

# **STUDY OF NON-REVENUE WATER WITH SPECIAL REFERENCE TO JAIPUR CITY**

## **ABSTRACT**

Water is the most precious natural resource which is always in delicate equilibrium. Water use has increased at over twice the population growth rate in the last century. An increasing number of regions are now chronically short of water. Managing and ensuring sustainable use of scarce water resources is one of the major development challenges to countries, states and water utilities around the world.

High levels of Non-Revenue Water (NRW) reflect huge volumes of water being lost through leakages and theft. It becomes a burden to those consumers who are billed. It also affects the financial viability of water utilities / projects through lost revenues and increased operational costs. Knowing the sources where NRW generates and reducing it is of great help in improving water supply status of the area and economic viability of water supply system.

Jaipur, the capital city of Rajasthan is growing rapidly as regards to both urban area and population. A detailed study of NRW has been carried out for the Jaipur city. The feedback on NRW and 24x7 continuous water supply has been collected from consumers, PHED officers and Public representatives.

The results indicate that reduction of NRW is key to 24x7 continuous water supply and enhanced consumer satisfaction. This also reveals that there is less water consumption or wastage, negligible pressure and quality problems, leakages are easily detected as lines are continuously charged and rectified promptly in 24x7 water supply system. In order to get full revenue of water poured into distribution

system it is necessary to reduce leakages, consumers are billed accurately for their water consumption, illegal connection are removed and thefts are checked. It is required to have good quality functional water meters to reduce NRW substantially. In present scenario Jaipur water supply lacks proper water metering.

Water tariff also plays its role on water consumption pattern. Rajasthan has very low water tariff hence consumers are not much cautious to make optimum use of water. Water tariff needs urgent upward revision to reduce tendency of misuse of water and also help make water supply projects financially viable.

As per consumer feedback surveys, majority of consumers prefer 24x7 water supply system and are ready to pay more for better services. Majority of PHED Engineers are also in favour of 24x7 supply system alongwith proper metering and tariff hike. This also helps in reducing maintenance requirements. Majority of Public Representatives also favour 24x7 water supplies and hike in water tariff.

The present study shows, it is possible to reduce NRW to targeted level and achieve 24x7 water supply in the city.