

Sumner Lake

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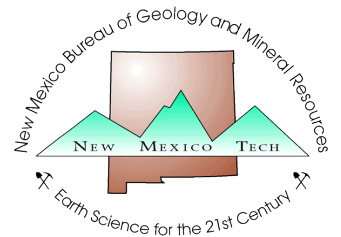
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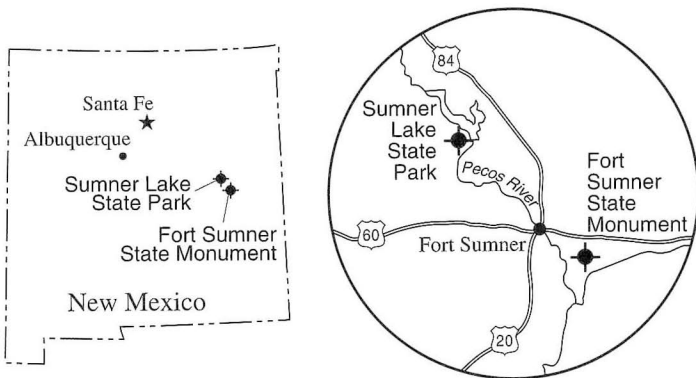


FIGURE 1—Location of Sumner Lake State Park.

Introduction

Sumner Lake State Park is approximately 16 mi northwest of Fort Sumner on US-84 and NM-203 at the junction between the Pecos River and Alamogordo Creek (Fig. 1). It was established in 1960 as Alamogordo Reservoir; the name was changed in 1974 to avoid confusion with the growing town of Alamogordo in south-



FIGURE 2—Sumner Lake, camping and boating are favorite activities.

central New Mexico. Sumner Lake was named after nearby Fort Sumner, which honors Col. Edmund Vose Sumner, who commanded the 9th Military District and built Forts Craig, Union, Thorn, and Fillmore (Julyan, 1996). Alamogordo (Spanish for big

