the community, and when I was old enough I went to Sunday school... The dam was completed in 1916 when I was seven years old, and we came back to El Paso to live.

A third perspective on life at Elephant Butte can be found in a medical report (USRS 1916b):

> The American employees and their families lived in a manner tending toward the promotion of good health. Mess conditions were good, not a case of incapacitating disease being traced thereto. The Mexican population (the only foreign) was generally well housed, considering the climate, but their method of living, particularly regarding subsistence, did not tend to promote good health. Especially this was true of children, many of whom were illy fed and clothed. The average Mexican home was fairly clean, but unscreened...

The same report described the amusements at the camp:

> Baseball, hand ball, tennis, trap shooting, hunting, boating, fishing, swimming, pocket pool, dancing and motoring. The Government has operated a moving picture theatre and an ice-cream parlor and provided a Y.M.C.A. room with its usual equipment.

8. Statement of Significance (continued)

Most likely, however, the formal recreational facilities were available only to the "American" residents. E. R. Bowman (1979:116-117) commented briefly on the Hispanic-Mexican population:

> Many Mexican laborers from El Paso, including some with families, were brought to Butte Junction, where the [Elephant] Butte spur met the Santa Fe Railroad main line. They were transported to the dam site by flat cars. Most of the Mexicans were settled in the southern end of the Townsite, but some of them build their houses across the river. The Mexicans were more ingenious in building their homes than the Americans, using more native materials such as stone and mud from the river and branches from trees and bushes. Many of the American workers continued to live in some kind of tent. The Mexican workers were divided into crews supervised by English-speaking Mexican foremen. They performed the manual labor to build the Dam...

Conditions for ordinary laborers are alluded to in an exchange in the *Sierra Free Press.* On December 19, 1912, that paper published an article which asked, "Is there Graft at the Dam?" The following February 13th, a response by L. Clapp of the Elephant Butte Water User's Association admitted that "unattached" employees were required to board at the government's mess halls, in order to ensure an adequate market for the latter, to maintain minimum standards for meals, and to make it easier to keep liquor out of the camp. For similar reasons the government prohibited the peddling of meat, providing that commodity itself; however, fruit and vegetable peddlers were allowed. Prices were in line with those in nearby private stores. Clapp stated:

> We find that... there has been an orderly, sanitary and well conducted camp and as a whole as contented a body of workmen as we have ever seen. No strikes have occurred and no widespread dissatisfaction has been manifest... Laborers and mechanics are in good demand at the present time, and unless those at the camp receive fair treatment the work would be delayed by lack of labor, and this has not occurred.

This was management's position, but there is little evidence of labor unrest at the construction site and most of that seems to have been aimed at the government store (a common response was to obtain goods by parcel post; USRS 1916a). Paternalism was a way of life in early 1900s jobs, and the Reclamation Service version must have seemed more bearable than most.[2] E. R. Bowman's allusion to meat shortages at the government commissary, cited earlier, shows that the government may have had a higher opinion of its personnel record than workers did.

Elephant Butte was bound to attract what the local grand jury called "a large and unruly element" (*Sierra County Advocate,* July 9, 1915). The South Camp included a concrete jail that is still standing; during at least part of the community's existence there were a resident justice of the peace and peace officer. Serious crimes were handled from the county seat at Hillsboro, and from a paper in that town we know of the following incidents: two murders, including of a night watchman; the wounding of a peace officer; the killing of a drunk who resisted arrest; a self-inflicted but accidental death by gunshot; a case of threats at gunpoint by a drunk; an arrest on a charge of grand larceny; and three individuals (including two "cow-boys") arrested on unspecified charges (Phillips 1996:48).

A hospital report (USRS 1916b) further illuminates life in camp (Table 2). For employees, from January 1913 through June 1916 there were 1,156 cases of incapacitating illness, leading to 5,228 lost days out of 782,069 worked; through injuries, 590 employees lost 9,239 days out of the same amount worked. Of the job-related deaths, nine were instantaneous; the report remarks, "A boy was blown to pieces in a powder house early in the work, but there was no evidence to substantiate it as a fact except for the sudden disappearance of the boy."

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[2]The greatest exception may have been in 1916, when deteriorating relations between the United States and Mexico's Villistas apparently caused ethnic tension in the camp (Autobee 1995:15).

8. Statement of Significance (continued)

For the 572 job-related injuries, 224 claims were filed and 219 were approved; total compensation paid out was $24,052.51, or an average payment of about $110 – a modest amount, since blue-collar wages ran about $2.00 to $4.50 a day and "a considerable number of the claims were for death or loss of limb." The report adds, "In consideration of the death rate of the employees, must be taken into account the extreme hazard of the work" (USRS 1916b).

Children were born at Elephant Butte, but most of these births were among the Hispanic population and went unrecorded. About half of the deaths in those families were of infants (under two years of age), "many receiving no medical attention and none being solicited."

Hedrick (1986) described the community cemetery as follows:

> Elephant Butte had a graveyard up on the hill across Ash Canyon from the old railroad tracks and all of the people who died while construction was going on were buried up there. We used to watch the funeral processions wind up the hill on the old road that is still visible. Usually the homemade coffins were on a wagon bed, and the family and friends walked up behind it. There are very few signs of the old graveyard there now, due to many vandals tearing up the headstones, but when my father died he requested that he be buried up there, so I obtained permission from the Government, and he was the last one that was buried there, in 1932.

Much remains to be learned of the social history of the construction community--a topic about which most records had little to say. Hedrick and Bowman's memories, though useful, are of junior members of the dominant ethnic group. Little is known about the Hispanics who made up most of the population--and nothing about other ethnic groups that may have been present, however briefly. A 1912 photograph shows four African-Americans working by themselves in an area being mucked out for the dam foundation, but otherwise the records provide no indication of non-Anglo, non-Hispanic community members.

END OF THE CONSTRUCTION COMMUNITY, 1916

As the dam was completed, the dwindling work force dismantled the construction plant and community at Elephant Butte. Details of this process can be found in Phillips (1996:115-125). A report for 1916 (USRS 1917) states, "At the end of the year the work at Elephant Butte was carried on by two men."

A 1935 map of the South Camp cited by Miller (1991) shows only the jail (ID No. 60) still standing. Foundations are indicated for "Mess Hall No. 2," the mercantile building, and the pump house (which, however, is standing today; ID No. 65). The remains of a water tank upslope from the jail are shown (ID No. 58). A new road ran parallel to (and west of) the former main street.

EARLY DAM ADMINISTRATION, 1916-1934

Little information was found on the period between dam completion and the arrival of the CCC; this was apparently a quiet period at the dam (Boyd and Etchieson 1986:2).

Additional Construction, 1921

In 1921, the concrete spillway channel was built. Construction was delayed until the dam was full, so loose material and blasted material could be sluiced away hydraulically (Anonymous 1921; Burns 1922). The sluice did not work as well as expected; material piled up on the lower slope (Burns 1922:100-101) and was finally removed years later by the Civilian Conservation Corps.

8. Statement of Significance (continued)

Concrete for the channel was placed using a 135-foot chuting tower built at the edge of the original spillway structure. Concrete was hoisted from a mixer at the base of the tower, then fed by gravity through a series of connecting troughs to the section being poured. By the end the tower began to deform and its use was discontinued (Burns 1922:101-106). After the spillway walls were completed, the spaces behind them were backfilled.

At this time, the parapet wall on the dam was extended about 100 feet to the east to prevent the flow of extremely high water around the east abutment of the dam. To provide a solid footing for the wall extension, the roadway at the east end of the dam was cut deeper into the hillside (Burns 1922:109).

