



**Shreeyash Pratishthan's
Shreeyash College of Engineering
& Technology, Aurangabad.**

(An ISO 9001 : 2015, Certified Institute)
Approved by : AICTE, New Delhi, Recognised by : Govt. of Maharashtra & DTE, Mumbai.
Affiliated to : Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.
Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad.



7.1.4 Water conservation facilities available in the Institution:

1) Rain water harvesting structures and utilization in the campus:

The institute is environmentally conscious and works towards the sustainability of environmental resources. Aurangabad city and its surrounding regions come under medium rainfall zone. As there is a shortage of water in summer season it is important to utilize water in the most efficient way. Taking into consideration this problem of water shortage, Institute has designed a rain water harvesting system for one of the buildings. Rain water is collected from each area of the campus like near the Engineering building premises, Adjacent to the boys' and girls' hostel building. Rain water harvesting (RWH) is the collection and storage of rain water than allowing it to run off. Roof water is collected through pipes that carry water to a well. Quantity of rainwater harvested = (Area in sq. m.) X (runoff coefficient) X (Mean annual rain fall) X (1000) = 4, 42582.96 X 0.6 X 0.726 X 1000 = 19, 57, 795.48 lit/year Total rain water harvesting from roof top results in saving of 1.9 million lit. / Year.

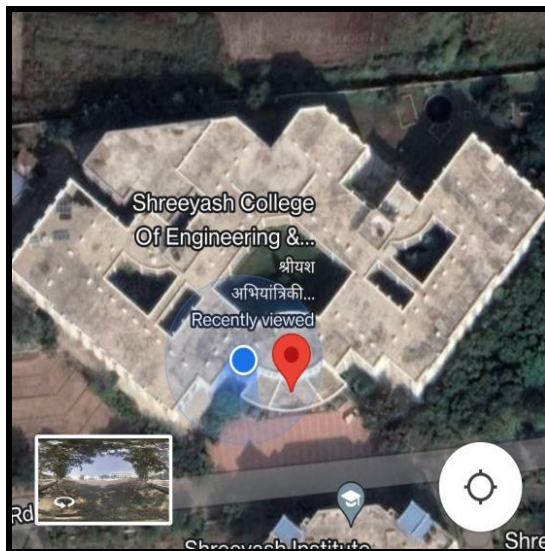


Fig. 1.1 Engineering terrace catchment area

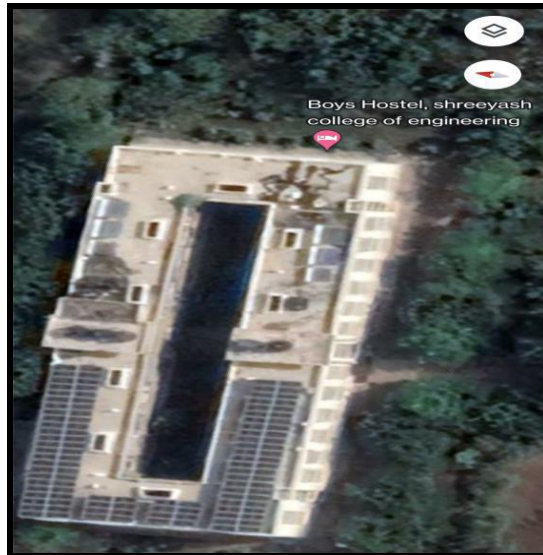


Fig.1.2 Boys hostel terrace catchment area for RWH



Fig.7.1.4.1: Rain Water Harvesting

2) Borewell /Open well recharge

As a part of water conservation facilities that are available in the institution, the bore well facilities are available in the campus. 3 wells in the premise with a depth of 65 feet for 2 wells and 75 feet for 1 well. Around 25,000 liters of water is pumped on a daily basis which is used as 10,000 liters for the Canteen and 6,000 liters for the Garden. 5 Ponds in the premise and the quantity in each is 5 Crore liters, 1 Crore liters, 50 Lakh liters, 24 thousand liters, 60 lakh liters, 10 lakh liters thus amounting to a total of Six crore seventy lakh and twenty-four thousand liters of water being stored. Due to there is no water in our borewell, we use it for percolation purposes. As a part of Water conservation facilities that are available in the Institution, the borewell facilities are available in the campus.

