Water Reuse Measurement at JSS Academy of Higher Education and Research (JSSAHER)

JSS Academy of Higher Education and Research (JSSAHER) takes a comprehensive approach to water conservation, emphasizing the measurement and management of water reuse across its campuses. Through advanced systems, community engagement, and innovative practices, JSSAHER aligns its efforts with **Sustainable Development Goal 6 (SDG 6)** to ensure clean water and sustainable sanitation.

Key Initiatives for Measuring and Managing Water Reuse

1. **Installation of Advanced Water Recycling Systems**
    - **Sewage Treatment Plants (STPs):** STPs at JSSAHER treat wastewater to a high standard, allowing its reuse for non-potable applications, such as irrigation of landscaped areas and cooling systems.
    - **Greywater Recycling Systems:** Wastewater from showers, sinks, and laundry is treated and reused for activities like toilet flushing and gardening, reducing reliance on freshwater.
    - The STPs process wastewater generated on campus and track the volume of treated water reused for irrigation and landscaping.
    - Greywater systems are equipped with monitoring devices to measure reuse efficiency.
2. 

Overall, the institution achieves a consolidated **rainwater collection capacity of 60,000 litres** and a **recycled water usage of 134,500 litres**, significantly reducing dependence on freshwater sources. These measures reflect JSS AHER's strategic commitment to sustainable water stewardship, climate-resilient campus planning, and environmental

responsibility, in alignment with **SDG 6 (Clean Water and Sanitation)** and **SDG 12 (Responsible Consumption and Production)**. Through continuous monitoring, metering systems, and efficient reuse mechanisms, the university demonstrates a measurable and scalable impact in reducing its overall water footprint while supporting institutional and community needs.

Campus	**Total Storage Capacity (Liters)**	**Daily Usage (Liters)**	**Rainwater Collection Capacity (Liters)**	**Recycled Water Usage (Liters)**
JSS Medical Institution Campus	940,000	479,600	16,000	80,000
JSS College of Pharmacy, Mysuru	200,000	120,700	5000	40,000
JSS College of Pharmacy, Ooty	100,000	44,650	5000	500
Off-Campus Buildings	61,000	58,195	24,000	10000
School of Life Sciences, Ooty	35,000	58,615	10,000	4,000
Total	**1,336,000**	**761,760**	**60,000**	**134,500**

Rainwater Harvesting and Water Recycling Initiatives

Rainwater Harvesting

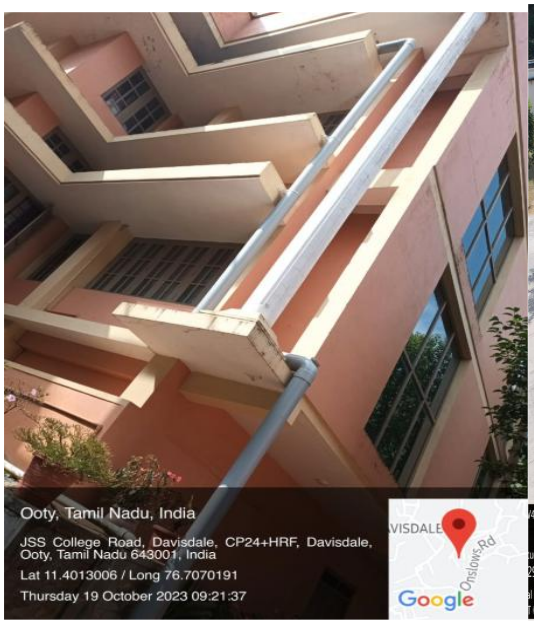
JSS AHER has installed rainwater harvesting systems at strategic locations to collect runoff from rooftops and other surfaces. This collected water is stored in dedicated tanks and used across our facilities, reducing reliance on municipal water.

Rainwater Harvesting Initiatives at JSS AHER, Mysuru

Water Recycling

Wastewater from various campus facilities undergoes treatment in specialized Sewage Treatment Plants (STPs) and is then recycled for landscaping and garden irrigation, reducing fresh water demand and promoting a sustainable, self-sufficient water system. Approximately 75% of the treated water, referred to as reject water, is repurposed to maintain the campus greenery, enhancing our commitment to environmental stewardship.

Water Recycling Initiatives (Wastewater Treatment Units) at JSS AHER, Mysuru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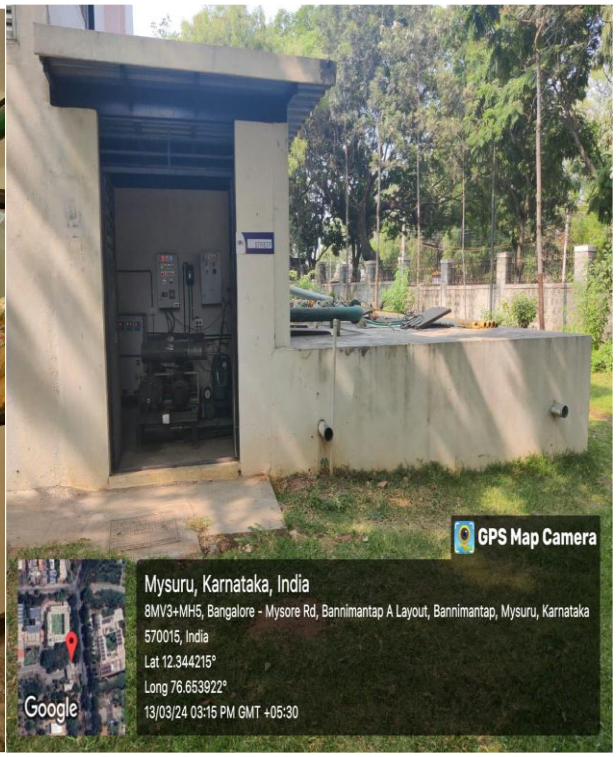
Lat 11.4013006 / Long 76.7070191
Thursday 19 October 2023 09:21:37
Google