Also in 1921, the deteriorating upstream face of the embankment was improved. A concrete toe wall and parapet were built, and the face was covered with reinforced concrete. Excavation work began in 1920 but the bulk of the new construction took place the following year (Burns 1922). Based on a 1921 photograph (Burns 1922:97; Boyd and Etchieson 1986: 9, Fig. 8), buildings and tents were present in the North Camp area during the concrete work.

East Camp after Dam Construction

Hedrick (1986) mentions that once the dam was built her father moved the family to El Paso. As of August 1916, at least part of the East Camp had been leased for use as a resort (Stanton 1916:431).

A statement by the Dam's acting superintendent, L. R. Fiock (1928), offers a snapshot of the East Camp in the late 1920s. The old lab building was now the superintendent's residence. As described below, the cottages were being rented out to tourists. The old administration building, hotel, mess hall, and hospital building may not have been in use, because Fiock was promoting their conversion to tourist facilities. This apparently was done (Fiock 1934), though tourists who didn't camp out seem to have preferred the cottages.

A 1934 map provides a broader view of the East Camp a few years later, just before the CCC became active. A dam shop building and associated outbuildings were located on the flank of Water Tank Hill. The old hospital was being used as apartments. The old hotel was still "quarters" but the old laboratory was now an infirmary and the old office building was now a hotel. The mess hall and cottages were still labeled as such; one cottage now boasted a separate garage. The one-room school house was present but not labeled. Uphill from the cottages was a weather station which, though modified, is still in use. In the area later occupied by CCC Camp BR-54, the construction era corral was still present, along with the old powder house. Also indicated is ID No. 51, a utility building. Lake side recreation facilities were present and are discussed below.

Photographs from this period (including Eisenhart 1979:46, Fig. 4; and 1921 photographs) show a lack of trees and other landscaping in the district in the early 1920s. By 1933, however, photographs show well-established trees at Cottages 1-13 and in today's boat house and restaurant area. Still, most of the landscaping within the district was apparently established by CCC crews.

Early Recreation at Elephant Butte Lake

Recreational use of the reservoir occurred from the beginning (Hedrick 1986), but the relative isolation of the area must have limited such use. In 1915 and 1916, the BOR established recreational facilities including a small pier and beach area, but no additional permanent facilities were built until the CCC arrived (Eisenhart 1979:60).

In the late 1920s, Acting Superintendent L. R. Fiock reported on the facilities at Elephant Butte Lake. "State and Federal aid highways" linked the lake with the outside world. Fishing was the "principal sport" and included lake fishing as well as angling in the colder waters below the dam. The lake had been stocked with a variety of fish, but regular stocking was not yet the case.

8. Statement of Significance (continued)

Other recreational activities included examining "a nationally known engineering accomplishment," motor boating, and swimming. Fiock added:

> The cottages, partly furnished but without bedding or dishes, are available for, and are leased by the night, week, or month for that form of accommodation. For those who wish a real outing there is opportunity to camp out around the lake shore or along the terraces below the buildings. The swimming beaches, boat landing, and docks are along the lake shore and in the coves in the hill below the buildings. Tennis courts are on the hill above the hotel... Renting of boats to the public is leased as a concession and the operator maintains a landing dock and several and motor and row boats... (Fiock 1928:34-35).

A 1933 photograph of a motorboat race shows a frame (?) building with a gable roof in the approximate location of today's restaurant, with a covered grandstand and dock at the adjacent shoreline. The 1934 BOR map discussed in the previous section appears to show the same building, grandstand, and dock and indicates that the BOR had installed a bathroom in this area. The campground later developed by the CCC (ID No. 28) was already in place and included a second bathroom, although Fiock's 1934 report complains of the lack of sanitary facilities.

A BOR article described the "Ninth Annual Regatta" held in 1939 (Slavik 1939). Annual attendance for this even was 5,000 to 6,000. Hydroplane, inboard motor, and outboard motor were held, along with swimming, diving, and other competitions. Near the dam was a dance pavilion and a sandy cove favored by swimmers. Speedboat rides around Elephant Butte cost 50 cents. The article described efforts detailed later in this section:

> Provisions for overnight visitors to the lake are being developed. Lake front camping grounds have been completed, shaded by trees and green with lawn. Stones set the grounds off into units. Each unit has a stone table and benches, a stone fireplace, an electric outlet and a meter for cooking and other appliances, and space for a tent or trailer and automobile. Foundations for 22 cottages have already been laid.

At some point after 1934, the BOR leased vacation cottage sites in the Elephant Butte community. In March 1938, according to Bainbridge (1940:53), the CCC completed "a good road... to cabin sites" on Water Tank hill, suggesting that the leases do not predate that year. The current research only documented four private cottages in the dam area–three on Water Tank Hill (two have survived) and one near the weather station. The standing cottages are discussed in Section 7.

CCC WORK AT ELEPHANT BUTTE DAM, 1934-1941

Much of the following information was obtained from the National Archives in Washington, D.C.

The Civilian Conservation Corps (CCC) was founded in 1933 and the work at Elephant Butte Dam was one of the agency's first projects (Boyd and Etchieson 1986:10). Two camps served as staging areas for CCC projects at Elephant Butte Reservoir. Camp BR-8-N was organized between September 17 and October 27, 1934, and occupied by Company 855. Camp BR-54-N was occupied between July 6 and August 20, 1935. While these camps were a quarter-mile (0.4 Km) apart, the Camp BR-54-N Project Superintendent supervised work projects for both camps (Camp BR-8-N Supplementary Report, October 1938).

The total number of enrollees, supervisors, and experienced men ranged from 175 to 200. The goal of these projects was to develop Elephant Butte Dam's recreational assets to benefit Sierra County's economic climate.

8. Statement of Significance (continued)

Camp BR-8-N

In 1938, L. R. Fiock (1938:16) described the CCC camp at the old Reclamation Service administrative site:

> The hotel provides, in one building, the company headquarters, recreational hall, reading room, canteen, class rooms, storerooms, and officers' mess and technicians' quarters. The old mess hall is serving as the company mess and the testing laboratory as the infirmary. The families of the company officers and supervising personnel are able to live near the camp in the residence cottages. For this company it was necessary to construct only the barracks group of buildings. Because of this economy it was possible to obtain the construction of 21 cabin-type barracks to accommodate six C. C. C. enrollees each, in place of two of the usual four or five 50-men barracks. This was done in anticipation of their availability for overnight cabins for tourists at the termination of the camp. For that purpose they will, of course, be moved to suitably located and prepared sites.

Camp commanders complained about Camp BR-8-N's hilly and rocky setting, which often led to broken bones and cuts among the enrollees (Camp Report, November 1938). The enrollees had to relocate their baseball games to a field in Hot Springs due to the rough terrain.

Mornings would find CCC workers from both camps gathering work tools and piling into trucks at the Camp BR-54-N utility yard. After work, enrollees dined in one of the 1911 structures (probably the old BOR mess hall).

Company 855 Occupation

Records show CCC Company 855 as the first to occupy this camp in October 1934. The enrollees consisted of "Caucasian" veterans from Texas and New Mexico (Camp Report February 13, 1935). In the fall of 1934, enrollees began making improvements. Army supervisors often complained of men having to work in solid rock. Enrollees blasted the holes needed to plant ash, cedar, juniper, pinyon, and "poplar" (cottonwood?) trees, making rock showers a common occurrence. During a 1938 road construction project next to the camp, a large rock sailed through the mess hall roof and tore out a 3 by 4 foot hole (Camp Report, August 1983).

