



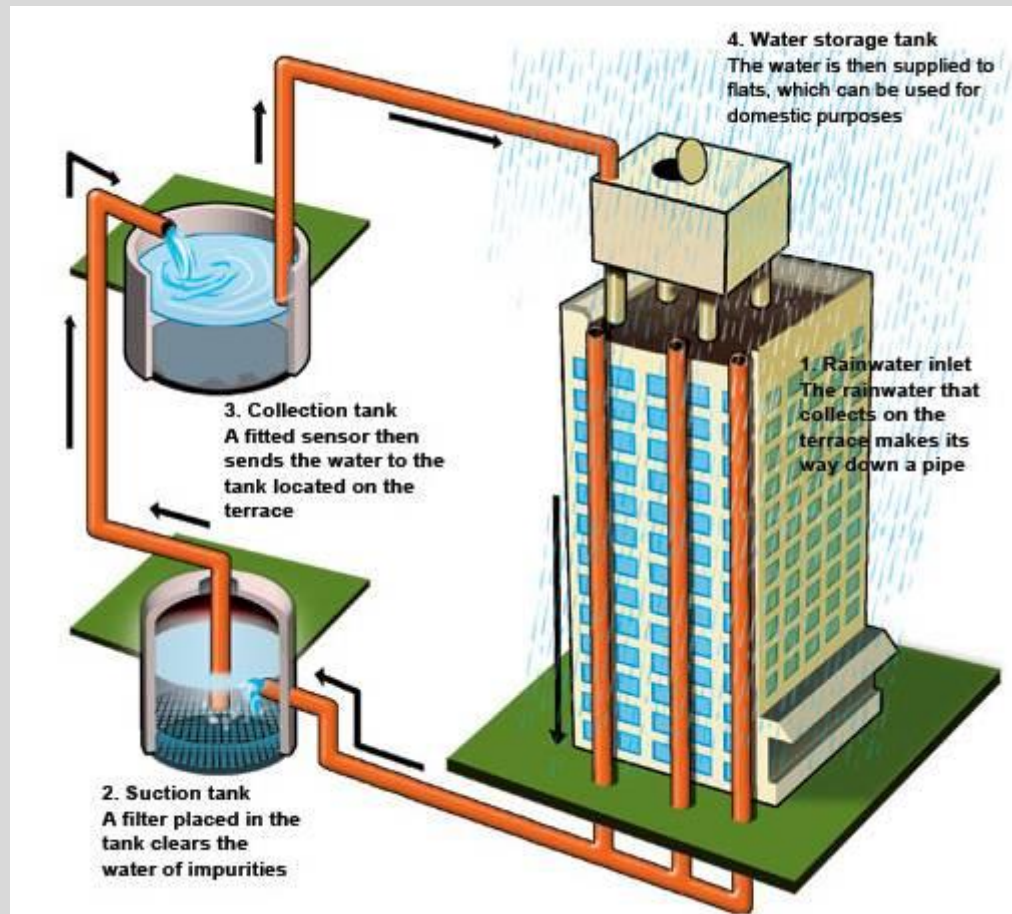
# World Quality Month 2020 Celebration

## Introduction of Ring Well And Rain Water Harvesting At Nursing College Andheri



**Umesh Sawant**

P D Hinduja Hospital & Medical Research Center, Mumbai



P D Hinduja Hospital has a Nursing college at Andheri. It was observed that that less water is getting through the Borewell & causes an acute shortage of water in the building of nursing College, which had created inconvenience to Nurses & staff residing in it. In this regard, Team of Engineers had inspected the matter and subsequent to after a lot of brain teasing question in between team members, conclusion has been arrived to establish a new borewell& rain water harvesting, but permission rejected by BMC. Then we had decided to make ring well and rain water harvesting system there which would eradicate the problem of water shortage in the college premises, hence accordingly the project commenced.

# PROBLEM DEFINITION

QUALTECH PRIZE 2020  
*Healthcare*

- Inconvenience to the staff & Nurses due to shortage of water.
- Tanker water unable to get in time .
- BMC potable water was being used for flushing purpose.
- Plumber have to be stationed at Nursing college to regulate the water supply.
- BMC permission for new bore well rejected.
- Engineering team has to travel from mahim to Andheri regularly for inspecting the work

- It was identified that there is a shortage of bore well water.
- Geological survey had been carried out to identify the under ground water levels.
- After the survey , the new locations had been identified where the water is available in abundance.
- The locations were identified where the water content was less.
- Underground BMC water tunnel is passing below the building hence bore well permission was rejected by BMC
- Fresh application was forwarded to BMC for construction of Ring well.

## PROBLEM REMEDY

- Developed in house rain water harvesting filter as per site conditions.
- 20 RCC rings has been installed.
- Stone gravels have been put around the rings
- Physical & chemical analysis of ring well water.
- Filtration chambers /unit.
- ISI material used .(Pipes & pumps )
- Ring well has been covered with strong RCC cover design by structural consultant which can bear the weight of heavy vehicles .
- The discharge pipeline has been painted with red colour
- A board has been fitted outside the ring well to indicate ,ring well water is not fit for dinking purpose .

# LOCKING THE IMPROVEMENT

---

QUALTECH PRIZE 2020  
*Healthcare*

Due to rain water harvesting there will be no shortage of water in future.

# CLONING THE IMPROVEMENT

---

QUALTECH PRIZE 2020  
*Healthcare*

- We have planned to make similar improvement at our S1 & S2 building where BMC Potable water is being used for Flushing purpose.



- Approximately 9 lakhs litres of water saved/recharged in the Ring well very monsoon.
- Approximately 24 lakhs liters of Potable water has been saved. cost Rs 20000/- per year .
- No Tanker water has taken after commissioning of this project
- Overall saving is Approximately Rs 1.68 Lakhs saved per year.

# INTANGIBLE RESULTS

- Rain water harvesting is a very good option to increase the ground water table .by using rain water we can save lots of potable water.
- It will help to reduce the carbon foot print ,hence reduction in pollution to that extent .
- Rain water harvesting will be helpful to growth of near by trees

Thank You