

## Improvement of Service Level for Water Supply in Mehrauli and Vasant Vihar Areas of Delhi

**Project Name:** Improvement of service level for water supply in Mehrauli and Vasant Vihar areas of Delhi  
**Location:** New Delhi, India  
**Population:** 350,000  
**Organising Authority:** Delhi Jal Board

Delhi Jal Board (DJB) wanted to enhance service delivery and improve management of water distribution by upgrading the water supply system and network improvement in order to significantly reduce Non-Revenue Water (NRW), conserve energy, improve water quality along with the revenue collection efficiency and extend water supply in the under-served areas in its jurisdiction to meet the increased demand for water in Delhi which has been putting tremendous pressure on its water supply infrastructure.

To address the ever growing demand, Delhi Jal Board in 2012 decided to undertake improvement in service level for water supply to over 3.5 lakh residents of Mehrauli and Vasant Vihar areas on a Design, Build, Operate and Transfer (DBOT) basis, with complete operation and maintenance of the water supply system of the areas for 10 years.

To achieve this, MVV Water Utility Pvt. Ltd. was formed to ensure equitable and 24x7 water supply in the project area, improve the existing water distribution system in order to minimise leakage and wastage of water, revamp service connections by removing illegal connections, rehabilitate and augment works for pumping stations, restore roads after laying the pipelines during project implementation and establish 24x7 consumer complaint centre.

**Water Operator:** MVV Water Utility Pvt. Ltd, a Special Purpose Vehicle (SPV) created by

- SPML Infra Ltd. (Lead Partner)
- HaGihon (National Water Company of Jerusalem)
- Tahal Engineering, Israel

### Key Initiatives Undertaken to Achieve Performance Parameters

- System analysis of the present system
  - Water infrastructure mapping - Pipelines were haphazard and unorganised leading to incomplete and inaccurate data on underground pipes. Unauthorised connections were difficult to identify. The company made a big effort to investigate status of pipelines and valves.
  - Base map has been prepared with the help of topology survey and GIS. Information of all important features of the water supply system i.e. pipes, valves, reservoirs, pumping system etc. were collected.
  - Consumer survey has been done.
  - Reframing of suitable water operational zones - Reframing involved introducing isolation valves to segregate operation zones, proper regulation of reservoir outlet valve and assigning the peak demand with respect to water audit study. Then the networks have been critically analysed.
- Meter management system - Meters were not calibrated and not replaced for many years. The inaccuracy of some old meters was very high causing a lot of water to go unregistered. An ongoing meter management plan is now under implementation.
- Inspection of residential houses - There were heavy losses in the internal pipelines of houses. Measures including checking all valve pits, fire hydrants and the pipelines of the houses and monitoring of the static water level of storage tanks have been implemented.
- Energy efficiency - Energy efficient pumps have been installed which are technically advanced to improve

### Key Performance Parameters

- Continuous Water Supply
- Reduction of Non-Revenue Water (NRW) to 15%
- Energy Efficiency
- 100% Connectivity
- Timely Complaints Resolutions
- Improvement in Collection Efficiency

the pressure from the pump house to the last house of the DMA.

- Services have been designed for customer satisfaction to make life easier for users with improved billing and collection.
- Staff capacity is being maintained through continuous training.

### Key Achievements

MVV completed the design and pipe laying for a water supply System in West End Colony of Vasant Vihar area and has successfully implemented 24x7 water supply.

- Water supply increased from less than 2 hours per day to 24 hours per day.
- 100% New House Service Connections.
- New pumping station with capacity of 91M3/hr has been installed. This has reduced energy and consumption drastically.
- Non-Revenue Water reduced from 61% to less than 6%. All bore wells have been phased off thereby, removing chances of contamination and excessive electricity. AMR meters have been installed at each household. Tanker complaints have reduced to nearly zero.
- 24x7 complaint management system with user friendly consumer service centre has been established and electricity bills reduced. □