

Green Building Practices and Water Usage Minimisation Measures

JSS AHER is Edge Certified:



At JSS Academy of Higher Education and Research (JSS AHER), water usage and care are integral to the institution's commitment to sustainability and responsible resource management. The university has implemented a range of building standards and practices designed to minimize water consumption while promoting efficient usage across its campuses.

One of the primary initiatives involves the installation of water-efficient fixtures throughout the campus. Controlled flow faucets are strategically placed in washrooms, laboratories, and kitchens to limit water waste without compromising usability. These fixtures are designed to reduce the flow rate while maintaining adequate pressure, effectively minimizing water usage. Additionally, dual-flush toilets have been installed, allowing users to select between two flushing options based on the waste type. This simple yet effective measure significantly decreases the amount of water used per flush, contributing to substantial savings over time.

In parallel with these efforts, JSS AHER has implemented a rainwater harvesting system, which plays a crucial role in supplementing water resources for non-potable uses. By collecting and storing rainwater, the university can provide water for gardening, landscaping, and ground preparation. This initiative not only reduces reliance on municipal water supplies but also enhances the institution's sustainability efforts by utilizing natural resources.

To maintain the integrity of its water systems, JSS AHER prioritizes regular inspections of plumbing systems. By routinely checking for leaks and promptly addressing any issues, the university minimizes water loss and ensures that its infrastructure operates efficiently. This proactive approach helps to conserve water while also reducing potential damage associated with leaks.

Additionally, JSS AHER conducts regular green audits to track water usage across various facilities. These audits are essential for identifying areas where improvements can be made. By analyzing water consumption data, the institution can pinpoint high-usage areas and develop targeted strategies to reduce waste. This systematic approach allows JSS AHER to adapt its water management practices continually and implement innovative solutions to enhance efficiency.

In conclusion, JSS AHER's commitment to water usage and care is evident in its comprehensive approach to minimizing water consumption. Through the installation of water-efficient fixtures, rainwater harvesting, regular plumbing inspections, and green audits, the university actively promotes sustainable water management practices. These initiatives not only support the institution's environmental goals but also foster a culture of conservation within the campus community, ensuring that JSS AHER remains a leader in responsible resource management.

JSS Academy of Higher Education & Research (JSSAHER) has implemented a series of measures to minimize water use and promote efficient water management:

1. Preventing Water Wastage:

JSSAHER places a strong emphasis on maintaining the infrastructure of its buildings, such as taps, flush tanks, and faucets, to ensure they are in good condition and free from leaks. This proactive maintenance approach prevents unnecessary water wastage, as even minor leaks can result in significant water loss over time.

2. Water Level Control:

The institution has installed water level controllers to prevent the unnecessary overflow of overhead tanks. These controllers ensure that water storage tanks are filled to appropriate levels and prevent water spillage, which can be a source of wastage. Ball valves are also installed at inlet points to regulate water flow into underground sumps and overhead tanks, further improving control over water usage.

3. Optimal Water Utilization:

JSSAHER optimizes its water usage in various ways:

- **Reuse of RO Rejected Water:** The water rejected by the Reverse Osmosis (RO) systems is repurposed. Rather than discarding it, this water is used for purposes such as maintaining sports grounds, where the stringent purity requirements of RO water are not essential.
- **STP Treated Water for Gardening:** The treated water from the Sewage Treatment Plant (STP) is utilized for gardening purposes. This ensures that water resources are efficiently reused for non-potable applications, reducing the demand for freshwater sources.
- **Rainwater Harvesting:** JSSAHER actively collects and utilizes rainwater through recharging pits and ponds. This practice not only reduces reliance on external water sources but also contributes to groundwater replenishment and mitigates the risk of water scarcity during dry periods.

These practices collectively reflect JSSAHER's commitment to responsible water management and sustainability. By proactively addressing water wastage, installing control systems, and judiciously utilizing water resources, the institution not only promotes eco-consciousness but also sets an example for efficient water use in its community.

JSS Academy of Higher Education & Research (JSSAHER) applied various building standards and practices to minimize water use, promoting water efficiency and sustainability. Relevant standards and practices that were implemented included:

1. **LEED Certification (Leadership in Energy and Environmental Design):** JSSAHER aimed for LEED certification for its buildings. LEED promoted water efficiency through standards like reducing indoor water use, utilizing efficient plumbing fixtures, and implementing water-efficient landscaping.
2. **Indian Green Building Council (IGBC) Standards:** JSSAHER aligned with IGBC standards for green building design and construction. These standards emphasized water efficiency, rainwater harvesting, and wastewater treatment.
3. **BIS (Bureau of Indian Standards) Guidelines:** JSSAHER followed BIS guidelines on water conservation in buildings. These standards covered plumbing fixtures, water storage, and water quality.