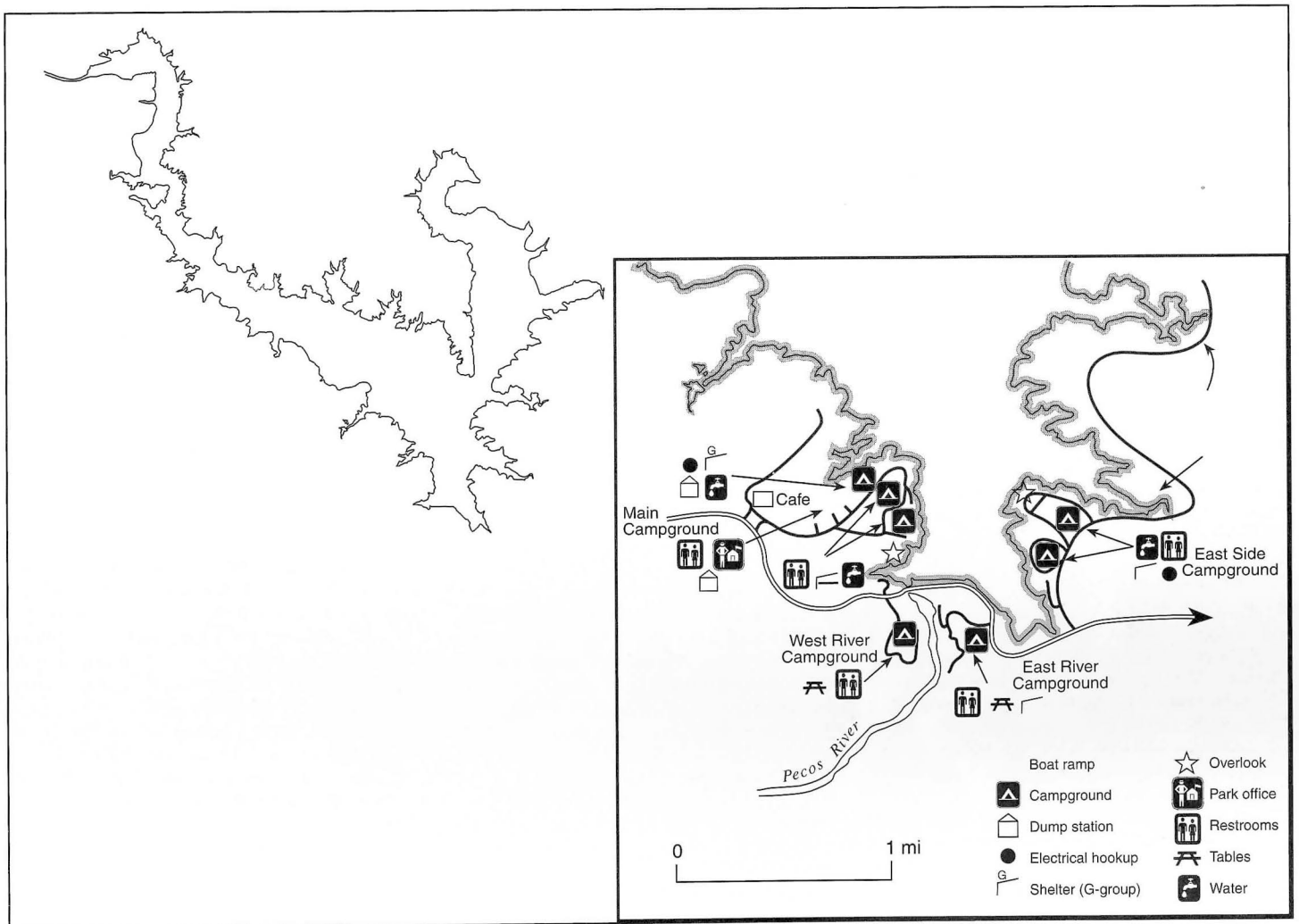


FIGURE 3—Recreational sites at Sumner Lake.

cottonwood) Creek was named after the abundant, large cottonwood trees along the river valleys (Julyan, 1996).

Alamogordo Dam was built in 1936-1937 by the Bureau of Reclamation to impound water of the Pecos River for the Carlsbad Irrigation District (Young, 1984). This district had been established in 1888 as a private corporation but in 1906 was taken over by the Federal government after a series of floods bankrupted the district (Young, 1984). The dam is a zoned earthen structure with height of 164 ft, width of 30 ft, base width of 925 ft, and a crest length of 3,084 ft at an elevation of 4,301 ft. The dam contains approximately 2.25 million yds³ of rock and dirt.

Accommodations and facilities

Sumner Lake State Park ranges in elevation from 4,275 to 4,500 ft. Piñon, juniper, mesquite, grasses, and yucca cover the hillslopes and mesas surrounding the lake (Fig. 2), and various wild flowers and cacti, including cholla and prickly pear, are common. Cottonwood trees grow along Alamogordo Creek and the Pecos River. Falcons, mountain bluebirds, ducks, and geese are plentiful. A few bald eagles inhabit the area as well. Antelope and deer roam the countryside. The State Game and Fish Department stocks the lake with walleye and northern pike, large-mouth bass, catfish, crappie, green sunfish, and bluegills. Trout is found in the river below the dam.

Recreational activities include hiking, picnicking, camping, swimming, fishing, boating, and water skiing. Sandy beaches separate rocky beaches and offer a diversity appreciated by both swimmers and fishermen. Coves abound and offer solitude even during busy holiday weekends (Fig. 3). Some camp sites are 30 ft above the lake (Fig. 4), others are at water level (Fig. 3). Another campground is along the river below the dam. Four launching ramps for boats are on the east and west sides of the lake (Fig. 5). Basketball courts, a playground, a nature trail, water, electrical hookups, and full restroom facilities with showers are available. A store and cafe are on the west side of the lake (Fig. 3). Fort Sumner State Monument is located 2 mi south of Fort Sumner.

History

Prehistoric man probably hunted in the Pecos Valley area long before Coronado passed through in 1541 (Julyan, 1996). The Ute, Comanche, and Kiowa Indians roamed these hills as early as the 1700s. The Mescalero Apache Indians came soon after. One of the popular Indian campsites was a wooded area known as Bosque Redondo (Spanish for round forest) on the east banks of the Pecos River south of Fort Sumner and the state park. Homesteaders settled in the area, and a trading post was established at Bosque Redondo in 1851.

In 1862, Fort Sumner was built at Bosque Redondo as a military installation designed to detain 8,000 Navajo and 400 Mescalero Apache Indians. The Navajo Indians were captured by Col. Kit Carson in 1862-1863 and forced to march from their homeland in the Four Corners area 350-450 mi away to Fort Sumner. The march has since been known as the "Long Walk." Once at Fort Sumner, the Indians were taught farming and grazing. However, the experiment was a failure. Cutworms, drought, and hailstorms destroyed the crops. Comanches raided the livestock. Money and supplies allotted by the U.S. Congress to support the reservation never reached the fort; food, wood, and drinking water were scarce (Wilson, 1967; Thompson, 1976). The Mescaleros escaped, and in 1868 the Navajos, humiliated and demoralized, convinced the U.S. government to allow them to return to the Four Corners area by promising not to raid the pueblos and towns. The fort was finally deactivated in 1868.

