

LOLO HOT SPRINGS, MONTANA

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INTRODUCTION

Lolo Hot Springs is located southwest of Missoula in the Bitterroot region of Montana next to the Idaho border. The hot springs were well known to the Indians, as it was a mineral lick for wild game, and an ancient meeting place and bathing spot for the Indians. Lewis and Clark visited here in 1805 and again on their return trip in 1806. The hot, mineralized springs became a landmark and rendezvous point for early explorers, trappers, and prospectors. By 1885, it had become a favorite vacationing spot for local families and hunters. Today, there is a large outdoor swimming pool, and indoor soaking pool, both heated by the geothermal springs. There is also a hotel, restaurant, saloon and a RV park, camping and picnicking area. An extensive trail system is available for hiking and horseback riding in the area, and since it is located at over 4,000 feet elevation, there is snowmobiling in the winter.

GEOHERMAL USE

Originally, seven to eight hot springs flowed out of the ground through glacial deposits. Today, the springs produce 275,000 gallons per day between 104 and 117°F. The hot water is collected in a 35,000 gallon holding tank which is used to supply drinking and shower water for the restaurant, hotel, swimming pool and the other establishments in the area. Water from the springs is used directly for filling the pool and for heating the decks and floors of the pool area. The swimming pool uses water at 92°F and the indoor soaking pool 104°F. The waste water from these areas is piped across the highway to bumper boat pond at the RV park. From here the water is disposed of to a local stream. The use of the geothermal water saves the swimming pool between \$500 and \$600 per month during the winter. The swimming pool holds about 100,000 gallons of water with a complete change about every 1.5 days, and the soaking pool of 35,000 gallons has a complete change every four hours. Due to the long retention time for the pool, the water is chlorinated. It is estimated that the peak energy use is around 200,000 Btu/hr and the annual energy use around 800 million Btu.

LEWIS AND CLARK

The Lewis and Clark expedition stopped at Lolo Hot Springs on both legs of the journey, in September of 1805 and in June of 1806. William Clark suggested the name Boyles Springs, but the first Lolo post office was registered as Lolo Hot Springs and the name endured. The trip over Lolo Pass took the Corps of Discovery 11 days to cross. On the crossing, since there was no game, they were forced to eat candles, bear oil, horsemeat, and packaged “portable” soup they’d brought from the east.



Figure 1. Outdoor pool.



Figure 2. Indoor pool.

Journal entries by members of the Corps were made on September 13, 1805 as follows:

Lewis:

“At the distance of two miles we came to several springs issuing from large rocks of a coarse, hard grit, and nearly boil hot. These seem to be much frequented, as there are several paths made by elk, deer, and other animals, near one of the springs hole or Indian bath, and roads leading in different directions. These embarrassed our guide who, mistaking the road, took us three miles out of the proper course, over an exceedingly bad route.”

Sergeant Gass:

"...we came to a most beautiful warm springs, the water of which is considerably above blood-heat, and I could not bear my hand in it without uneasiness. There are so many paths leading to and from this spring that our guide took a wrong one for a mile or two..."

Journal entries made by the Corps on June 29, 1806 are as follows:

Clark:

"Those Worm or Hot Springs are Situated at the base of a hill of no considerable hight - these springs issue from the bottom and through the interstices of a grey freestone rock, the rock rises in irregular masy cliffs in a circular range - the principal springs is the temperature of the warmest baths used at the Hot Springs in Virginia. In this bath which had been prepared by the Indians by stopping the river with Stone and mud, I bathed and remained in 10 minits it was with dificuelty I could remain this long and it caused. A profuse swet. Two other bold Springs adjacent to this are much warmer, their heat being so great as to make the hand of a person Smart extreemly when immerced. Both the Men and indians amused themselves with the use of the bath this evening. I observed after the indians remaining in the bath as long as they could bear it run and plunge themselves into the creek the water of

which is now as cold as ice can make it; after remaining her a few mintis they return again to the worm bath repeeting the transision several times but always ending in the worm bath. Saw the tracks of 2 bear footed indians."

Sergeant Gass:

"...in the evening we arrived at the warm springs; where we encamped for the night, and most of us bathed in its water."

Authors note: the original spelling and grammar of the journals have been maintained. Their description of the temperature of the springs, verifies that they were approximately the same temperature as today (104E to 117EF), as this is the range of temperature that the human body can only stand for short periods of time - and the upper limit can be painful. The reference to Virginia probably refers to the resort at Hot Springs, VA - described in Vol. 17, No. 2 of the Geo-Heat Center Quarterly Bulletin (May, 1996). The spring temperature at this resort, commercialized in the middle 1700s, is at 102E to 106EF.

Additional information on Lolo Hot Springs and the Lewis and Clark route through Montana can be found at the following website: <http://lewisandclark.state.mt.us/> and www.lolohotsprings.net. Much of the information in this article came from these two sites.