



Shiv Chhatrapati Shikshan Sanstha's

Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous)

Kaku Seth Ukka Marg, Chandra Nagar, Latur – 413512 (Maharashtra)

(Affiliated to Swami Ramanand Teerth Marathwada University, Nanded)

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Criterion VII - Institutional Values and Best Practices

Key Indicator – 7.1

Institutional Values and Social Responsibilities

Environmental Consciousness and Sustainability

7.1.4 Water Conservation Facilities

1. Rainwater harvesting

Latur is situated in Marathwada region of Maharashtra, where water scarcity is very common. Institute has taken significant steps to combat its water scarcity issues by implementing rooftop rainwater harvesting systems across its three campuses: the Main campus, Biotechnology Campus, and Sports Complex. This initiative aims to recharge groundwater and meet the water requirements of the institute.

The college's Main Campus and Biotechnology Campus have successfully set up rainwater harvesting systems. Runoff from the terrace areas of the college buildings, covering 5900 square feet and 3175 square feet, is directed into two recharge wells, each measuring 1m x 1m x 2m. To further enhance groundwater recharge, all rooftop rainwater outlets are designed to discharge into stormwater drains, which then lead to recharge pits with a capacity of 42,000 kilolitres each. Additionally, each structure is equipped with bore wells, which are 107.69 meters deep and have a diameter of 150mm. These bore wells incorporate layers of bricks to ensure the proper filtration of harvested water. This comprehensive rainwater harvesting project was implemented in March 2016 at a cost of Rs 0.25 lakh.

In the Biotechnology Campus, two different rainwater harvesting processes have been developed. In a four-story building, metal sheets with ridges have been strategically placed on the roof area to efficiently collect rainwater, which is then channeled through 6x6 inches circumference plastic pipes into a large syntax tank on the roof. This collected rainwater is utilized for laboratory purposes and recycling. Managing the

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substantial flow of rainwater during the rainy season on campus has presented a significant challenge, but it has been effectively addressed. Two rainwater plastic tanks have been installed to partially meet water requirements. Rainwater is also directed towards bore wells to raise the groundwater level.

At the Sports Complex, rainwater from the rooftop is directed into a pit near the bore well, increasing the water level. The collected rainwater is stored in a tank and utilized for garden irrigation. Water-efficient practices are employed for maintaining trees and lawns, including the use of water drips and sprinklers to minimize water wastage. This frugal use of water ensures a continuous water supply for all college stakeholders.



Rainwater Harvesting facility at Main Campus



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Rainwater Harvesting facility at Main Campus



Rainwater Harvesting facility at Biotech Campus



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Rainwater Harvesting facility at Main Campus



Rainwater Harvesting facility at Biotech Campus

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2. Bore Well/Open Well Recharge

The institute is actively engaged in the continuous replenishment of existing borewells through the construction of recharge pits. This ongoing effort is coupled with a strong commitment to regular maintenance and upkeep. These combined actions contribute to the sustained availability and conservation of groundwater resources. The institute places a high priority on the regular maintenance and upkeep of both recharge pits and borewells, guaranteeing their effective operation over time.



