The Thermal Water Distribution System

Water from 44 of the hot springs is piped by gravity flow into the 300,000 gallon reservoir beneath Park Headquarters. The pumps in the Headquarters' basement pump part of this water through a 10-inch pipeline along the front of Bathhouse Row. The water flowing into the reservoir which is not pumped out again is passed on as overflow into Hot Springs Creek. The bathhouses take off part of the hot water from the 10-inch main, part is diverted to the various thermal fountains, and part is pumped to the 400,000 gallon reservoir and the 100,000 gallon high-level reservoir on Hot Springs Mountain. The remainder of the water goes on to the Heat Exchanger. Here it is cooled somewhat by passing through radiators. During the summer months, when the air temperature is high, the air-cooling system is supplemented by a water cooling system. The hot water passes through large cylinders containing pipes filled with cold well water. The heat then passes from the hot water to the cold water without any mixing of the two systems. The cooled water is then pumped back along Bathhouse Row where the bathhouses take off part of it and the remainder is pumped to a 100,000 gallon holding reservoir on Hot Springs Mountain.

The holding reservoirs are used to provide water to the outlying bathhouses when the pumps are shut off. This water is pumped to the reservoirs and flows out again, through the same pipes.

An average of 10,000,000 gallons of water is pumped each month. Flow meters located at each bathhouse send electrical impulses to receivers located in the Headquarters basement. These receivers then record on graphs the amount of water being used.