

Non Revenue Water: Plan of Action

Introduction

Non-revenue water (NRW) is water which is supplied but not paid for, including technical losses (leakage), not billed water, illegal connections, poor water meter performance and inaccurate reading and accounting of metered flows. The impacts of NRW are the loss of scarce resources and financial revenue in a cash strapped water sector.

Shamli Demography Pattern

2011 census shows that Shamli has a population of 107,233, of which 57,236 are male and 49,997 are female. The literacy rate is 81.97 per cent. City divided into 25 wards with 27,200 households.

Existing Scenario of Water Supply

Groundwater is the main source of water supply in Shamli City. Water is supplied through 47 no of tub wells with a capacity of 34.5 MLD. The total length of water supply distribution pipe line is 235 KM.

The present rate of water supply is 300 LPCD, which is much more than the required benchmark of 135 LPCD. Total connections are 15011.

Board passed resolution to provide free water supply for residential purpose. Nagar Palika Parishad collects tax from non-residential connections. At present, total no of water connections are 15011.

Non Revenue Water Causes

Transmission and Distribution Losses (Physical or Real Losses)

At present the actual transmission and distribution losses cannot be calculated as flow meters and check meters are not installed in the distribution network. It is assumed that total 27.78 % water is NRW.

Illegal Connections

Survey is not done by Nagar Palika Parishad Shamli, we are calculated via sampling method and total illegal connections are 650.

Leakage

Water supply line is old so there is leakage problem in some areas. Around 5% NRW calculated through leakage.

No Charges for Residential Connections

Board passed resolution to provide free water supply for residential purpose. It is consider as NRW.

Action Plan to Reduce NRW

Identification of issues and Prioritization

The key to developing a strategy for management of non-revenue water (NRW) is to gain a better understanding of the reasons for NRW, and the factors which influence its components.

Component of NRW

- Illegal connections/ high unauthorized water use
- Limited skills in NRW management
- Water tank overflow
- Stand Post
- Authorized consumption free of charge
- Absence of water meters
- Poor quality infrastructure with high leakage levels (old pipeline)

Priority Sectors as per components

- Identification of illegal connections and Reduction of illegal connection
- Check of physical losses
- Awareness program
- Reduction in Water for City Services (300 LPCD)
- Structuring of billing system

Priority wise Actions required

Water Audit and Planning:

For the purpose of accurately calculation of losses and NRW a Water Audit is proposed to be conducted. The scope of work will involve Assessment of existing water supply system, conducting water audit proposal for coverage of gap and detail project report (DPR) for SCADA system.

SCADA System:

The SCADA system in first phase will be installed for monitoring and water at water Source, Treatment Plants, Water distribution Rising Mains, Elevated Service Reservoirs, Ground Service Reservoirs and Feeder Mains. The system will monitor the water consumption, flow rate pressure etc. on a live basis. This will help identify the location of water loss and area of high demand.

Regular monitoring for Illegal Connections and Citizen Involvement

Illegal connections involve the physical installation of a connection to water distribution pipelines without the knowledge and approval of the Nagar Palika Parishad Shamli.

Smart Metering

After coverage of 100%, the water connections will be covered by smart meters to increase revenue and increase collection of efficiency.

Nagar Palika Parishad, Shamli

Action Plan for NRW under AMRUT (Reduce upto 10%)

Sr. No.	Activity	Results				
		2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
1.	Identification of illegal connections	20				
2.	Repair of old and damage pipeline, leakage identification		10			
3.	Residential coverage under Tax			50		
4.	SCADA System				10	
5.	Smart Meters					10

Note: Water Supply estimates 17.45 Cr. submitted to Ministry of Urban Development under AMRUT Scheme.

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