At Camp BR-8-N, Camp Commander Jno. L. Lawson served as Educational Advisor in 1935 and offered Company 855 enrollees the following courses: arithmetic, auto mechanics, civil service, English, First Aid, life saving, penmanship, photography, physical culture-hygiene, spelling, topography, and typing. The enrollees competed in bi-weekly spelling bees. Seven instructors taught five elementary courses and six vocational classes to 135 to 140 enrollees. No high school or college courses were offered and the camp's traveling library remained in camp for six months (Monthly Educational Report, January 1935; Monthly Educational Report, September 1935; Supplementary Report, October, 2, 1935).

The following is a typical menu from February 1935. Breakfast included French toast, bacon, cream gravy, hominy grits, milk, oranges, butter, and coffee; "supper" was salmon loaf, Spanish rice, baked hominy, green bean salad, sliced onions, fruit pudding, bread, and hot tea; and dinner was red chile beans, Spanish rice, scalloped potatoes, canned plums, pickled beets, bread, butter, and coffee. The cooking staff obtained dry goods from Fort Bliss and perishables from dealers in El Paso, Texas.

Certain items—raincoats, gloves, underwear, safety shoes and goggles, and towels—were in short supply. As a result, the men were tempted to steal from one another (Camp Report, February 13, 1935; Letter March 1, 1935; Supplementary Report, October, 2, 1935). Supplies for the enrollees never seemed to reach parity; the camp always had too much or too little of an item.

8. Statement of Significance (continued)

The camp offered six religious services each month, split by a Sub District Chaplain, two local ministers, and a Catholic priest. Recreation included indoor activities at the recreation hall (pool tables, a punching bag, checkers, and a library). Outside play revolved around basketball, volleyball, baseball, and horseshoes (Camp Report, February 13, 1935). Fishing and swimming in Elephant Butte Reservoir were also encouraged. The enrollees established a photography club and set up a dark room (Monthly Educational Report, September 1935).

Company 3832W Occupation

Between June 1 and October 15, 1936, Company 855 left Camp BR-8-N and Company 3832W moved in (during the eighth enrollment period; Monthly Work Progress Report, May 1936; Monthly Work Progress Report, October 1936; Camp BR-54-N Report, December 1936). Lieutenant Robert P. Kirk was the company commander.

Educational offerings improved under Camp Education Advisor Theodore Nelson's guidance. The enrollees in this company consisted of young "Caucasians" from New Mexico (Camp Report, December 1936). Enrollees at Camp BR-54-N had a 66 to 80 percent school attendance rate, and could now attend classes on business arithmetic, typing, and high school English (Education Report, July 1937). By late 1938 courses also included geography, arithmetic, American history, algebra, and high school literature and Spanish. Enrollees could attend morning classes on Monday through Friday before work (Camp Educational Report, November 1938).

Social activities had also expanded with the formation of a Glee Club and classes in leather work and drama. Movies were offered twice a week ((Monthly Camp Educational Report, September 1936; Camp Inspection Report, November 1938). The religious preferences of Company 3832 broke down as 45 Catholics and 118 Protestants, served by two Army chaplains (Report of Camp Commander on Religious Activities, December 1936). Based on surviving menus, the men ate food similar that served to Company 855. Outdoor sports remained the same except for the addition of tennis; a radio was available in the recreation hall (Recreational Equipment List, December 1936).

Company 3832 left Camp BR-8-N on August 10, 1939, for a camp in Bayfield, Colorado (Monthly Work Progress Report, September 1939).

Camp BR-54-N

Camp BR-54-N was in the hills behind the lake side recreation area; the location was initially referred to as Christobal or Engle.

Less information is available on this camp, which the National Park Service directed under the State Park Conservation Work program. Enrollees built this facility under the direction of John H. Vealey (Monthly Work Progress Report, October 1934).

Company 3830 Occupation

Under Commanding Officer Q. A. Sanders, Company 3830 occupied Camp BR-54-N on August 14, 1935. Enrollees were "Caucasian" veterans recruited from Texas, New Mexico and Oklahoma. (Recreation Equipment List, October 2, 1935; Camp Report September, 1935).

Recreation offered to enrollees at this camp included baseball, volleyball, basketball, and horseshoes. Indoors, the enrollees could listen to a radio as they played table tennis, dominoes, checkers and chess, or sparred with a punching bag (Recreation Equipment List, October 2, 1935). At this camp, Protestants dominated and Catholics were in the minority. Company 3830 had neither an educational advisor nor a library. In 1935 enrollees could only attend a current events class.

8. Statement of Significance (continued)

Company 855 Occupation

Company 855 moved into Camp BR-54-N from Camp BR-8-N on June 1, 1936 (Camp BR-54-N Report, December 1936). A February 23, 1940 report by M. J. Bowen, Special Investigator, noted that 60 percent of the company was "Spanish." Bowen described them as "right at home, working on rock masonry. Splendid work." There is little, if any, mention of the camp's Hispanic element elsewhere in reports, which grouped them with Anglos as "Caucasian."

Trucks were provided three nights a week for recreational purposes so the enrollees could visit Hot Springs. Few CCC camps were this close to town--a stroke of luck for the enrollees.

Two army chaplains continued to offer Protestant and Catholic services. Denominations at the camp in 1936 included 68 Catholics, 69 Protestants, 2 Mormons, and 34 "Others" (Camp Religious Activities, December 1936). A nature study course offered by the Education Advisor during 1937 proved very popular. The group discovered petrified wood and sea fossils, which they used to landscape Camp BR-54-N. Enrollees also cultivated a cactus and flower garden along with cedar trees and yuccas. During work time they also cut and watered the lawns surrounding the administrative offices (Educational Report, August 1937; Supplementary Report, July 1937).

By late 1938, the Camp education program offered high school classes in algebra, composition, civics, American history, Spanish, and spelling (Camp Educational Report, November 1938). Morning class began in June 1938, and could be attended four days a week for academic subjects. Night classes were also offered. The WPA instructor and Educational Advisor made special efforts to instruct Hispanic males to read and write in morning and evening classes (Camp Educational Report February 1940; Camp Educational Report September 1940).

Nights and weekends would find the enrollees playing pool and other games. During the summer, enrollees from both camps used a fully equipped swimming dock. By 1938 they were paying 50 cents a month for the bi-weekly motion picture shows (Camp Report, November 1938; Camp Report, December 1938). In early 1940, the camp library received six daily newspapers, four weekly newspapers, and twenty magazines (Camp Educational Report, 1940).

Meals had not changed much. A menu for December 1, 1936 offered the following: Breakfast, dry cereal, milk, hot cakes, and coffee; lunch, Irish stew, boiled beans, mashed potatoes, bread, and tea; and dinner, macaroni and cheese, fried spinach, Boston baked beans, bread, baked apples, and Postum. The proximity of the camp to the work areas allowed the enrollees the luxury of eating lunch in the mess hall (Camp Report, August 1937).

Company 855 was the last CCC unit to occupy Camp BR-54-N, which closed on May 10, 1941 (Monthly Work Progress Report, June 1941).

CCC Projects: A Summary

The following paragraphs summarize documentary evidence on CCC activities, and do not cover all buildings and structures at Elephant Butte. The dates in parentheses reflect the mention of a specific activity in CCC camp records but may not fully bracket the actual activity dates.