Life at Bosque Redondo changed the Navajo way of life forever (Thompson, 1976). After returning to their homeland, the Navajo became farmers using irrigation and modern tools. The style of their crafts and homes changed. Navajos learned the art of silver smithing; hogans were built more efficiently as a result of their



FIGURE 4—Sheltered camp site at Sumner Lake beneath trees.

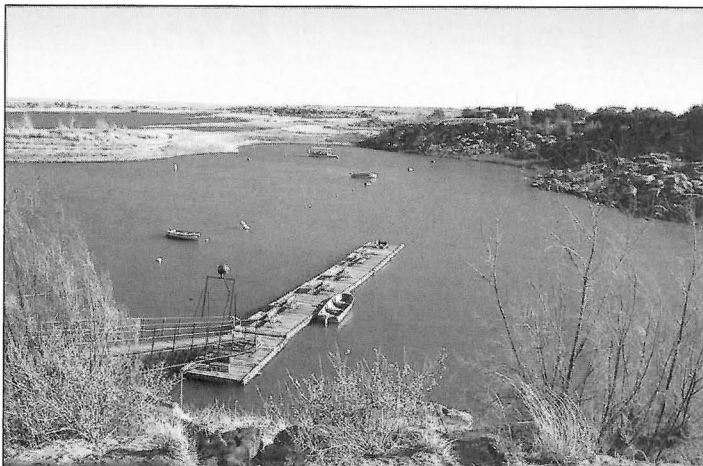


FIGURE 5—Sumner Lake near one of the boat docks.

experience at Fort Sumner. Navajos used wagons instead of the ancient travois. American justice became integrated into their tribal customs and laws.

Before the experiment at Bosque Redondo failed, Charles Goodnight and Oliver Loving left Ft. Belknap, Texas in 1866 bound for the mining camps of northern New Mexico and Colorado with about 2,000 head of cattle (Haley, 1949). They headed southwest to the Pecos River and then north along the river to Ft. Sumner (Fig. 6). This route was chosen in the hope of avoiding hostile Indians.

Once they reached Ft. Sumner, they found a ready market for most of their cattle. The U.S. Army purchased the beef to feed the Navajo and Mescalero Apache Indians held on the Bosque Redondo Reservation. Loving continued on to Denver via Las Vegas and Raton Pass (Loving Trail) with the remaining unsold cattle. Goodnight returned to Texas with the profits to purchase more cattle. In 1867, Goodnight blazed a new trail from Ft. Sumner northward through Trinchera Pass east of Raton, and into Denver and Cheyenne (Fig. 6). Years later he blazed a third segment from Ft. Sumner to Granada, Colorado. Other cattlemen, such as John Chisum, followed the Goodnight-Loving trails. Between 1866 and 1875, an estimated 250,000 head of cattle traveled over the 2,000-mi-long Goodnight-Loving Trail. But Oliver Loving did not live to see his trails used; in 1867, he died of wounds received in a skirmish with Indians near present-day Carlsbad (Fig. 6). The cattle drives ended in the late 1880s with the coming of the railroad and the establishment of permanent ranges with barbed-wire fencing and windmills to provide a steady supply of water.

In 1875, Lucien Maxwell purchased the abandoned fort and built a ranch and store; the name Fort Sumner was never changed.

FIGURE 6—Sketch map of the Southwest showing the Goodnight–Loving Trails (modified from Haley, 1949).