Bore Well Recharge





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Bore Well Recharge



Bore Well Recharge

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Bore Well Recharge



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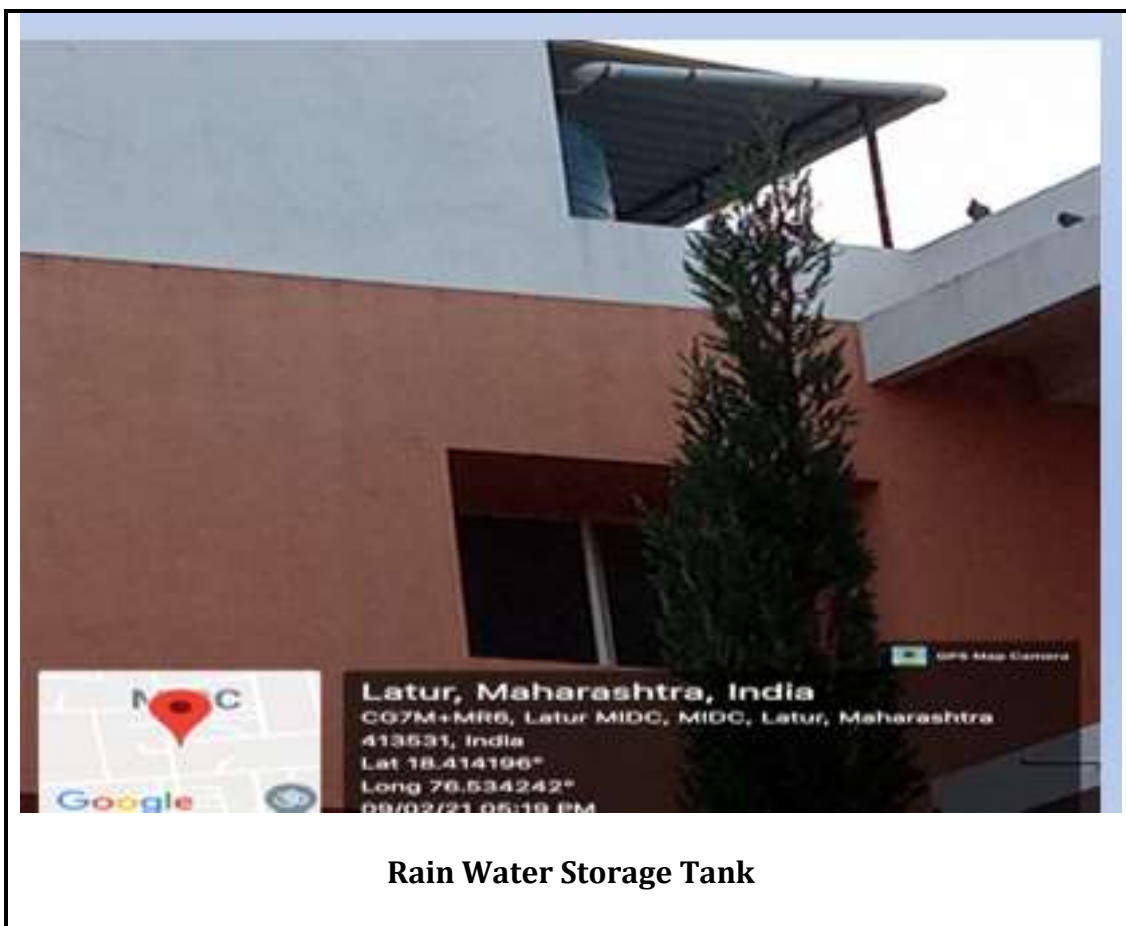
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3. Construction of tanks and bunds

Urgent adjustments are necessary in our water management system, with a focus on the resurrection of traditional methods, in response to the worsening water problem. In an effort to accept conventional wisdom, our Institute has installed a rainwater harvesting system. We can now collect and store rainwater and use it whenever necessary.





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Rain Water Storage Tank



Rain Water Storage Tank

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4. Waste water recycling

It is facilitated through an advanced sewage treatment plant that employs Moving Bed Biofilm Reactor (MBBR) technology. This innovative approach significantly enhances the treatment of wastewater, ensuring that it meets stringent environmental standards. MBBR is a biological wastewater treatment process that utilizes plastic carriers with attached biofilm to promote the growth of beneficial microorganisms. These microorganisms naturally consume organic matter and pollutants present in the wastewater.



Waste Water Recycling Plant



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Waste Water Recycling Plant

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

- Groundwater is efficiently pumped into strategically positioned storage tanks across the campus. The college boasts a total of 15 overhead storage tanks and Water Storage Tanks, with a substantial combined capacity of 256,000 liters. This stored water resource is effectively distributed through a meticulously laid-out network of pipelines.
- Drinking water after treating in RO plant is supplied through a separate set of distribution pipes and water for all other purpose is supplied through another set of distribution pipes.
- Entire distribution system is well supervised by Civil works people to ensure that there are no leakages and wastages of precious water through joints, valves etc.
- To curtail unnecessary water consumption, low-pressure flushes are employed, reducing the overall water usage efficiently.
- Comprehensive education and awareness programs have been implemented to educate and inform all college stakeholders on the responsible and economical use of water, fostering a shared commitment to water conservation and efficiency.