Cleanup Work

Evidence of the old construction camps, which were mostly dismantled after initial construction, was further erased by CCC cleanup crews (1935).

8. Statement of Significance (continued)

Work on Existing Reclamation Buildings

The CCC crews improved "facilities for the Bureau's administration of the area" (1937). Plans dated August 1938 (and still on file at the dam) show a proposed conversion of the old hospital (in Hospital Canyon) to apartments. The old mess hall was converted into two apartments and a storeroom (1940; Bainbridge 1940:57; Peacock 1941:46). The administration building was converted into "a modern 18-room hotel" (1940; Peacock 1941:46). In 1939 and 1940, six or seven masonry garages were built at the old Reclamation Service cottages (Bainbridge 1940:57; Peacock 1941:46).

The Fish Hatchery

In January 1938, Fiock (1938:17-18) reported on hatchery construction:

> Actual construction began on October 1, 1937 as a major item in the work program of Camp BR-8... Construction is to include a [residential] building for the operating foreman, necessary storage and service facilities, and installation of pumping equipment, etc. Electricity for pumping the water supply for the hatchery ponds is to be supplied from the hydro-electric plant at Elephant Butte Dam...
>
> The hatchery will be of the type adapted to the propagation of warm-water fish. Black bass will be the principal specie [*sic*] produced. The capacity is expected to be 200,000 to 500,000 depending on the size to which the young fish are carried in the ponds. The output is to be used for stocking Elephant Butte Reservoir, Caballo Reservoir a short distance below, and the river and drainages of the Rio Grande project. Because of the rising or falling water surface in the reservoir, which usually occurs at the normal spawning season, propagating conditions in the reservoir itself are not very favorable; hence the desire and need for a hatchery from which to constantly stock it. It is expected that some of the ponds will be ready for use during the next season.

The completed facilities included a residence for the hatchery supervisor (ID No. 66, completed in February 1939; Bainbridge 1940:54); an office, garage, and store room (ID Nos. 63 and 64, completed in April 1939; Bainbridge 1940:54), a holding house and hatchery building (ID No. 61), 14 fish ponds with berms, a series of concrete raceways (about 50 by 15 feet), and stone-lined drainage ditches (ID No. 71). By November 1938 the crews had completed five ponds and transplanted 200,000 fish. The hatchery was completed in 1939 and Bureau of Fisheries personnel began stocking of the lake on a regular basis.

New Administrative and Recreational Buildings

The CCC built new buildings to support dam administration and recreation at Elephant Butte Lake. These included a concession building (built in 1937-1938), a boat house (completed in January 1939; Bainbridge 1940:53); tourist cabins (started in 1939; completed in 1940 and 1941), and a residence and five tourist cabins in Hospital Canyon (BOR 1942:29; Boyd and Etchieson 1986:96). Fiock (1938:17) described part of the work as follows:

> A large combination and concession building of Spanish colonial architecture, to include men's and women's dressing rooms, store, restaurant, confectionery, pavilion or lounge room and attendants' quarters, also a portal and a roof terrace or balcony. This rambling building is located at one side of the service, or parking, area at the head of a combination stone stairway and trail which has been built down to the boat docks and diving platforms for swimmers.
>
> At the opposite side of the parking area work has been started on a connected group of service buildings consisting of a boat repair shop, gasoline and oil service station, and a locker room to afford individual lockers for boat owners to store their motors, and boating accessories and fishing tackle. To lead down to the boat

8. Statement of Significance (continued)

> servicing docks from the boat shop there has already been built an inclined tramway of steel rails and concrete to launch boats and for lowering motors and accessories.

Bainbridge (1939:50) mentioned CCC construction of a BOR "storage division office and garage," but it is not clear which buildings these might be.

Landscaping and Stabilization Work

The CCC crews built masonry retaining walls and walkways and provided other landscaping (including "lawns... trees, flowers, cacti, and shrubs") in the lake side recreation area (1937, 1940). This landscaping was recorded as ID Nos. 31 and 40 and is also discussed in Section 7.

> In accomplishing this landscaping work it was necessary in most cases to blast rock for tree planting and haul suitable dirt a considerable distance for this work. ...A nursery was operated under the supervision of a technician who propagated a great many shrubs, vines and other varieties of plant life suitable for the area (Bainbridge 1938:50).

Work along the lake also included

> A large parking area, seats, curbs, walls, etc. In this area, the camp is now engaged in riprapping the lake shore, landscaping around the concession building and constructing stone walls (ID Nos. 31 and 40; 1938).

L. R. Fiock (1938:17) describes the same work in greater detail:

> The shore line terrace, about a mile in length, which is being developed into a service and recreational area, was the railroad grade and quarry pits during the dam construction period. The total area of this terrace is about 7 acres and the excavation of 30,000 cubic yards of rock and placing of 15,000 cubic yards of earth fill with 3,000 square yards of rock riprap to protect the facing was involved in the raising of its level 2 to 14 feet to escape the high water level of the reservoir...
>
> The edge of the terrace in the vicinity of the concession building and docks is being finished off to form a stadium for seating of spectators during regatta celebrations and of other water sports. Beyond the concession building, the terrace will terminate in a wading pool for children, as the deep water in the reservoir and the absence of beaches in the immediate vicinity can offer inducement only to expert swimmers.

The CCC crews upgraded the campground (ID No. 28) first developed by the BOR:

> The limited area available for camp grounds has been intensively developed to provide as many units as possible. Each unit is equipped with fireplace, table and bench combination and electric light, with a convenience receptacle mounted on a post, for plugging in electric appliances or a trailer (Fiock 1938:17).

This work required planting 465 trees and shrubs plus road grading and surfacing, which was completed in January 1939. By August of that year, 10 campsites were completed (Bainbridge 1940:53-54).

The CCC crews landscaped the ridge where the old Reclamation Service adobe cottages (Nos. 1-13) were located, including construction of rock retaining walls, placement of water lines, and planting of trees and shrubs around the then-standing cottages. This work was completed in August 1939 (Bainbridge 1940:53).

8. Statement of Significance (continued)

Crews also worked on "development of Water-tank Hill," presumably ID No. 57 (1938). Bainbridge (1939:50) mentions that in 1938, crews built storm water control features and did landscaping work in Hospital Canyon.

Other Activities

Based on camp records from the National Archives, Fiock's (1938) summary, and BOR reports (Bainbridge 1938-1940; Peacock 1941; BOR 1942), other CCC activities included construction or upgrading of roads and foot trails near the dam; extension of the road grid along the west side of the reservoir; masonry work and placement of rock cribbing at the dam; excavation of the spillway (including removal of 1921 construction spoil) below the concrete chute; building latrines and toilets near the power plant; replacement of the dam site power grid and upgrading of the powerhouse control system; placement of water, sprinkler, and sewer lines; construction of a sewer plant and utility buildings; and topographic and other survey work.

THE PWA HYDROELECTRIC POWER PLANT, 1938-1940

The current hydroelectric power plant at Elephant Butte Dam was New Mexico's first major hydroelectric power plant, and replaced an earlier plant of very limited capacity. The key to sustained power generation at Elephant Butte was Caballo Dam, which was built downstream between 1936 and 1938. Water released to drive the turbines at Elephant Butte Dam could be recaptured for irrigation at Caballo (Eisenhart 1979:56-57).

The new power plant, a Public Works Administration (PWA) project, was started in 1938; it included three 8,500 Kw turbines, for a total output of 24,300 Kw (Eisenhart 1979:56-57). The first power flowed to Hot Springs on November 14, 1940. Service to Las Cruces began in December of that year, and to Deming in October 1941 (BOR 1945:37).

