The Mineral Springs

In 1906, the Secretary of the Interior, Honorable B.A. Hitchcock, recommended that the springs be surveyed and inventoried. Joseph R. Swords, the first park superintendent, hired geologist Charles N. Gould to perform the work and prepare a report.

In a report dated August 13, 1906, Professor Gould wrote, "There are known to exist at present in the Platt National Park 33 springs of sufficient importance to justify description..." The original report documented thirty three springs: 18 sulphur springs, 6 freshwater springs, 4 iron springs, 3 bromide springs, 1 bromide/sulphur spring, and 1 soda spring.

As popularity of the springs continued to grow, rumors of the area becoming a health resort were promoted and the little town of Sulphur Springs flourished. People came from all over the world to seek the mineral waters. Although there is no scientific evidence to support such claims, some people have long attributed medicinal and restorative powers to the mineral waters flowing from these springs.

French Count Henri DeFeres visits Pavilion Springs to collect mineral water, circa 1906

Through the ages, many testimonials have been written about notable cures, ranging from severe cases of rheumatism and stomach disorders, to diseases of the liver and kidneys.

> My sister (Mrs. Florence Leak) came here from Knoxville, Tenn., a nervous wreck from stomach trouble. She drank Bromide water and in four months went home cured.
>
> B.E. RAWLINGS
> Police Judge, Sulphur, OK
>
> Had stroke of paralysis and went to Sulphur a nervous wreck with the left side wholy out of control. Bromide water cured me in three weeks.
>
> W.S. LIKEN,
> Muncie, Ind.

Today, Pavilion Springs, Black Sulphur Spring, Hillside Spring, and the Vendome Well are the only mineral waters flowing at Chickasaw National Recreation Area. Water laden with compounds of sulphur, bromide, and many other elements flow from these springs, emitting a strong odor from which the town of Sulphur draws its name. Though the National Park Service claims no proof to the curative qualities these springs may hold, visitors to the area can be assured the springs will continue to be protected. Today, visitors to the area can still enjoy the beauty of the springs or possibly indulge in the mystery of their healing powers.

For a close look at many of the historical structures, including the springs and their locations, obtain a copy of the Historic Structures of the Platt Historic District brochure from the Travertine Nature Center.

Southwest Parks & Monuments Association
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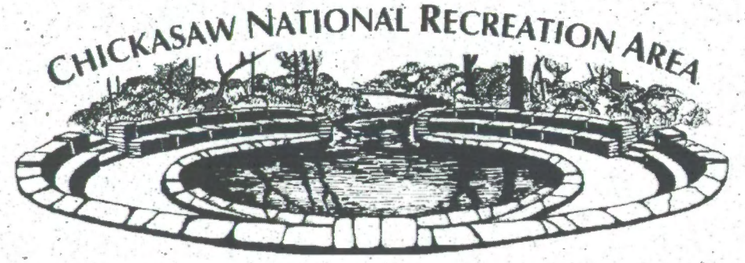


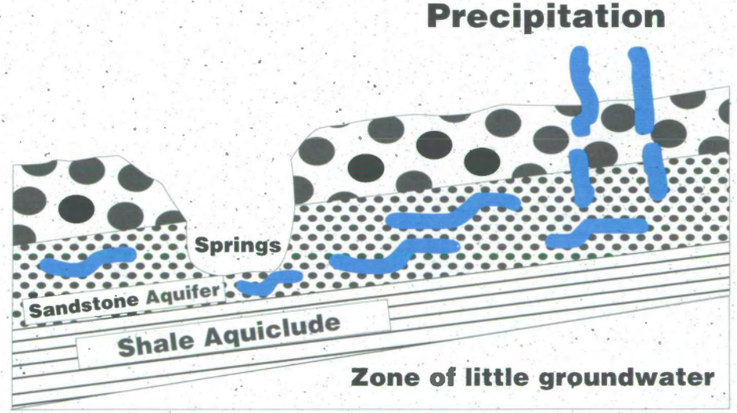
The Springs of Chickasaw National Recreation Area

NATIONAL PARK SERVICE
Department of the Interior

Chickasaw National Recreation Area had its beginning as Sulphur Springs Reservation in 1902 when legislation provided for the federal govenment to purchase 640 acres from the Chickasaw and Choctaw Indian Nations in Indian Territory. This land was set aside "... for the proper utilization and control of said springs and the waters of said creeks ..." Folklore tells us that the early people who lived here referred to this area as "The Peaceful Valley of Rippling Waters." The sick and aged came to restore their health and regain their vigor. Doctors of the era prescribed various types of mineral water for ailments such as stroke, arthritis, and paralysis. There is no doubt the freshwater and mineral springs have lured visitors here, both for their refreshing qualities and for the mystery that springs have always held for many people. The origin of the springs and their characteristics are really no mystery at all, but are ongoing natural processes.

The Origin of the Park's Springs

Groundwater, simply defined, is the water beneath the earth's surface. Virtually all the soils and rocks that make up the earth's crust contain varying amounts of moisture, referred to as groundwater. Groundwater is the main source of springs and wells.



As rain falls, gravity forces water downward through many layers of porous rock. These porous layers of rock are made up mainly of sandstone and are called aquifers. Gravity pulls groundwater down through these areas until it reaches a layer of shale rock that does not allow the water to penetrate. This layer is known as an aquiclude.

Because the layers here at Chickasaw National Recreation Area are tilted, the groundwater flows downhill. This undergroundwater is surrounded by solid rock and is naturally under a great deal of pressure. This pressure is released when the water finds an opening to the earth's surface. These openings can be either naturally occurring cracks and fissures in rock layers or areas where the earth has eroded away.

Antelope Springs

Fresh or Mineral Spring?

The difference between freshwater and mineral springs is the amount of natural minerals that remain dissolved in the water once it reaches the surface of the earth.

Water from **mineral springs** flows through an aquifer containing mineral-laden rocks. These rocks have minerals that readily dissolve into the water as it passes through. Some of the minerals found in these springs at Chickasaw National Recreation Area include sulphur, bromide, calcium, sodium, and magnesium. Sulphur and bromide give the water its infamous odor and taste.

In **freshwater springs**, the aquifers that the water passes through are free of many of the minerals that are dissolved in a mineral spring. Since water from these springs has no distinctive odor or taste it is called "fresh" water, but in fact it contains a great deal of calcium carbonate.

The Park's Springs

The Freshwater Springs

Antelope and Buffalo Springs, the two largest freshwater springs in the recreation area, are located approximately one-half mile east of the Travertine Nature Center. These springs can be accessed by taking the Antelope and Buffalo Springs Trail, which begins at the nature center.

These springs have no strong taste or odor and are referred to as freshwater springs. As the water is exposed to the air at Antelope and Buffalo Springs, carbon dioxide (a gas) is returned to the atmosphere, forcing calcium carbonate to drop out and form a deposit known as travertine. At Buffalo Springs, the tiny bubbles emerging at the water's surface indicate the release of carbon dioxide. Evidence of travertine deposits can be seen as rock ledges, which have formed over time throughout Travertine Creek. Objects left in the creek, such as bottles or keys, will also acquire a coating of this porous travertine mineral.

These two popular freshwater springs flow at a combined average rate of about three to five million gallons of water per day. Although the freshwater springs have high-volume flows, they fluctuate greatly, depending on rainfall. Consequently, Buffalo and Antelope Springs have occasionally dried up during extended droughts.

Buffalo Springs