

Action Plan for NRW

Action Plan for Non-Revenue Water(NRW)

The Urban population in India is growing at a rate faster than ever and the services in cities are crumbling to the increasing pressure. Along with other key services of the city, water supply is also struggling to maintain adequacy and quality of services provided to the citizens. Few of the major problems faced by Water Supply sector is the large proportion of water loss in distribution and poor collection of revenue for the supplied water. This situation is common in majority of Indian cities and has led to inefficient performance of water supply services.

To overcome the challenge the city needs to identify the losses and take necessary measures to reduce it. Non-Revenue Water (NRW) is good indicators to measure the losses and high NRW typically indicate a poorly managed water utility.

Non-revenue water (NRW) is water which is supplied (produced and purchased) 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. The central government under AMRUT mission has aimed to reduce the NRW in cities, and has included the same as a priority reform.

About Loni City:

The total area of Loni city is 34.68 sq.km. And total population is 512296 (Acc. to census 2011). As per URDPFI 135 liters per capita per day water is required that is service level bench mark. There are 92327 household in the city. There are 20380 household have water connection in the city and 50 rupees has been charged per month by ULB. The extent of NRW in Loni city is not accurately measured, however it has been estimated approximately 40% i.e. 158.98 MLD while total generated water is 397.44 MLD. This is unacceptable and for that reason ULB has prepared an Action Plan to reduce the NRW less than 20% in next 5 years.

Action taken to reduce NRW:

- Replacement of damage sluice valve is the main action for NRW & Five tube wells are working with automation system.
- There is no water meter connection that is why user charges cannot be applied at differential rate but the rates are charged as per consumption of water for different categories which have been proposed and sent to govt. for sanction. These rates are as below:-
 - 1- For domestic use Rs. 600 per Year
 - 2- For commercial use Rs. 1200 per Year
- Old pipeline has been replaced to provide connection for remaining household (to increase coverage) and to reduce NRW.

Component	Present Status	Action Taken
Leakage	The identification of leakage in pipeline is detected via monitoring staff and also by reporting done by public. After the detection of leakage	Leakage repaired in (2015-16)-983 Nos. (2016-17)-557 Nos.

	the repairing work is carried out as soon as possible through skilled manpower.	
Connections	There are 20380 nos. of water legal connections up to 31/03/2017. No water charge tariff is entered in Nagar Palika Parishad Loni.	Connections given Fy 2015-16-4283Nos. Fy 2016-17-4048 Nos.
Authorized consumption free of charge	At present water supply is given through 105 number of stand post, 5 numbers of tanker.	
Discounts	No rebate is given on water tax timely deposit of bill.	No water charges tariff existed today. Only water tax is charged.
Water for Municipal Services	All parks and municipal office and fire fighting system are supplied water free of cost.	
Water Metering	Till now the status of metering is nil.	Metering for sources and consumer connections is to be done to reduce NRW. While preparing SLIP at RCUES metering is detected. It will take later on.

Action Plan to Reduce NRW

Identification of issues

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. Then techniques and procedures can be developed.

Following are the components of NRW

1. Background and unavoidable leakage
2. Reported Leakage
3. Detectable Leakage
4. Water tank Overflow
5. Illegal Connections
6. Billing Errors
7. Authorized consumption free of charge
8. Discounts
9. Water for Municipal Services

10. Water Meter out of operation

11. Poorly calibrated water meters

Key Strategies to reduce NRW:

The extent of NRW in Loni city is not accurately measured, however it has been estimated approximately 40% i.e. 158.98 MLD while total generated water is 397.44 MLD.

- Check of physical losses (leakages on Mains, leakages on Service connections, losses because of overflow.
- Reduction of illegal connections by doing monitoring time to time and Awareness program to reduce the waste of water.
- Restructuring of billing and Metering of connections.
- Check on Reservoir flow and non-detectable losses.
- Check on losses of service connections up to the customer's meter
- **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.
- **Regular monitoring for Illegal Connections and Citizen Involvement:** Illegal connections can occur during the installation of a new supply connection, or sometimes the customer's supply is cut off after non-payment and the customer cannot afford, or does not want to pay, to be reconnected. During customer awareness programme, customers should be encouraged to report illegal connections, and regulations should be in place to penalize the water thieves.
- The rates of water charges should be fixed at such rates so that it is not greater than respective present water tax, considering the standard supply of approx. 135 LPCD. This will ensure that the users consuming more water will pay more and hence reducing the NRW.
- The connections which are exempted from water tax i.e. religious buildings; govt. buildings etc should also be metered. Based upon their usage a cap for unbilled water shall be fixed. Consuming more than the limited amount should be charged.
- Under AMRUT mission 78.01 Cr has been approved for water supply sector in next 5 years.
- 57000 new water connections will be provided in next year's for 100% coverage.