

Fundamental Steps to be taken for implementation of 24 X 7 Water Supply

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1. Satellite image to be procured as like as from NRSA Hyderabad.
2. The entire city to be digitized and the map showing road network, house properties (with house ID number) etc to be prepared in Auto Cad drawing which can then used a backdrop of the hydraulic model.
3. City Development Plan (CDP) is required from the Municipal Council.
4. Water distribution network to be plotted on CDP in Auto Cad which will then be superimposed on the digitized map.
5. Population to be forecasted by density method.
6. Water Distribution pipe network of city to be divided into suitable numbers of Operation Zones (OZ).
7. Each OZ will further sub-divided into 3 to 4 District Metering Area (DMA)s so that each DMA contain not more than 1000 connections.
8. Property survey to be carried out to determine number of people residing in all (i.e. 25,000 Houses). Thus demand at nearest node is to be computed which will then be compared with the earlier population figure computed by the density method.
9. Distribution network to be simulated using latest Water Gem Software and hydraulic model is required to be prepared. The data is required to be validated and the pipe network calibrated. This type of model is to be used for taking decisions in field.
10. According to model design OZ and DMAs are hydraulically discreted at site of work.
11. As per analysis carried out by the hydraulic model, new pipelines to be laid, some old pipes to be replaced & house connections to be replaced.
12. Using DMA methodology Non Revenue Water (NRW) for each OZ and DMA is to be worked out.
13. The OZs and DMAs with high NRW (profusely leaking) are tackled first for leak detection and repair.
14. Toll free contact number is provided for consumer redresses. Say for example, 8 Wards out of 34 Wards tackled in first phase for 24x7 water supply system. Rest of the area to be covered in two or three phases.
15. Branded /ISI mark-ISO mark /Imported of world over leading company meters are to be installed.

Water audit

This activity measures the total inflows and outflows of the system with the help of various methods, which involve use of instruments like pressure gauges, flow meters. The activity is like a pathology test, which reflects the health of water supply system in terms of its components under different parameters recording the transformation. The water audits need to be repeated several times after every experimentation to evolve the appropriate decision making and to document the progress of the improvements.

Accurate metering of the retail consumers is an important job to be carried out in order to achieve 24x7 continuous water supply. It is an essential prerequisite for demand management. A water balance is required to be achieved by water authority.