



WATER RESOURCES IN MADRAS: LEGACY UNDER THE BRITISH

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Abstract: Chennai faces water woes almost every year, either in the form of floods or drought. It heavily depends on the monsoon for water yet it does not have a proper system of water management. What system of water supply we currently have is thanks to the British. The city was the first major settlement of the English East India Company in 1639. But the question always remains as to why exactly this spot was chosen to construct their Fort especially when it lacks a basic amenity like good drinking water. In spite of the drawbacks the British had to work out methods to face the perennial problem of water. This paper is an attempt to understand the problem related to the supply of water and the first few attempts made by the English to come up with feasible solutions.

Keywords: Water, Captain Baker, Seven Wells, Municipal Waterworks

I. INTRODUCTION

Chennai, or erstwhile Madras, is the capital of the southern state of Tamil Nadu and is the fifth largest city in India. Historically, the city has immense importance. It was the first proper settlement of the English East India Company in 1639 and the place of the first Fort built by the English in India. One essential factor which made many historians wonder over the choice of location of the first English fort in India is, though it was situated on the Coromandel Coast of the Bay of Bengal what the location lacked is a good source of drinking water.

Water is regarded as “a prime natural resource, a basic human need and a precious national asset”. Water is part of the three fundamental requirements of every human being namely, food, clothing and shelter. In fact, civilization itself is something of a dialogue between man and water. The earliest human beings have settled on riverbanks or besides lakes. Most of the earliest civilizations have all flourished along the banks of rivers Tigris, Euphrates, Nile, Hwang-Ho and Indus. As civilizations prospered and with increasing population, people had to move further away from the natural water sources, but the need for water never ceased. Methods had to be developed to regulate the supply of water based on needs. It is

believed that it was the Chinese who had first developed the art of sinking wells as deep as 500 metres below the ground to draw and store water. Long distance water supply through high pressure pipelines is believed to be of Greek origin. Under the Romans the ancient water supply system attained its zenith. They constructed aqueducts to divert water to their cities. The importance which a country attaches to the need for an adequate and wholesome water supply is an index of its civilization, growth and development.

II. SOURCES OF WATER IN MADRAS

Chennai, located on the coast of Bay of Bengal, has no perennial source of water. At the time of the English settlement in Madras there were three existing rivers in the city – namely, Cooum river, Adyar river and Elambore river. These rivers were mostly stagnant and were fed by the monsoon rains. But these rivers were not ideal for consumption due to lack of proper drainage and lack of general awareness among the people gradually resulting in the contamination of the rivers. Other than these rivers the people of the area depended on wells, ponds and tanks for water. These water bodies were also fed by the monsoon rains and their water was used for domestic as well as for irrigation. However, the fluctuating monsoon could not be trusted. Whenever the monsoons failed the water sources invariably dried up and the people were forced to bring water from distant areas. This was the condition of water in Madras on the eve of the English settlement.

III. THE ENGLISH SETTLEMENT IN MADRAS

In December 1600 the English East India Company had been granted a charter by Queen Elizabeth for a monopoly on all English trade east of the Cape of Good Hope. Company merchants sought to establish trading ports along the coastal lines to enable effective control and management of trade. On 22 August 1639, an English trader and agent of the Company, Francis Day, secured a land grant from the local Nayak and the construction of Fort St. George began in 1640. Its proximity to the sea enabled the English settlers to make Chennai their first actual settlement in India. With the establishment of the Fort a new town arose near it. This town was known to the natives as Chennapatnam. The original village of Madraspatnam was to the North of the Fort. With the passage of time, the two growing towns merged together. The English preferred to call it Madraspatnam. In due course of time this town was referred to by the Europeans as “Black Town”, while the European settlement in and around the Fort was referred to as “White Town”. The classification of Black Town is essential to understand the problem of water supply.

IV. THE PROBLEM OF WATER FOR THE SETTLERS

When the Britishers settled in Madras the one problem that bewildered them was the scarcity of good drinking water. Alexander Hamilton, a trader in the East Indies, had noted in 1718, “*Fort St. George or Maderass, or as the natives call it, China Patam, is a Colony and City belonging to the English East-India Company, situated in one of the most incommodious Places I ever saw. It front’s the sea which continuously rolls impetuously on its shore – more here than in any other place on the coast of*

Coromandel. The Foundation is in Sand, with a Salt- water River on its back side, which obstructs all Springs of Fresh-water from coming near the Town, so that they have no drinkable Water within a Mile of them, the Sea of- ten threatening Destruction on one Side, and the River in the rainy Sea- son Inundations on the other, the Sun from April to September scorching hot;... ”. The statement sums up the fact that the White Town did not have adequate water sources and that it necessitated the inhabitants to bring water from distant areas.