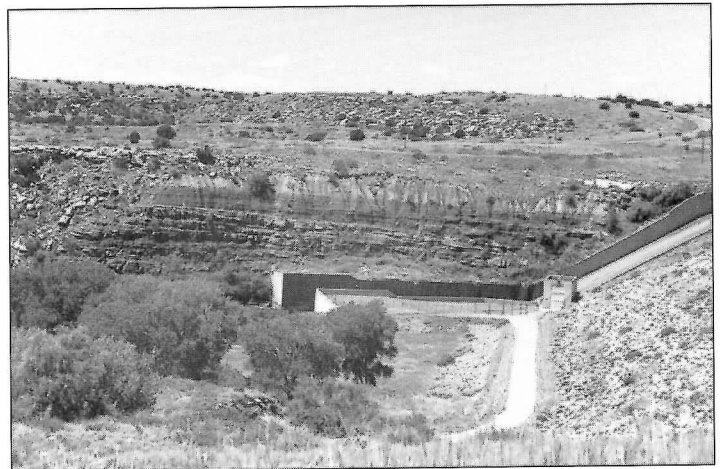
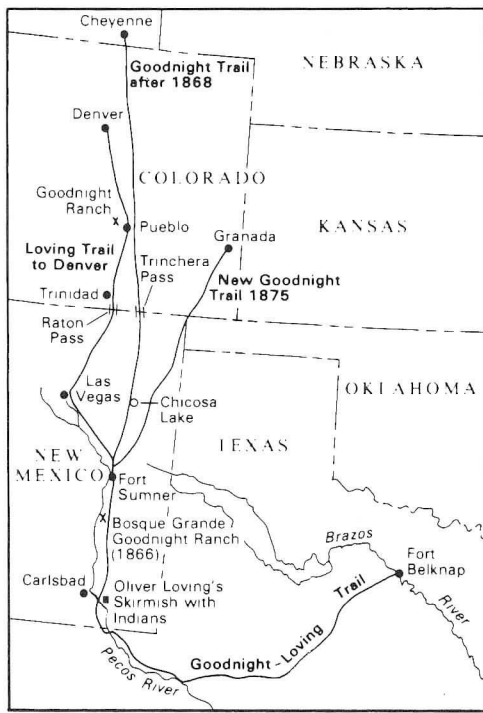
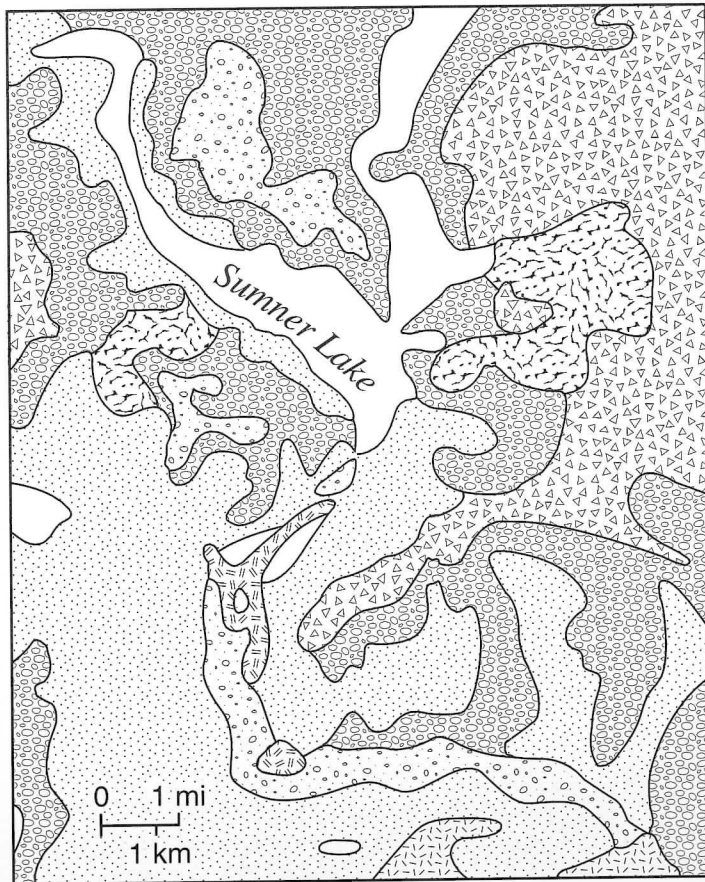







FIGURE 8—View of cliffs of sandstone of the Santa Rosa Formation that are overlain by shale and siltstone of the Garita Creek Formation at the dam spillway.



FIGURE 7—Geologic map of sedimentary rocks of Sumner Lake State Park (modified from Kelley, 1972).




Quaternary

-  Stream alluvium
-  Eolian deposits
-  Terrace gravel deposits
-  Pediment deposits
-  Older alluvial deposits

Triassic

-  Garita Creek Formation
-  Moenkopi and Santa Rosa Formations

Permian

-  Grayburg/Queen Formation

Homesteaders followed Maxwell and settled near Bosque Redondo. Billy the Kid was killed by Pat Garrett in Maxwell's bedroom in 1881 and is buried in a private cemetery next to the state monument. After Maxwell's death, the New England Cattle Co. purchased the ranch. Residents moved north and called their new community Fort Sumner, leaving the original ranch and fort to deteriorate. In 1905, the Atchinson, Topeka, and Santa Fe Railroad began construction and established a construction camp near the original site of the fort. Finally, in 1910, a post office was estab-

lished at the town of Fort Sumner, which has remained a vital community ever since (Julyan, 1996). In 1968, the ruins of the original Fort Sumner became a state monument.

