

## WATER SUPPLY IN CHENNAI CITY

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### Introduction

Chennai city, one of the major metropolises of India, is situated at the northern coastal edge of the State of Tamil Nadu. The city is more well-known by its older name of Madras. Currently, Chennai is inhabited by more than 7 million people in an area of 176 sq km. Water supply for this population is maintained by tapping a combination of surface storage reservoirs and aquifers. The Chennai Municipal Water Supply and Sewerage Board (CMWSSB), a statutory body established in 1978, is responsible for water supply and sewerage services in the Chennai Metropolitan Area. The main sources of public water supply in the city are the three reservoirs — Poondi, Redhills and Cholavaram — with an aggregate storage capacity of 175 million cubic metres (MCM). The other major resource is groundwater from the well-fields in the Araniar-Kortaliyar basin and the southern coastal aquifer, and also a large number of wells and tube-wells spread all across the city. The CMWSSB calculates water availability based on surface and aquifer contributions under its direct control. Since it perceived reservoirs and other surface supply as more significant for a long time, very little attention was paid to subsurface storage or ground water recharge.

### Methodology

In order to assess the water supply in Chennai city for a small focusing group of slums, the slum clearance board has been surveyed for Slums the level of water supply Status Assessment and also b) Surveyed for Demand Assessment. All the surveyed slums located within the administrative jurisdiction of Chennai Municipal Corporation had a total of about 590 public water tanks / water taps / hand pumps to cater to an estimated slum population of 3,29,824 persons and 71,840 families living in these slums, indicating an average of about 620 persons per public water tank/water tap/ hand pump. It may be noted that many of the slums did not have public water tank/tap/hand pump as these slum dwellers store the water supplied through lorries. It is also evident from the demand assessment surveys that the respondents revealed that a majority of them buy water from these lorries.

The survey format is to provide inputs for the quantitative assessment at the slum level while the latter to provide inputs for qualitative assessment in terms of both the need and the willingness-to-pay for the improved services. All the above data has been adopted through GIS as well as quantitative techniques.

The service norms for water supply have been fixed only for the quantity of water supply and number of public tanks/taps, as per the following. Further, a broad cost norm for public water tank made of PVC along with a necessary tap and masonry platform for mounting the tank is also evolved and presented.

### Discussion and Conclusion

Based on the existing status and in comparison with the above indicated service norms for water supply, a demand and gap assessment has been carried out and is presented and it is estimated that there is a gap of about 3816 public water tanks/water taps/ hand pumps, each of capacity of 5000 litres (for two days) to meet the estimated demand of 4398 water tanks/taps/ hand pumps, indicating an overall deficiency of about 14 percent to meet the demand.

As an outcome of research, to create water supply facilities in slum, in the city, and later throughout the State. This led to significant changes in supply of water and to the quantum of water available to the population of a growing metropolis.

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