The nearest source of good drinking water for the residents of White Town were the wells in the northern part of Peddanaickenpet, which lay in the western part of Black Town. The water was brought and sold by water-bearers who brought the water in pots, on cattle and carts. A pot of water is said to have cost two duddus (10 copper cash each). The system of purchasing water for consumption existed in Chennai even during the initial settlement of the English. Large timber–mud cisterns were used to store water within the Fort. Paul Benfield (1741–1840), a building contractor, filled these cisterns with water transported in bullock carts. Significantly, the wells in Peddanaickenpet were used by the people of both White Town and Black Town.

The next problem that the English faced, as far as water was concerned was that they not only had to supply water for their own troops but also for the people dependent on them. The only lure to the English settlers to settle in Madras was the thriving indigenous trade in Calico (muslin). The East India Company, therefore, gave employment to many washers, bleachers and dyers of calico. The Company was driven to the necessity of finding plenty of open space and good water for these men to carry on their business. The first settlement the English made for these workers was in Peddanaickenpet, but the area soon proved inadequate. Elihu Yale, Governor of Madras (1687 – 1692), imported nearly 50 weaver-families and settled them at ‘Weaver’s Street’ (now Nyniappa Naick Street in George Town). But these minor settlements were insufficient in the long run.

During Governor Collet’s period (1717 – 1720), weavers and painters were encouraged to migrate to Tiruvottiyur where the settlement of ‘Collet’s Pettah’ was created. Similarly, Washermanpet and later Chintadripetta were also established. These areas had adequate water. Thus, the English tried to solve the water problem for the people dependent on them by creating settlements in different areas with water. But the basic question of a good water supply to the Fort remained unanswered for more than a century from the establishment of the Fort.

V. SEVEN WELLS GOVERNMENT WATERWORKS

Water was still being brought in carts by water-bearers from distant wells. The water was stored in cisterns in the Fort which would not last more than a few days. The need for a systematic supply and organized storage was felt with the French siege of Madras (1746 – 1749). During the French siege the supply of water to the Fort was cut off. Proper supply was restored only in 1749. Several attempts were made to make provision for the storage of water within the Fort but nothing could be achieved for some

time. In 1772 Captain George Baker executed a scheme and the Fort began to have a regular supply of water with provisions for storage. The scheme undertaken by Baker was called the “Seven Wells Government Works”.

Captain Baker had concluded that water around the Fort was too brackish for consumption. According to the scheme, water was to be brought from the Seven Wells through conduits and stored in reservoirs, which were to be constructed with the permission of the Government. Initially seven wells were dug up in an area two miles from the Fort and at a distance of about a mile from the sea, north of Peddanaickenpet. The wells were later increased to ten in number. Baker established a pipe network to transport water to the cisterns within the Fort. He maintained the water cisterns within the Fort, guaranteeing water for 6000 people for four months. Water from these wells were good in quality. Thus began the city’s first organized water supply in 1772, though it was meant only for the Fort.

VI. PRIVATE SUPPLY OF WATER

The people of Black Town continued to draw water from shallow wells which were soon contaminated. In 1783 a proposal was put forth to the Government to extend the supply of piped water to Black Town to increase their profits. The natives, who were dependent on their wells, with the increase in population turned to the Fort for the supply of water. Thus in 1791, for the first time, a tax was levied for water supply on the inhabitants of Madras, both as a source of revenue and for maintenance cost. An Act of the Parliament of 1793 stated that the objective of the municipal administration should be that of cleaning the streets regularly and effectively and to make provisions for a good supply of water to the people. To meet the needs of the people several proposals were laid for the construction of additional reservoirs. However, the Government failed to carry out adequate steps for enhancing the water supply system immediately. Francis Whyte Ellis, Collector of Madras (1810–1819), dug 27 wells in different locations outside the Fort, enabling the Indians to face the acute water scarcity in Madras in 1818. One of the wells dug in 1818 was found in Royapettah Periyapalayathamman temple along with an inscription recording the event. The inscription detailing Collector Ellis’ attempt at resolving the water scarcity in Madras was unearthed by eminent epigraphist, Iravatham Mahadevan.



