

Unaccounted for Water (UFW)

UFW Projects in BWSSB.

As like many water utilities in worldwide, BWSSB is also facing increasing supply / Demand problem as demand grows and finite water sources are becoming increasingly difficult and expensive to develop. The Bangalore population is increasing exponentially and the increasing demand for water source has put BWSSB to think in all directions to explore the possible ways to address the 'Water accountability'.

BWSSB cannot afford to have high 'Non Revenue water'(NRW) due to the limited source. As per the statistics of September-2019, the UFW levels of BWSSB has reduced to 36.14 % as compared to its 2007 statistics which was 48%. This achievement was made by implementing various water saving process at O&M Divisions, by taking up various UFW projects and by implementing projects like Helium leak detection methods for hidden leak detection and rectification. The BWSSB Engineers and the supporting staff are also trained at various levels by imparting new Technologies regarding Leak detection and rectification and this has been a continuous process in BWSSB for time now.

The various UFW projects taken up by BWSSB are as follows.

- UFW reduction projects were taken in erstwhile **South, Central and West Division area covering 132 Sq.km** under JICA assistance and are presently running under O & M period.
- The New UFW project with 100% pipe replacement is taken up in **22 Sq.km** area.

Regarding NEW UFW Project taken up under N-2, N-3, C-2 & SE-2 Sub-Divisions.

This project is taken with an intension to replace 100% of the lead joint pipeline from 600mm and below with an intension to reduce the UFW to 10%. The work is awarded to M/s.Tahal-Inaqua JV at an evaluated cost of Rs. 203.00 Crore. The work is in the initial stage and Survey and Design, establishment of DMA have been completed. The laying of pipeline to a tune of 105 Kms is also completed as against the scope of 400 Kms. The work is under progress in part of Byatarayanpura, Yelahanka, C V Raman Nagar & Shivajinagar constituency .

Salient features of South, West, Central & New UFW Projects taken up.

UFW Contract	Agency	Area Covered in Sq. Km	Project Status
South-D2b	M/s. L&T	52	O&M completed
West - D2a	M/s. L&T	54	O&M in progress
Central-D1a	M/s. SUEZ-SPML	26.5	O&M in progress
New UFW Project	M/s. Tahal-Inaqua JV	22	Work in progress
TOTAL		154.50	

Outcome of the Project:

The detailed calculations of water Inflow, billing, savings for all the three projects are as follows.

Description	Initial UFW	As on Sep-19
UFW%	48.68%	24.25%
Total Accountability - ML/ month	5006.1	
Total Accountability in ML per day	166.87	

Net Accountability from all the three Projects = 166.87 Mld

Works taken up during O&M Period of the contract

- Regularly monitoring the performance of each District meter area (flows, pressures, supply hours, leakage and UFW levels, etc) as well identifying when and what remedial action needs to be taken
- Undertake leakage surveys as necessary, locate and repair leaks and re-measure leakage and UFW until levels are reduced to the required levels