

Sustainability of Drinking Water for Future Generations

Water is the elixir of life. “Water is Life and Sanitation is Dignity “– South African Constitution. The draft National Water Policy 2012 of India also indicates access to safe drinking water as a right to life.

Already India is water stressed (Falkenmark indicator) with the per capita availability dwindling to about 1000 cum / annum. The available fresh water is only about 1%. Now the water management is a matter of serious concern with the monsoon showing extreme variations and extreme weather events becoming more frequent, being practically experienced by the farmers and other citizens.

Vijayawada Municipal Corporation (VMC) is also facing challenges in managing its vast water supply network with the limited resources available at its disposal, under severe financial constraints.

Presently VMC is supplying about 160 MLD of water (daily) thro’ five sources and bore wells at 152 (norm:150) lpcd, thro’ a distribution network of about 930 KM. It covers almost the entire population thanks to JNNURM program. Out of the property tax assessments of about 1,75,000, presently there are 1,08,247 water supply House Service Connections (HSCs) out of which 42,964 are BPL. These are being charged at a flat rate. There are also 2779 Public Stand Posts (PSPs). Water is being supplied for about 2 hours, twice a day. There are 7855 metered connections.

The challenges before VMC: to realize the *Vision* of healthy citizens, ensuring safety of water supplied, improving service levels, environmental sustainability, financial sustainability and community involvement. We are adopting the following strategies to achieve our objectives.

To realize this vision of having healthy citizens in VMC: We have embarked on a *Mission* to give individual house service connection to each and every household in VMC before 31.03.2013 so that safe drinking water is accessible to them, they can enjoy better health, save time and their girls need not miss their schools. We have already started water supply/drainage House Service Connection (HSC) melas in various localities to enable citizens to take HSCs thro’ single window, on the spot, wherever technically feasible. Prior to the date of the mela, we are making a tom-tom through Public Address System. The BPL consumers are being provided HSCs at a highly subsidized rate of Rs.200.

To ensure safety of water supplied: We have initiated a Water Safety Plan (WSP) envisaging identification of potential/actual hazards (like contamination/ pollution) at various stages from source thro’ transmission, treatment, storage, distribution to the point of use, assessing the risks and their extent, identifying the control measures and implementing them. Monitoring and evaluation of the implementation measures is a part and parcel of this WSP. The feedback from public and the lessons learnt will feed into future plans. We are continuously assessing the efficiency of our treatment, disinfection and testing processes to ensure safety of drinking water supplied to the public.

For improving service levels: For improving service levels, we initiated field measurement and monitoring to know how much is being supplied in different conditions in different localities. Thus, we are identifying ways to make the supply *adequate, safe, equitable and reliable*, reducing the variations to the minimum. We are also discouraging wastage at HSCs and PSPs through various measures, and to discourage fixing of motors to HSCs which lead to low pressures at tail ends, pollution and inequity.

For ensuring environmental sustainability: VMC has initiated O&M improvement thro' identification of unaccounted for water, visible leaks thro' pipelines, joints, valves, and wastage thro' PSPs and HSCs. We are identifying potential/ actual points of contamination of water at source and at other stages. Necessary trainings are being imparted to our staff. We are verifying power bills of all pumping stations, maintaining required PF, avoiding excess demand/ non-segregation of L&F load, Time of Day charges, and trying to avoid late payment charges. We have already installed SCADA with central control room, flow meters, level controllers and chlorinators at key control points on transmission mains. We have practically eliminated overflows at the reservoirs and reduced UFW through transmission mains. We will continue the same tempo through Water and Energy Audits shortly to save on water and energy and reduce GHG emissions, to ensure the environmental sustainability of water supply system so that we can make safe drinking water accessible and affordable to present and future generations, against the challenges of climate change.

For realizing Financial sustainability: Presently, VMC is spending about Rs.20.50 crores for providing safe water to its citizens, but realizing only about 40% of this thro' tariff (Rs.50 for BPL and Rs.80 for APL). We had revised our tariff way back in 2004 (they were the same as in 2000). Hence we need to rationalize our tariff policy to build financial sustainability, equity, fairness and thro' supply and demand side management initiatives. The basic premises are that the connection charges (donation) should meet the capital costs and debt service liability, and the tariff should be just, meet the cost of production (O&M cost per KL) and depreciation of the assets. This is a challenge in the context of all round price increases in every commodity. We are planning to provide HSCs to every household. We are trying to build rights portion (for the min. quantity for sustenance) at a very low rate to cater to equity, and water over that may be charged appropriately. We have installed flow meters for commercial consumers, apartments, group housing etc. We plan to install flow meters at reservoir outlets. We are strengthening our systems and structures to ensure financial sustainability.

Regarding Community Involvement: We would ensure transparency and exhibit our process of water purification, our expenditure and revenues to the public and invite their suggestions, listen to their grievances and invite their constructive suggestions to improve the system. We would involve all relevant stakeholders in our decision making process. If the water supply system fails to deliver the goods, the poor will be the worst sufferers since it may lead to other consequences. Hence it is in the interest of VMC as well as the general public that the system should be environmentally and financially sustainable.