4. **Rainwater Harvesting Systems:** Buildings were designed with rainwater harvesting systems, in compliance with local regulations and standards. Rainwater was collected and stored for non-potable uses, reducing the demand on municipal water supplies.
5. **Dual-Flush Toilets:** The use of dual-flush toilets was mandated, allowing users to select a lower volume for liquid waste and a higher volume for solid waste, reducing overall water consumption.
6. **Low-Flow Faucets and Showerheads:** Low-flow faucets and showerheads were installed to minimize water use in sinks and bathing areas.
7. **Water-Efficient Landscaping:** Building designs included landscaping with native, drought-resistant plants and efficient irrigation systems to reduce outdoor water consumption.
8. **Greywater Recycling:** Systems were considered to treat and recycle greywater (wastewater from sinks and showers) for non-potable uses like flushing toilets and landscape irrigation.
9. **Metering and Monitoring:** Water meters and monitoring systems were implemented in buildings to track water usage and identify areas where improvements were needed.
10. **Educational Initiatives:** Building occupants were educated on water-saving practices, and signage was displayed to encourage responsible water use.

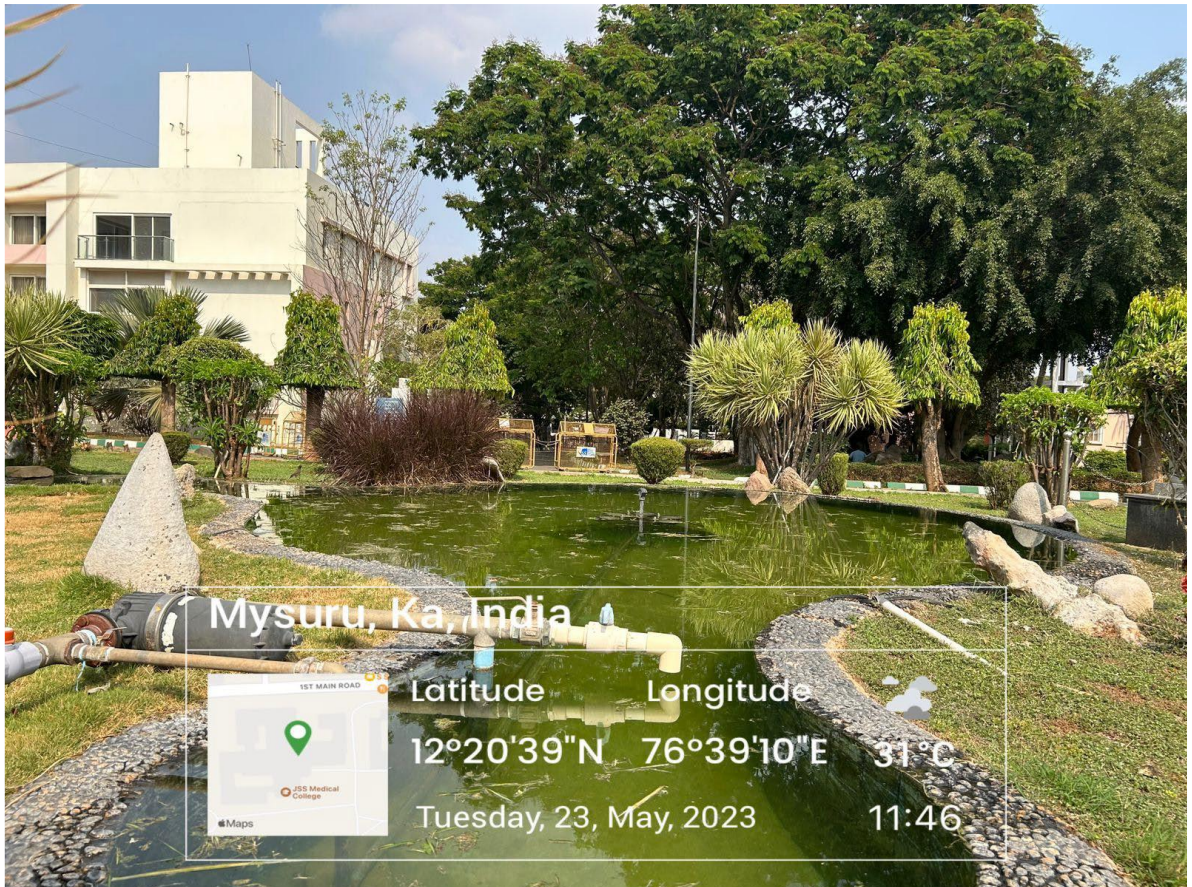
JSSAHER collaborated with architects, engineers, and construction professionals who were well-versed in these standards and practices designing and construct water-efficient buildings. Compliance with relevant local, national, and international building codes and standards ensured that JSSAHER's structures were not only functional and safe but also environmentally responsible, contributing to a sustainable past.



