

NRW REDUCTION STRATEGY

1. PREAMBLE :

Potable water is becoming scarcer; often making it more energy intensive to procure. More energy is required to pump water to greater distances and from deeper depth in the ground. This alarming situation and ever increasing population has cautioned everybody to conserve the available water resources and adapt oneself to optimum use of available water. The water supply, as an essential commodity, has to be looked upon from demand side as well as supply side. The urban local bodies, which form the supply side, will have to play a vital role in managing this often-scarce resource. As global urbanization continues, they have the complex task of cost effectively providing water to keep cities functioning. Further in the process of improving overall water system efficiency, energy & water consumption have to be viewed as linked inputs rather than viewing them as separate and unrelated. On the other hand, the demand side which consists of consumers have to be made aware of the present situation of the available water resources, necessary habitual changes required to be made by adopting various means of water conservation, optimal use of available water, re-use and re-circulation of waste water for some activities, frequent inspection and rectification of home appliances to reduce leak & wastage, restricted use of appliances requiring more water, etc.

2. EXISTING WATER SUPPLY SYSTEM :

- The existing water supply to the Ahmednagar city is managed by Ahmednagar Municipal Corporation (AMC). Main source of the Ahmednagar water supply system is Mula dam which is 35 kilometers away from the city.
- Water is pumped from the Mula dam and conveyed to water treatment plant by three mild steel (MS) pipe pumping mains (two 600 mm and 813 mm). Raw water is pumped to Break Pressure Tank (BPT) near site and then transmitted by gravity through the transmission mains of 17 kms to WTP at Vilad. Then treated water is pumped to Vasant

Tekadi in city through which the water is distributed by Elevated Service Reservoirs (ESR's) in the city.

- This water from the ESR's is distributed through the distribution network of length of 400 km. The system presently covers almost 100% of the developed areas including the slums. The newly added areas are currently being catered to by tanker supply. The distribution system in the city is based on both gravity and pumping.
- The distribution system in the city is based on the division of the entire city into four distinct parts on the basis of its topography.
- There are total 51,025 service connections in entire AMC area as per details shown in Table below;

Table No 1. Details of House Connections

Category	Number
Total Connections	51,025
Metered Connections	77
Un-metered Connections	47219
Slum Connections	0
Non Domestic Connections	3799

3. NON REVENUE WATER (NRW) :

- **What is Non-Revenue Water (NRW)?**

The difference between the amount of water put into the distribution system and the amount of water billed to customers is known as Non-Revenue Water (NRW). NRW is made up of real losses and apparent losses. Real losses occur in distribution systems, service connections, bursts and storage tanks (including overflow). Apparent loss includes meter and record inaccuracies and unauthorized water uses such as theft and unauthorized connections authorized unmetered uses can also be considered as one of the components of NRW.

- The service level benchmark for NRW is 20%. There is considerable scope for reduction of NRW in almost all cities of the country. Though reduction of NRW is a very big challenge, there have been examples of successful reduction of NRW.

- **Different Elements of NRW Reduction Strategy identified are :-**
 - Water Audit & Water Balance
 - 24x7 Water Supply
 - District Metered Area (DMA)
 - Supervisory Control & Data Acquisition (SCADA)
 - Network Mapping
 - Leakage Mapping
 - Regularization of Public Stand Posts (PSP)
 - NRW Cell
 - Capacity Building
 - Tariff Structure

4. AMC's NRW REDUCTION STRATEGY :

- **Daily Pressurized Water Supply Project**

Ahmednagar Municipal Corporation has planned to undertake the prestigious project of Converting existing Intermittent Water Supply System to Continuous Water Supply System for the entire city.

In the first phase, AMC has proposed to convert intermittent water supply system to daily water supply system for 100% area. The improvement work is in progress under UIDSSMT scheme.

In the second phase, a project under water supply for 100% Coverage and Reduce NRW and for projection of 30 years has been sanctioned for AMC under Central Government's AMRUT Mission. AMC plans to undertake this project wherein the final objective of the project shall be to convert intermittent water to daily water supply for the total city. At present, Detailed Project Report for the said project is being prepared.

- **Consumer Awareness Programs :**

- AMC plans to undertake all measures which shall promote the benefits of project and create public awareness about water supplies. A separate Public Relation team shall be appointed which will ensure cordial communication between Contractor, AMC, Public Representatives, NGOs, consumer forum, Media, other Government Authorities, etc.
- Public Campaigns for the project & water conservation while conserving Water Supply shall be undertaken.
- Internal water audit or leak test for consumers those having history of high consumption shall be conducted. A list of such consumers shall be identified and maintained.



Head of Department

Water Supply

Ahmednagar Municipal Corporation