Charles Trevelyan, Governor of Madras (1859–60), enthusiastically worked on improving the needs of the residents of Madras, both within and outside the Fort. A reservoir which was to be constructed under Baker's scheme was finally completed and named Trevelyan Reservoir. Between 1855 and 1866, a piped-water supply scheme to entire Madras was discussed but nothing came out of it.

VII. MADRAS MUNICIPAL CITY WATER WORKS

By the middle of the 19th century Madras had gained in prominence as a developing city and there was also a subsequent rise in the population. The earlier schemes of water supply, though expanded, failed to meet the growing needs of the people. Thus in 1872 a new water supply system, the Madras Municipal City Water Works, was started to provide water for the whole city. Fraser, a Civil Engineer, formulated a plan for tapping the Kosasthalaiyar River and connecting it to irrigation tanks and enlarging and combining a few irrigation tanks both for irrigation and for providing a good water supply to the city.

The origin of the plan for a new systematic and organized supply of water to the city could be traced to 1861 when Fraser elaborated a scheme for the enlargement of the Red Hills and the Cholavaram tanks both for irrigation and for providing drinking water to the city. The scheme provided for water to be brought from the Kosasthalaiyar River and its tributaries by constructing a masonry weir across the river at Tamarapakkam. The weir would divert the water into a channel leading to a reservoir which in turn would divert the water to the distribution tanks situated in Madras. From the tanks the water would be supplied to the city. The scheme also specified that the water should be conveyed from the reservoir to filter beds and then to a water basin. From the basin the water was to be raised to an elevated tank by pump wells. From the tank the water was to be delivered to different parts in the city. The scheme secured the approval of the Government of India in 1866 and was then successfully carried out under the supervision of Standish Lee, the then Municipal Engineer.

The Kosasthalaiyar River was a very small river which originated from the overflow of the Kaveripakkam tank on the west of the city. It is joined by its two tributaries, Boosikal and Katankal, both of which originated from the Nagari hills on the Eastern Ghats about 100 miles north-west of the city. The Cholavaram tank and the Red Hills tank were originally irrigation tanks. By the Fraser's scheme, they were enlarged and converted into irrigation-cum-water supply storage reservoirs. These tanks were fed naturally by rain falling on its own catchment area, and with the construction of the anicut, by the Kosasthalaiyar River and its tributaries. These tanks being also irrigation tanks the Government made provisions for the proper supply of water to the city even during the failure of the monsoons. Accordingly, when the level of water in the tanks falls to six feet above the bed of the municipal supply channel then, the supply of water from the tank for irrigational purposes had to be stopped and water from the tanks was to be solely used for supplying the city with water.

The water supply project was inaugurated by Lord Napier, the then Governor of Madras (1866 – 1873), on May 13, 1872 and on the same day the city received its first supply of water through the Madras Municipal City Water Works.

VIII. CONCLUSION

The development of water supply in a city reflects on the development of the city itself. Though the English settlement in Madras was established in 1639 itself, a systematic water supply system to the Fort began only in 1772 and a hundred years later a proper system was brought into place. It must be noted that the systematic development of water supply to Chennai city has taken a long time to accomplish. Two different schemes were adopted during the period 1772 – 1872 for systematic supply of water to the city. While the first scheme focused on enhancing the water storage capacity of the Fort, the other scheme found a more lasting solution to the problem of water supply. The second scheme, Fraser's scheme, also provided for a safe system of drinking water by including key ideas like filtration and protected supply system. Fraser's scheme was developed and extended by J.W. Madeley in 1914. The Madras Municipal City Waterworks, to a large extent, was a successful scheme, at that point of time, as it satisfied the needs of the people. The scheme is significant as it was planned to provide water supply to the whole of the city. Another noteworthy fact is that more than the colonial government, the individual officers connected with the scheme looked at the problem of water to the city with far sight and vision and come up with workable solutions. These schemes have been the foundation of the water supply system to Chennai till date. The present supply system is an extension of the ideas of people like Fraser and Madeley.

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