Little information was found on the history of power plant construction, perhaps because of the nature of the PWA. Unlike the CCC, which deliberately employed large numbers of laborers, the PWA let contracts for projects like the Elephant Butte power plant. As a consequence, most of the actual effort involved in building the plant would have taken place outside the sphere of government activity. Bainbridge (1939:43) mentioned that

> This development was made possible... through contracts... which provide that the Districts will release all claims to power revenues and they are released from repayment of construction charges on both the Elephant Butte and Caballo Reservoirs...

Bainbridge (1939:44) added that in 1938,

> An organization was built up and camp facilities provided from the old construction buildings at Elephant Butte beginning in October. Actual work began on the power plant and transmission line in December.

The following year,

> The river channel was deepened and straightened, the foundation substructure and power house proper were completed and installation of machinery started. This work was all accomplished without interfering with the release of water for irrigation requirements (Bainbridge 1940:43).

In 1940,

8. Statement of Significance (continued)

> ...The erection of the power plant and the installation of the three 8,100 kW. units was completed... Deepening and straightening of the river channel below the dam and power plant for a distance of two miles was performed and completed during the year (Peacock 1941:36).

The first power flowed to Hot Springs on November 14, 1940. Service to Las Cruces began in December of that year, and to Deming in October 1941 (BOR 1945:37).

WORLD WAR II AND LATER

According to Eisenhart (1979:70-71), there was little development of the Elephant Butte Dam area between the CCC period and 1961. In the late 1940s, emergency repairs were made to the spillway (Boggess 1949) but had no visible effect on the structure. In 1952,

> The Service Area was greatly improved in appearance by the razing of several old dilapidated buildings remaining from the C.C.C. camp [BR-54-N] days (BOR 1953:77).

In 1953 and 1954, a water treatment plant was established at the base of the dam (BOR 1954:56-67). This treatment plant, which was 500 feet south of the power plant, is shown on a 1963 BOR map but was later razed.

Other improvements, including new housing, were made over the years and are described in part in Section 7.

Development of new recreational facilities at Elephant Butte Lake was authorized by the Act of July 25, 1962 (76 Stat. 171; BOR 1963:4). In 1964, the lake became a state park under a lease agreement with the BOR. The first series of picnic shelters, marinas, and other state park structures was built between May 1964 and October 1965 (BOR 1965:5, 1966:4).

As of 1968,

> Demolishing of old vacant residences continued during the year as part of a program to eliminate the Elephant Butte housing and camp operations (BOR 1969:7).

The wording of this statement indicates that demolition of early buildings began in 1967 or earlier. Demolition continued at least until 1970 (BOR 1970:7, 1971:9). The Youth Conservation Corps later developed the former location of Reclamation Service Cabins 1-13 into a picnic area (BOR 1983).

In 1977, state parks modernized its facilities, including "a complete rehabilitation of the Elephant Butte cabins" (Eisenhart 1978:76). Based on conversations with residents at the dam site, State Parks has continued to modernize BOR-owned historic structures, most obviously by replacing original windows with aluminum frame models. In addition, the exposed stone work in the walls of CCC-built tourist cabins has been stuccoed over (cf. BOR 1983).

A succession of federal agencies operated the fish hatchery until 1965, when the abandoned hatchery became part of Elephant Butte Lake State Park.

Recreational use of Elephant Butte Lake has grown steadily within the past 50 years. As of 1978, the reservoir was the "most utilized outdoor recreation area in New Mexico, with well over one million visitors annually" (Eisenhart 1979:v).

8. Statement of Significance (continued)

IMPORTANCE OF THE DISTRICT

The Elephant Butte Dam and Spillway are currently listed on the National Register of Historic Places. For the elements being added as part of the district nomination, the primary importance stems from their contributions to regional and national history (Criterion A), as summarized in two themes. A cutoff date of 1941 reflects the departure of the CCC from the area, signaling the close of the New Deal and U.S. entry into World War II.

Theme I: Dam Construction and Administration, 1908-1941. At the time of its completion (1916), Elephant Butte Dam created the largest irrigation reservoir in the world (Baker and Cumiford 1978). Early proposals to build the dam and reservoir touched off a historic debate over interstate and international aspects of water use; one benefit of the dam was to allow the United States to meet its treaty obligations to Mexico. As part of the Rio Grande Project, Elephant Butte Dam is "one of the [Bureau of Reclamation's] oldest water supply projects in the Southwestern United States" and "the agricultural production and tourist industry that Elephant Butte brought has radically altered the history of southern New Mexico" (Boyd and Etchieson 1986:1, 104).

While the dam, spillway, and embankment are themselves monumental achievements, they were built by a construction community that sprang to life in a formerly solitary part of New Mexico. This community disbanded after completion of the dam in 1916, but since then a smaller community has operated the dam and provided recreational facilities.

Theme II: The New Deal at Elephant Butte, 1934-1941. The district embodies an important event in national history: the creation and deployment of the Civilian Conservation Corps. President Roosevelt's favorite New Deal program, the CCC provided work for thousands of men across the country. At Elephant Butte, the CCC transformed the landscape by building a variety of structures, terracing the hillsides, and planting hundreds of trees. The CCC work at Elephant Butte is so extensive and well preserved that it provides a direct link to this aspect of national history.

The Elephant Butte district incorporates a second major New Deal project, the Public Works Administration power plant. Although less exciting to the popular imagination than the CCC, the plant was the first hydroelectric power plant to supply consumer electricity in New Mexico. Combined with other federal programs, such as rural electrification, the power plant was a key regional element in the national leap towards electrical power in the middle of the century.

Three elements are also included as important engineering features:

The *embankment* built in 1915 is less impressive visually than the dam and spillway, but is an integral part of the engineering for Elephant Butte Dam and Reservoir. In addition, the embankment is probably one of the last major features in New Mexico built primarily using human labor and animal power.

Completed in 1940, the *powerhouse* is the outstanding historic example of hydroelectric power generation in the state.

Completed between 1934 and 1941, the *CCC landscaping* at Elephant Butte Dam represents the transformation of a series of semidesert hillsides into what may be the largest and most labor-intensive garden landscape in New Mexico.

Elements of the district are also important for their ability to contribute information to history. The available records provide only a fragmentary picture of the dam construction community, leaving out many details about the location, extent, and nature of buildings and structures within the community. This information is preserved to some degree in the archaeological component of the district. And, as Boyd and Etchieson (1986:17) remark,

8. Statement of Significance (continued)

> There are, as is often typical, few records of the daily lives of the people who lived and worked at Elephant Butte at the turn of the century. The sites from this period, especially the camps and refuse dumps, are the only link to their past.

As with initial dam construction, the available records do not provide a complete record of the locations and nature of the CCC camps and construction projects at Elephant Butte. In addition, the records focus on official functions and tell us less about daily life in the camps.

IMPORTANCE OF SPECIFIC ELEMENTS

The relationship between specific elements of the district and the areas of significance for the district as a whole can be summarized as follows. Where an element is seen as having more than one area of importance, it is listed for each area. Letter portions of theme designations relate to the criteria for inclusion on the National Register of Historic Places (A for historical values, C for engineering values, and D for research values).

Theme AI: Dam Construction and Administration, 1908-1941

Elephant Butte Dam is of national importance as an example of federal intervention to resolve regional and even international disputes over the distribution of water in the arid West. At the time of its completion in 1916, Elephant Butte Dam created the largest irrigation reservoir in the world and made it possible for the federal government to transform agricultural practices along the Rio Grande in southern New Mexico and west Texas.