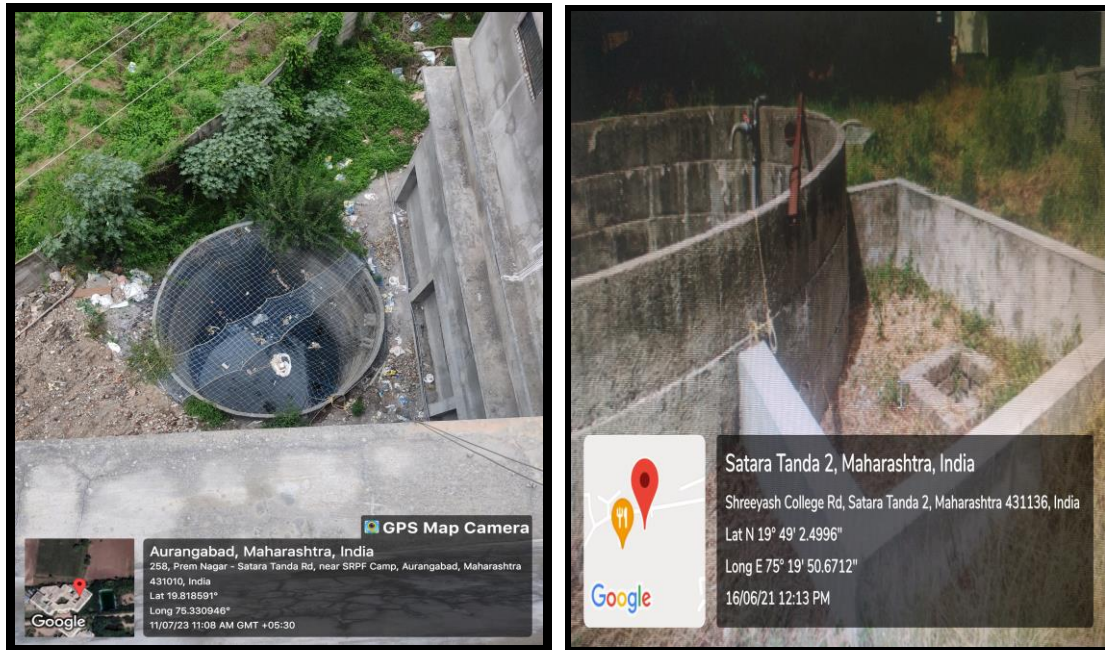
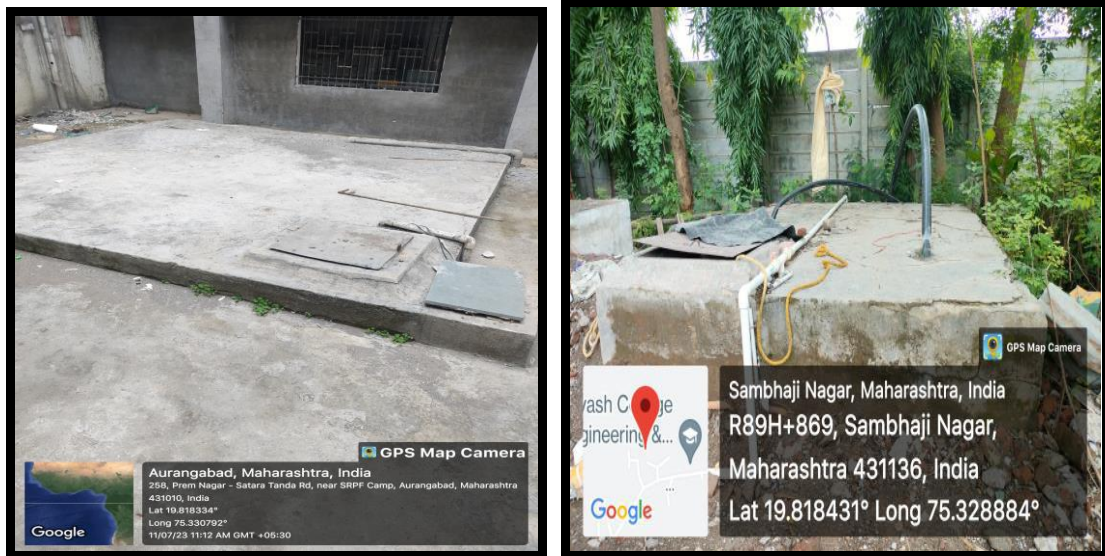