Longitude
76.65623964°
Altitude 734 meters
Saturday, 16.12.2023


WATER TREATMENT PLANT
Mysuru, Karnataka, India
24/1, JSS Old Hospital Premises, Mahatama Gandhi Road, Ramachandra Agrahara, Mysuru, Karnataka 570004, India
Lat 12.295154°
Long 76.655325°
15/12/23 04:46 PM GMT +05:30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Borewell recharge point at JSS AHER, Mysuru

Open well recharge point at JSS College of Pharmacy Ooty and School of Life Sciences Ooty, JSS AHER

Campus-wise Rainwater Harvesting and Recycled Water Utilisation (2024–25)

Campus Location	Rainwater Collection Capacity (Liters)	Recycled Water Usage (Liters)	Usage for Landscaping (Liters)
JSS Medical Institution Campus	16,000	80,000	80,000
JSS College of Pharmacy, Mysuru	5000	40,000	40,000
JSS College of Pharmacy, Ooty	5000	500	500
Off-Campus Buildings	24,000	10000	10000
School of Life Sciences, Ooty	10,000	4,000	2,000
Total	**60,000**	**134,500**	**132,500**

During 2024–25, JSS Academy of Higher Education & Research significantly strengthened its alternative water sourcing and reuse mechanisms across all campuses by expanding both rainwater harvesting capacity and recycled water utilization. The institution achieved a cumulative **rainwater collection capacity of 60,000 litres** and **recycled water usage of 134,500 litres**, with **132,500 litres** of this treated water being effectively reused for landscaping and non-potable applications, thereby substantially reducing dependence on freshwater sources.

The **JSS Medical Institution Campus** leads these efforts with **16,000 litres of rainwater harvesting capacity** and **80,000 litres of recycled water reuse**, all of which is effectively diverted for landscaping purposes. Similarly, the **JSS College of Pharmacy, Mysuru** demonstrated strong water efficiency practices through **5,000 litres of rainwater collection** and the reuse of **40,000 litres of treated water** for landscape maintenance. The **JSS College of Pharmacy, Ooty** further contributes through **5,000 litres of rainwater harvesting** and **500 litres of recycled water reuse**.

The **Off-Campus Buildings** and the **School of Life Sciences, Ooty** also play a key role in decentralized conservation efforts, together contributing **34,000 litres of rainwater harvesting capacity** and **14,000 litres of recycled water reuse**. These integrated systems enable sustainable campus operations while minimizing freshwater extraction and enhancing climate resilience.

Collectively, these initiatives highlight JSS AHER's strong commitment to sustainable water management, responsible resource utilization, and green campus development, aligning with **SDG 6 (Clean Water and Sanitation)**, **SDG 11 (Sustainable Cities and Communities)**, and **SDG 12 (Responsible Consumption and Production)**. Continuous monitoring, infrastructure upgrades, and awareness among campus stakeholders ensure the long-term effectiveness and scalability of these interventions.

3. **Advanced Monitoring and Evaluation Systems**
    - Real-time monitoring technologies track the volume and quality of recycled water, ensuring compliance with health and safety standards.
    - These systems provide data-driven insights for continuous improvement.
    - Real-time dashboards show water recycling statistics, helping the university optimize its water reuse strategies.

4. **Greywater Reuse Integration**
    - Treated greywater is systematically utilized for irrigating gardens and other green spaces, conserving water resources while beautifying the campus.

5. **Desalinated Water Usage**
    - In areas where applicable, desalinated water is stored and utilized for activities like gardening and preparing sports grounds.
    - Desalinated water is recorded and used for irrigation on sports fields, demonstrating efficient water management.

6. **Continuous Monitoring and Feedback**
    - The university regularly audits its water reuse programs, measuring the volume of reused water and evaluating its impact.
    - Reports are generated and shared with stakeholders to maintain transparency.
    - Annual reviews document the total amount of water treated and reused, showing incremental progress toward sustainability targets.

Impact of Water Reuse Measurement

- **Environmental Impact:** Significant reduction in freshwater consumption and waste discharge.
- **Data-Driven Decisions:** Real-time insights enable the institution to make informed adjustments to its water reuse strategies.
- **Community Benefits:** Students and staff actively participate in water conservation initiatives, creating a culture of shared responsibility.

Examples of Success

- **Sewage Treatment Plants (STPs) and Greywater Systems** at JSSAHER campuses have reduced freshwater demand by over 30%.
- **Desalinated Water Storage** has supported efficient irrigation of sports fields, reducing water wastage.
- **Advanced Monitoring Systems** provide detailed records of recycled water usage, ensuring sustainable practices.

By implementing and continuously improving water reuse measurement systems, JSSAHER not only contributes to environmental sustainability but also serves as a role model for educational institutions globally. This commitment underscores the university's leadership in sustainable water management practices.

For more information on our sustainability initiatives, visit the JSSAHER Sustainability Page.