Many structures in the original Elephant Butte community have vanished over the years, but the dam and spillway are virtually unchanged and are so monumental as to provide an effective focus for the district. The following properties are historically linked to the construction and early administration of Elephant Butte Dam, and in the aggregate provide an effective sense of the monumental and historic effort that led to the dam.

The following are contributing structural elements:

Elephant Butte Dam and Spillway (01; already on NRHP)
Elephant Butte Embankment (82)
Pump House (65)
Community Jail (60)
The Water Tank (54)
Reclamation Service Office Building (41)
Early Storage Building (51)
LA 49043 (Elephant Butte Cemetery)(81)

Although the National Register criteria usually exclude cemeteries (McClelland 1991:37), in terms of historic association LA 49043 (Elephant Butte Cemetery) is considered a contributing structural element because of its direct association with the construction of Elephant Butte Dam, *to the exclusion of other events.* The cemetery contains only the remains of dam construction workers and their families who died during dam construction, with the exception of R. J. Schmalhausen, the dam construction supervisor, who was buried there in 1932. As should be evident from the narrative, death was an important part of life at Elephant Butte, and in this case the cemetery is an inseparable part of the historic community.

8. Statement of Significance (continued)

The following are contributing archaeological elements:

LA 51765 and 54915, South Camp (Elephant Butte Townsite, including ID Nos. 59 and 71), and associated site:
LA 108201, South Camp Outlier
LA 103971, East Camp (The Hill), and associated sites:
LA 49044, East Camp Outlier
LA 49045, East Camp Outlier
LA 74221, East Camp Outlier
LA 74222, East Camp Outlier
LA 74223, East Camp Outlier
LA 108181, East Camp Outlier
LA 108182, East Camp Outlier
LA 108186, East Camp Outlier
LA 108187, East Camp Outlier
LA 108189, East Camp Outlier
LA 108190, East Camp Outlier
LA 108191, East Camp Outlier
LA 108193, East Camp Outlier
LA 108195, East Camp Outlier
LA 53605, North Camp
LA 49043 (Elephant Butte Cemetery; also a contributing structural element as ID No. 81)
LA 103972, Ash Canyon Railroad Grade
LA 108185, Historic Road
LA 108188, Historic Utility Line
LA 108192, Reclamation Service Quarry No. 2
LA 108194, Historic Road
LA 108203, Historic Utility Line
LA 108205, Historic Road

Theme AII: The New Deal at Elephant Butte, 1934-1941

The CCC's work at the Elephant Butte community transformed the local landscape from bare semidesert hillsides and gulches into a wooded, pleasant recreation area. In addition, the CCC built a number of buildings and a hatchery that greatly enhanced the recreation value of Elephant Butte Lake. Most of the CCC improvements are still standing, and many of those closely resemble their original appearance. As such, the CCC improvements at the Elephant Butte community are an outstanding example of a national program of the New Deal and its effects on the regional level.

The following form, in the aggregate, an impressive physical reminder of the CCC and its role in American history.

Masonry-lined Arroyo and Small Bridges (68, 69)
Fish Hatchery Residence (66, 67)
Hatchery Building (63, 64)
Holding House and Hatchery (61)
Hatchery Pond Area (71)
State Parks Housing (77, 78)
CCC Rock Work (57)

8. Statement of Significance (continued)

State Parks Housing, No. 15 (39)—except garage
State Parks Housing, No. 18 (38)—except garage
Pergola (34)
Rest Rooms (33)
Concession Building (32)
Boat House (30)
Lake Side Landscaping (31, 40)
Lake Side Tourist Cabins Nos. 1-15 (11-23, 25, and 26)
Campground (28)
LA 51765 and 54915, South Camp, CCC component
LA 53605, North Camp, CCC component
LA 103971, East Camp, CCC component
LA 108196, rock retaining wall
LA 108197, CCC trash dump near East Camp
LA 108198, CCC trash dump near East Camp
LA 108199, CCC trash dump near East Camp
LA 108200, CCC trash dump near East Camp
LA 108202, CCC trash dump near East Camp
LA 108204, CCC trash dump near North Camp

In addition, at least part of the rock work at these two sites is probably CCC-derived:

LA 108196, historic retaining wall
LA 108205, historic road

The PWA hydroelectric power station (03) also reflects the role of the New Deal in increasing federal involvement in the development of local and regional infrastructure. The power station at Elephant Butte was the first source of commercial hydroelectric power in New Mexico.

Theme C: Important Engineering Features

As has already been discussed, the following are important historical examples of dam construction and hydroelectric power generation:

Elephant Butte Dam and Spillway (01; already on NRHP)
Elephant Butte Embankment (82)
PWA Power Station (03)

The following is an important example of historic formal landscape construction:

Lake Side Landscaping (31,40) and other CCC rock work (57).

Theme D: Important Archaeological Sites

The following are included for their ability to contribute information towards the historic themes developed in this nomination. Some smaller sites may not be important as individual properties, but as a district the sites provide extensive information about the now-vanished community that built Elephant Butte Dam, and about CCC activities in the dam and reservoir area. In the

8. Statement of Significance (continued)

aggregate, the smaller campsites are especially important because they represent activities not sponsored by the Reclamation Service and therefore not documented in government records; our only hope of reconstructing activities outside the official camps is through archaeological study of the sites in question.

LA 49043 (Elephant Butte Cemetery)
LA 51765 and 54915, South Camp (Elephant Butte Townsite), including Water Tank Remains (59) and Hatchery Pond Area Remains (71)
South Camp Outlier Site LA 108201
LA 103971, East Camp (The Hill)
East Camp Outlier Sites, including LA 49044, 49045, 74221-74223, 108181, 108182, 108186, 108187, 108189-108193, 108195, 108197-108200, and 108202
LA 53605, North Camp
LA 108204, near North Camp

Although the National Register criteria usually exclude cemeteries (McClelland 1991:37), the Elephant Butte Cemetery is considered to be a contributing element of the district, in part *as an archaeological site,* for its ability to contribute important information on the social history of Elephant Butte. Most of the individuals buried at Elephant Butte were blue-collar dam construction workers or family members; their remains have the potential to yield important information about the lives and health of the most poorly documented segment of the community.

In addition, a series of transportation and communication related sites has survived at Elephant Butte. In the aggregate, these sites provide the opportunity to study a rarely examined aspect of historic landscapes:

LA 103972, Ash Canyon Railroad Grade (80)
LA 108185, historic road
LA 108188, historic utility line
LA 108194, historic road
LA 108196, historic transportation-related retaining wall
LA 108203, historic utility line
LA 108205, historic road

NON-CONTRIBUTING ELEMENTS

Properties Less Than 50 Years Old

Buildings with a known or likely age of less than fifty years, or completely transformed within the past fifty years, include:

- the *Records Storage Shed* (02), *Chlorination Room* (04), *Warehouse and Welding Shop* (05), *Machine Shop* (06), *New Administration Building* (07), *Storage Shed* (08), *Carpenter Shop* (09), *Flammables Storage Shed* (10), and enclosing fence at the Dam Maintenance Yard Group;

- the *Southwest Region 4 Headquarters* (62), *Small Utility Building* (70), *Steel Water Tank and Pump House* (72), *Walled Picnic Shelters* (73), *Metal Picnic Shelters* (74), *Stream Gaging Station* (75), *State Parks Rest Rooms* (76) in the Hatchery Group;

- the *Communications Complex* (58) in the Water Tank Hill Group;

8. Statement of Significance (continued)

- *State Parks Housing, No. 24* (37), the garages at *State Parks Housing Nos. 15 and 18* (39, 38), and the *Small Floating Boat House* (36) in Hospital Canyon Group;
- the *Marina* (35), *Cabins Nos. 16 and 17* (24), the *Boat Ramp and Small Dock* (27), and *Sewage Treatment Plant* (29) in the Lake Side Group;
- the *Pump House* (42), *Three Water Towers* (43), *NOAA Weather Station* (45), and *Hilltop Housing* (46-48) in the Hills Group; and
- the *Garage and Shop* (49), *Warehouse* (50), and the enclosing fence (not numbered) at the State Parks maintenance yard in the Camp BR-54 Area.