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Water Storage Tank



Water Storage Tank

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Water Storage Tank



RO Plant on the Roof in Main Campus



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Distribution System of Water in Campus



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Distribution System of Water in Campus





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Distribution System of Water in Campus



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Water Storage Tank



Water Storage Tank at Biotechnology Campus

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RO Plant at Biotechnology Campus



Distribution System of Water in Campus

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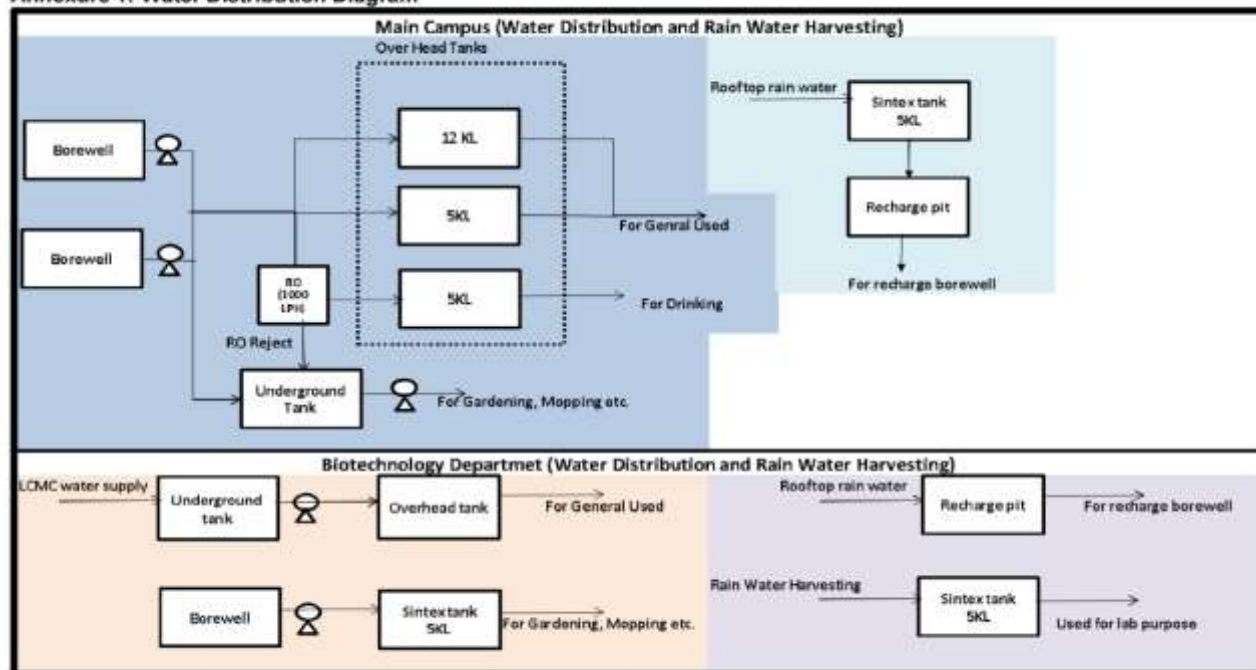
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The institute is deeply dedicated to fostering awareness about water conservation and rainwater harvesting through a range of programs and initiatives. These efforts take various forms, including guest lectures, orientation sessions, and the organization of holistic competitions centered on environmental issues. Various college entities, such as Shahu Extension Services, NSS (National Service Scheme), NCC (National Cadet Corps), Eco club, and Academic Departments, all play pivotal roles in instilling the values and ethics of water conservation among both students and society.

Water Distribution System

Annexure 1: Water Distribution Diagram



Date: 20/01/2024

Principal

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