

The Water Systems Of Jerusalem

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In Jerusalem, as is the case anywhere in the world, water means survival and it means life. That fact becomes clear in Jerusalem, more so, it seems, than in other places, because the city is situated on the edge of a desert and the land is often without water. Water, therefore, takes on special significance in Jerusalem; in fact, its presence is intimately connected with the history of the city. This paper deals with the water systems in the city of Jerusalem, which enabled the city to survive and flourish through the centuries.

A study of Jerusalem's water systems must begin at the spring Gihon. The spring is located in the Kidron Valley, east of ancient Mount Zion, and still "gushes" its water today. It was adjacent to this spring, to the west, that the Canaanite tribe of the Jebusites, prior to the time of David, had settled and built their stronghold. The spring not only provided the Jebusites with a reliable source of water in times of peace, but in times of warfare as well. Although located outside of the city walls, the precious waters of the Gihon were brought to the interior of the city by way of a series of natural tunnels and a shaft. This water system allowed the inhabitants of the city, during times of war, to use the waters of the Gihon without being exposed to the enemy. This very system, however, next to which they had settled and which was to be their lifeblood, would eventually play a vital role in their downfall.

Late in the 11th Century B.C., after David had ruled as king in Israel for six years, he chose to move his capital from Hebron to the Jebusite city of Jerusalem. Several factors influenced his decision: Jerusalem, of course, had a reliable source of water, the Gihon; moving the capital to centrally-located Jerusalem would serve to unite the scattered tribes of Israel without fueling any petty jealousies among them; and finally, the capital's location in the territory of Benjamin would serve to appease that tribe which had supported the former king, one of their own, King Saul.

In 1004 B.C. David attacked Jerusalem, using the spring Gihon to do so. Apparently, the presence of the spring and its connecting tunnels and shaft were not a secret to those outside the city, at least not to the Israelites. David ordered a surprise attack through this "water shaft" (2 Samuel 5:8). It was Joab, the Bible tells us, who, at the Gihon in the Kidron Valley, entered the horizontal tunnel that took the spring's waters toward the city. He followed the tunnel to what is known today as Warren's Shaft (named after Charles Warren, who discovered it in 1867). Having scaled the shaft—no doubt, a difficult 38-foot climb!—Joab entered the city and was instrumental in the overthrow of the Jebusites and in Israel's taking Jerusalem. The spring Gihon, the lifeblood of the Jebusites, had indeed played an important role in their downfall.

Two other facets of the Gihon spring should be mentioned. Not only did the spring supply water to the inhabitants of Jerusalem—either directly from its mouth or through its adjoining tunnels and Warren's Shaft—but it also supplied water for the irrigation of crops in the Kidron Valley and at the southern end of Mount Zion. To control the flow of the waters to the valley, a channel called the Siloam Channel was constructed, most likely by King Solomon. The channel ran from the spring Gihon south, along the eastern slope of Mount Zion. Small dams near Gihon directed its waters either toward Warren's Shaft or south through the channel.

The channel, partly exposed and partly a rock-hewn tunnel, extended to the south for about 1,300 feet. Along its eastern wall, facing the Kidron Valley, were a series of "windows." Small dams regulated the water flowing from these openings into the fields of the Kidron. Reservoirs were

constructed at the end of the channel, on the southern tip of Mount Zion. The reservoirs stored the “excess” water that ran through the Siloam Channel.

A final use of the waters of the Gihon involved an extraordinary building project of Judah’s King Hezekiah. In approximately 701 B.C., when under the threat of Assyrian attack, Hezekiah not only strengthened the walls and defenses of the city, but he also protected the city’s valuable water supply. The king constructed a tunnel that took the waters of the Gihon spring well beyond Warren’s Shaft. In fact, Hezekiah’s tunnel wound all the way through Mount Zion, some 1,750 feet, to the Pool of Siloam. Here, behind Hezekiah’s newly constructed city wall, Gihon’s waters were safe for the inhabitants of Jerusalem. An inscription found in the tunnel documents the completion of this extraordinary project.

In addition to the Gihon spring, Jerusalem’s water system also included the use of pools, or reservoirs. These were added to the water system, not only to meet the increasing demand for water in the temple, but also and especially to meet the increasing demand for water by a growing population. The Gihon spring could supply water to those in the city that lived in and around Ophel. Since Jerusalem grew as a city towards the north and the west, sources of water were needed for the people in these areas as well. Consequently, reservoirs were constructed.

Many of the reservoirs had steps leading into them and were sometimes as deep as 45 feet and over 300 feet in length. They were used, like the usual cisterns throughout the city, to store any available water, most often that from the winter rains.

Archeological findings, the Biblical record, and the accounts of Josephus and other sources have identified and located a number of reservoirs in and around the city of Jerusalem. Among these were the Serpent Pool, outside of the city on its southwest corner; the Tower Pool, on the western hill near the three towers built by Herod the Great; the Pool of Siloam; and the Pool of Israel, the Strouthion Pool, and the Sheep Pool to the north of the Temple near the site of the Fortress Antonia. It is this last—the Sheep Pool (or “Bethesda” in Aramaic)—which is probably the most familiar to Bible students. It was here that Jesus healed the man who had been an invalid for 38 years (cf. John 5).

During the time of Herod the Great, the Gihon spring and the waters of the reservoirs proved to be insufficient for the growing city of Jerusalem. To meet the city’s needs, aqueducts were also added to Jerusalem’s water system. Water from the region south of Bethlehem was carried by gravity over aqueducts into the city of Jerusalem, filling its pools and reservoirs.

Jerusalem had two aqueducts supplying it with water: the lower aqueduct and the upper. While some question whether or not the lower aqueduct was constructed by the Romans (its appearance and construction suggest an earlier date), there is no question concerning the construction of the upper aqueduct; it is clearly Roman. It was most likely begun during the time of Herod the Great and completed during the governorship of Pontius Pilate. In fact, Josephus accuses Pilate of plundering the temple treasury to cover the cost of part of the aqueduct’s construction.

The course of the lower aqueduct took it from Ein-Arrub, 15 miles south of Jerusalem, winding and twisting through the hill country in and around Bethlehem, to its termination on the Temple Mount. While the direct distance was only 15 miles, the aqueduct’s torturous route gave it a total length of 50!

The upper aqueduct, however, was much shorter and much straighter. It originated some 12 miles south of Jerusalem and seems to have joined the lower aqueduct southwest of the city. Both aqueducts, much like the Siloam Channel, were constructed by either tunneling directly through rock or by fitting together “pipes” which had been cut from the rock. Although this water system was in constant need of repairs and care, it served the city of Jerusalem well for some seventeen centuries.

Water means survival and it means life. Because that is so true, people will often take elaborate measures to assure themselves a supply of water. That, indeed, was the case with the early inhabitants of the city of Jerusalem.