None of these properties manifest exceptional values that would lead to their inclusion on the National Register of Historic Places despite their recent construction.

Property Over 50 Years Old but Not Considered Eligible

LA 108184 appears to be a recreational campsite used between between the World Wars (i.e., between 1918 and 1941), and is a superficial site that is unrelated to the other archaeological remains or the defined themes of the district. When not considered on an individual basis, the site appears to lack the potential to yield important information on local history.

Properties of Unknown Age, Considered Non-Contributing

One property in the Camp BR-54 area may be more than 50 years old, but has deteriorated so badly that it cannot be considered important as a building: an adobe *Storage Shed* (52). The property is unlikely to contribute important information through archaeological study. While the shed may date to the CCC or early BOR periods at Elephant Butte, its actual historical associations cannot be documented.

Three properties on Water Tank Hill represent private residences (vacation homes) rather than BOR properties, although they are on BOR land. The residences are between 46 and 56 years old, and therefore may be historic rather than recent, but they do not relate to either of the defined themes for the historic district: *Tattman Cottage* (55), *Unidentified House* (56), and *Vance Castle* (53).

Finally, one property in the Hills Group, *Neff Cottage* (44), is also a private vacation home on BOR land. The property is between 43 and 59 years old, but does not relate to either of the defined themes for the historic district.

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9. Major Bibliographical References (continued)

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1915b United States Reclamation Service, Rio Grande Project, New Mexico, History of Elephant Butte Storage Unit, January 1 through December 31, 1914. National Archives - Rocky Mountain Region, RG 115 (BOR), Project Reports, Box 721, Report 510-14-RG. Denver.

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n.d. d Department of the Interior, Bureau of Reclamation, Report on Construction of Flume for River Diversion - Including Section of Main Dam - Rio Grande Project. National Archives - Rocky Mountain Region, RG 115 (BOR), Project Reports, Box 721, Report 520-16. Denver.

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n.d. g Department of the Interior, Bureau of Reclamation, Reports on Cement Gun and Grouting Operations, Elephant Butte Dam - Rio Grande Project. National Archives - Rocky Mountain Region, RG 115 (BOR), Project Reports, Box 720, Report 510-16-RG. Denver.

n.d. h Department of the Interior, Bureau of Reclamation, Reports on Construction and Operation of Steam Power Plant, Hydro-Electric Plant, Pumping Plant, Rio Grande Project. National Archives - Rocky Mountain Region, RG 115 (BOR), Project Reports, Box 725, Report 550-16-RG. Denver.

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10. Geographical Data

UTM References

5.	13	E 297780	N 3667680
6.	13	E 294360	N 3668640
7.	13	E 293990	N 3668910
8.	13	E 294520	N 3670950

Verbal Boundary Description

See boundaries marked on accompanying USGS map. Points 4 and 5 correspond to boundary markers for the Elephant Butte Reservoir Reservation.

Boundary Justification

The boundary encloses the portion of the Elephant Butte Reservoir Reservation known to contain buildings, structures, and archaeological sites related to the history of Elephant Butte.

11. Additional Documentation

Maps

The USGS Elephant Butte, N. Mex. 7.5 minute quadrangle contains the Elephant Butte Historic District and is included with this nomination (1980 photorevised edition).

A map of standing buildings and structures within the Elephant Butte Historic District is also included with this nomination (after Phillips et al. 1994). This map is based on the USGS Elephant Butte, N. Mex. 7.5 minute quadrangle (1980 photorevised edition).

Photographs

All photographs are of the Elephant Butte Historic District, Sierra County, New Mexico. Photographs 1 through 21 are courtesy of Elephant Butte Dam, New Mexico; those original negatives are archived at the Elephant Butte Dam office. Names of photographers are unknown for Photographs 1 through 21, and Photographs 22 through 28 were taken by Christine VanPool. Original negatives for Photographs 22 through 28 are archived at New Mexico Historic Preservation Division. Original captions are listed in quotes.

1. Building the Water Tank.
   Photographer: Unknown
   Original caption lists date as 1916, but photo probably dates to 1908 or 1909.
   Original negative: Elephant Butte Dam, New Mexico
   Camera direction: Unknown
   "Rio Grande Project, NM. Engle Damsite. Water supply tank of reinforced concrete; Capacity-305,000 gallons. "

11. Additional Documentation (continued)

2. Railroad trestle across Hospital Canyon, and north end of construction plant (coal-fired power plant is to upper right).
Photographer: Unknown
January 27, 1912
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown

3. North end of construction plant, showing coal-fired plant.
Photographer: Unknown
February 29, 1912
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown

4. Towers and cables erected for dam construction (south end of construction plant is under far end of cable system).
Photographer: Unknown
October 31, 1912
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"gen view of cableways showing all towers."

5. Sand-cement construction plant.
Photographer: Unknown
March 29, 1913
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"complete sand-cement plant."

6. Placement of concrete and boulders at the base of the gravity dam.
Photographer: Unknown
June 28, 1912
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"engle dam site - first 3 large rocks into foundation."

7. Partly completed gravity dam. The Rio Grande has been diverted into a flume at the west end of the structure.
Photographer: Unknown
November 27, 1914
Original negative: Elephant Butte Dam, New Mexico
Camera direction: north
"dam site general view looking north."

8. Closeup of partly completed gravity dam.
Photographer: Unknown
November 27, 1914
Original negative: Elephant Butte Dam, New Mexico
Camera direction: east
"exposure from west bank looking east."

11. Additional Documentation (continued)

9. Gravity dam nears completion (note rising waters of the lake).
Photographer: Unknown
May 28, 1915
Original negative: Elephant Butte Dam, New Mexico
Camera direction: north
"dam site looking north from towers."

10. Gravity dam, spillway, and South Camp bridge.
Photographer: Unknown
January 4, 1916
Original negative: Elephant Butte Dam, New Mexico
Camera direction: north
"general view of dam looking north."

11. Elephant Butte Dam just before completion.
Photographer: Unknown
April 30, 1916
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"dam & reservoir gen view."

12. Spillway viewed from downstream.
Photographer: Unknown
February 29, 1916
Original negative: Elephant Butte Dam, New Mexico
Camera direction: east
"elephant butte dam site looking east."

13. Spillway viewed from upstream.
Photographer: Unknown
April 30, 1916.
Original negative: Elephant Butte Dam, New Mexico
Camera direction: south
"spillway; upstream face looking south."

14. Building the embankment (note the steam roller in operation on top of structure).
Photographer: Unknown
Original caption lists date as May 28, 1916, but photo actually dates to 1915.
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"dam site embankment from west end."

11. Additional Documentation (continued)

15. Mule shed at North Camp (embankment is in the background).
Photographer: Unknown
Original caption lists date as May 28, 1916, but photo actually dates to 1915.
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"dam site embankment from south."