Fig. 7.1.4.2: Open Well in the campus

3) Construction of tanks and bunds

In our campus we have Underground water tanks of 5,000 liters each thus amounting to 15,000 liters and 8 Water tanks on the Terrace of 2,000 liters each thus amounting to 16,000 liters. Thus, the total water stored in terms of tanks is 71,000 liters. Our students-built bunds to collect rainwater on campus area.



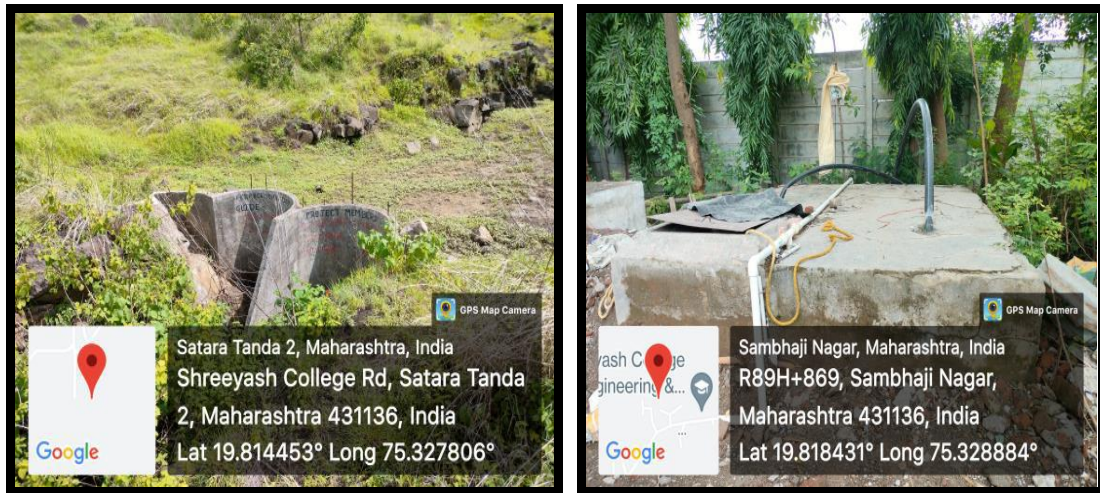


Fig. 7.1.4.3: Construction of Water tanks in Engineering and Hostel Building.

4) Waste water recycling:

In our campus the best facility is available for water waste management is STP. The water is purified and then recycled to a pure state and then sent through pipelines and containers and then utilized for the green forestation of trees and plants around the vicinity. We collect all liquid from college campus as well as Boy’s and Girl’s Hostel and recycle it by STP and then we use it for watering the trees. Due to this shortage of water problem of our Institute is solved. The rain water collected on the roof top from Boy’s hostel, Girl’s Hostel as well as institute building is carried through a down take pipe which is collected in the collection tank. This initiative is not only helpful for institute but it also helpful for surrounding areas. Conserving rain water and utilizing it for basic purposes fulfils a social responsibility.





Fig. 7.1.4.4: Sewage Treatment plant (STP) Setup in the Campus

5) Maintenance of water bodies and distribution system in the campus

There are nine numbers of overhead storage tanks and one Elevated Service Reservoir in the campus. The water is distributed through well laid pipe network. Drinking water after treating in RO plant is supplied through a separate set of distribution pipes and water for all other purposes is supplied through another set of distribution pipes. Entire distribution system is well supervised by Civil works committee to ensure that there are no leakages and wastages of precious water through joints, valves etc. Waste usage of water is reduced using low pressure flushes. All the stakeholders of the college are well educated to use water economically and efficiently.



Fig. 7.1.4.5: RO Plant setup in the campus