Geology

Sumner Lake State Park is in the Pecos Valley section of the Great Plains physiographic province. Rocks exposed in Sumner Lake State Park range in age from Permian to Quaternary (Fig. 7).

Sandstones form ledges and cliffs surrounding Sumner Lake (Fig. 8); shales and mudstones form the slopes and are typically vegetated. The red color of the rocks is from trace amounts of red iron oxides that occur as discrete mineral grains and as disseminations in other iron-bearing minerals.

The oldest unit exposed in the park is the Grayburg–Queen Formation (Permian), which consists of reddish-brown mudstones and shaly gypsum with thin dolomitic limestone interbeds. This unit is less than 100 ft thick and crops out along the canyon walls of the Pecos River, both north and south of Sumner Lake (Kelley, 1972). These rocks were deposited by less-saline waters on the north edge of the Artesia shelf of the Permian Basin (Kelley, 1972). The Artesia shelf was one of many marine deposits formed during Permian times when a shallow marine sea covered much of south-east New Mexico.

Most of the rocks surrounding the lake, including those that form the bedrock of the dam, belong to the Middle Triassic Moenkopi Formation and the Upper Triassic Chinle Group. The Moenkopi Formation consists of grayish-red, cross-bedded sandstones, siltstones, and mudstones. Fossil amphibians have been found in the Moenkopi Formation (Lucas and Morales, 1985). The dam is built on the Moenkopi and Santa Rosa (Chinle Group) Formations.

The Chinle Group consists of alternating layers of red-brown to maroon to gray mudstone, siltstone, and sandstone that were deposited in continental fluvial and lacustrine environments about 220 million years ago. The Chinle Group is divided into five formations in eastern New Mexico: Santa Rosa, Garita Creek, Trujillo, Bull Canyon, and Redonda Formations (Lucas, 1995). Only the Santa Rosa and Garita Creek Formations are exposed at the park. The crossbeds in the sandstone are consistent with fluvial deposition. Mudcracks indicate that the mudstones were exposed to drying prior to becoming rock. Oxidation of iron in the minerals forming the sandstone is common to seasonally arid environments such as existed at the time the Chinle was deposited.

The Santa Rosa Formation is the basal member of the Chinle Group, and unconformably overlies the Grayburg–Queen Formation. The unit consists of approximately 300 ft of maroon to reddish-brown to tan sandstone, siltstone, and mudstone (Fig. 7). Locally, the sandstones and siltstones are crossbedded and contain ripple marks that indicate the rocks were deposited in stream channels and on floodplains as overbank deposits in alluvial and deltaic environments. Some tree branches, fossil leaves, and other plant remains were found locally in sandstones and mudstones. The Santa Rosa Formation was deposited in a semiarid continental environment, probably wetter than the present climate (Lucas and Hunt, 1987, Lucas and Morales, 1985). Excellent exposures crop out in the dam spillway and form the steep canyon walls along the Pecos River below the dam (Fig. 8). Elsewhere in the subsurface of eastern New Mexico, the Santa Rosa Formation is an oil producer (Broadhead, 1984).

The Garita Creek Formation of the Chinle Group conformably overlies the Santa Rosa Formation (Fig. 7). This unit consists of maroon to reddish-brown mudstone, siltstone, and thin sandstone. These rocks were deposited in lacustrine and fluvial environments. Rocks of the Chinle Group form most of the vegetated slopes.

Surficial deposits of soil, gravel, silt, and clay of late Tertiary and Quaternary age cover the Triassic rocks in places. Most of these materials were deposited during the past 2 million yrs as the Pecos River cut its present valley. Along some valleys in the area, the alluvial fill may be as thick as 60 ft. The terraces along the Pecos River below the dam consist of coarse gravels of quartzite, schist, gneiss, and sandstone that were eroded from the Sangre de Cristo Mountains and deposited by the river over the last million years or so. Sand dunes are also common locally in the state park and were formed in modern times by wind-blown material.

Summary

Sumner Lake State Park was originally established in 1965 as Alamogordo Lake State Park and renamed after nearby Fort Sumner in 1974. Although the Alamogordo Dam was built in 1936–1937 by the Bureau of Reclamation to impound water of the Pecos River for irrigation, recreational use, including hiking, picnicking, camping, swimming, fishing, boating, and water skiing, is important to most visitors. Fort Sumner State Monument is nearby for visitors interested in mid- to late-1800s history of eastern New Mexico.

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