16. BOR headquarters complex. Office building to left; hotel to right; mess hall behind them at center of photograph; Cottage 14 above the mess hall; Cottages 1-13 to upper left.
Photographer: Unknown
September 27, 1911
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown

17. South Camp (Elephant Butte Townsite)
Photographer: Unknown
September 25, 1911
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown

18. Pony truss bridge across the Rio Grande at South Camp.
Photographer: Unknown
June 26, 1911
Original negative: Elephant Butte Dam, New Mexico
Camera direction: north
"Wagon bridge over the Rio Grande at Elephant Butte looking north."

19. The first "permanent" stream gaging station at Elephant Butte Dam.
Photographer: Unknown
June 1, 1916
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"View of permanent river gaging station."

20. Pump house at South Camp during dam construction (note cable towers at far right).
Photographer: Unknown
May 25, 1912
Original negative: Elephant Butte Dam, New Mexico
Camera direction: Unknown
"pump house for water supply."

21. CCC Co. 855 at Camp BR-8-N
Photographer: Unknown
Date unknown (between June 1936 and May 1941).
Original negative: Elephant Butte Dam, New Mexico (internegative submitted to N.M. Historic Preservation Division).
Camera direction: Unkown

11. Additional Documentation (continued)

22. Power house and yards (Historic Building ID No. 1846-00003)
Photographer: Christine VanPool
December 22, 1993
Original negative: New Mexico Historic Preservation Division
Camera direction: east-northeast

23. Cabin No. 3 (Historic Building ID No. 1846-00013)
Photographer: Christine VanPool
December 22, 1993
Original negative: New Mexico Historic Preservation Division
Camera direction: east-northeast

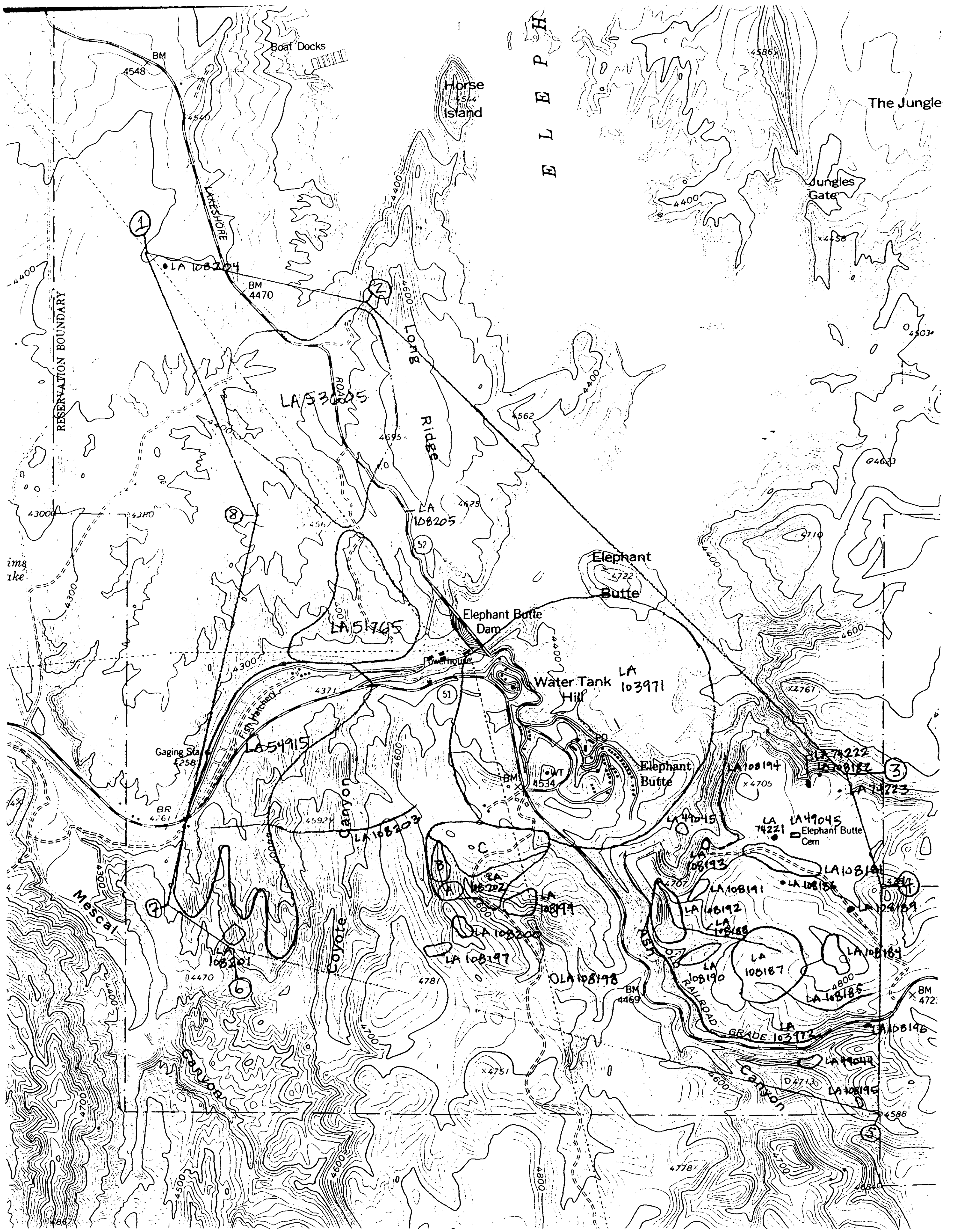
24. Cabin No. 4 (Historic Building ID No. 1846-00014)
Photographer: Christine VanPool
December 22, 1993
Original negative: New Mexico Historic Preservation Division
Camera direction: northeast

25. Boat house (Historic Building ID No. 1846-00030)
Photographer: Christine VanPool
January 13, 1994
Original negative: New Mexico Historic Preservation Division
Camera direction: east-northeast

26. Concession building (Historic Building ID No. 1846-00032)
Photographer: Christine VanPool
January 13, 1994
Original negative: New Mexico Historic Preservation Division
Camera direction: south-southwest

27. CCC rock work (Historic Building ID No. 1846-00040)
Photographer: Christine VanPool
January 13, 1994
Original negative: New Mexico Historic Preservation Division
Camera direction: south

28. Holding house and hatchery (Historic Building ID No. 1846-00061)
Photographer: Christine VanPool
January 20, 1994
Original negative: New Mexico Historic Preservation Division
Camera direction: north-northwest


Boat Docks
BM 4548
Horse Island
The Jungle
ELEPH
Jungles Gate
LAKESHORE
RESERVATION BOUNDARY
LA 108204
BM 4470
Long Ridge
ROAD
LA 53025
LA 108205
Elephant Butte
Elephant Butte Dam
Powerhouse
LA 51705
Water Tank Hill
LA 103971
Fish Hatchery
Gaging Sta
LA 54915
Coyote Canyon
Elephant Butte
PO
WT
BM 4534
LA 108194
LA 74222
LA 108182
LA 74223
LA 49045
LA 74221
Elephant Butte Cem
LA 108203
LA 108202
LA 108199
LA 108200
LA 108197
LA 108201
LA 108198
LA 108193
LA 108191
LA 108186
LA 108189
LA 108192
LA 108188
LA 108190
LA 108187
LA 108184
LA 108185
RAILROAD GRADE
LA 103972
LA 108196
LA 49044
LA 108195
Mescal Canyon
Canyon
BM 4469
BM 4723