Installation of water-efficient fixtures and dual-flush toilets at JSS AHER Campus, Mysuru



Rainwater harvesting system at JSS AHER Campus, Mysuru

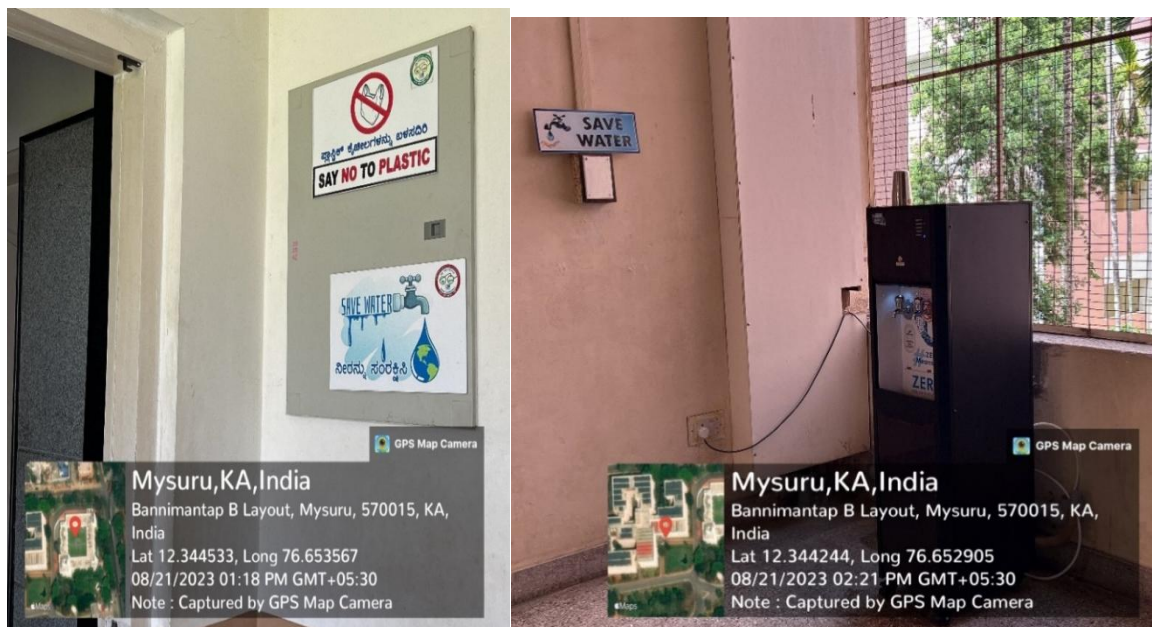


Rainwater collection and storage at JSS AHER Campus, Mysuru





Collects and utilizes rainwater through recharging pits and ponds at JSSAHER, Mysuru



Signage boards and displays for conservation of water at JSSAHER, Mysuru



Utilization of Desalinated water for gardening purposes at JSS AHER Campus, Mysuru

Standards to minimise the usage of water

Water closets and Urinals flow rate details were gathered, and recommendations were made in order to minimize the flow rate of water from taps and flushes which is going to reduce water usage across the campus.

WATER EFFICIENCY MEASURES

WEM02* Water-efficient Faucets for Private Bathrooms: 2 L/min

Base Case Value: 8 L/min

Faucet Type: Faucets with Aerators Flow Rate (...):
 Hot Water...: Yes

WEM03* Water-efficient Faucets for Public Bathrooms: 2 L/min

Base Case Value: 8 L/min

Faucet Type: Faucets with Aerators Flow Rate (...):
 Hot Water...: Yes

WEM04* Efficient Water Closets for All Bathrooms: 6 L/High volume flush and 3 L/Low volume...

Base Case Value: Single Flush, 8 L/Flush

Type Of Wa...: Dual Flush
 High Volume...: Low Volume...:

WEM07 Water-efficient Urinals: 2 L/flush

Base Case Value: 4 L/flush

Flush Volum...:

WEM13 Water-efficient Landscape Irrigation System: 4 L/m²/day

Base Case Value: 6 L/m²/day

Average Wa...:

WEM14 Rainwater Harvesting System: 50% of Roof Area Used for Collection

Base Case Value: No Rainwater Harvesting

WEM15 Waste Water Treatment and Recycling System: 100% Treated

Base Case Value: No Water Recycling System

WEM16 Condensate Water Recovery: 100% Recovery

WEM17 Smart Meters for Water

WEM04* Efficient Water Closets for All Bathrooms: 6 L/High volume flush and 3 L/Low volume...

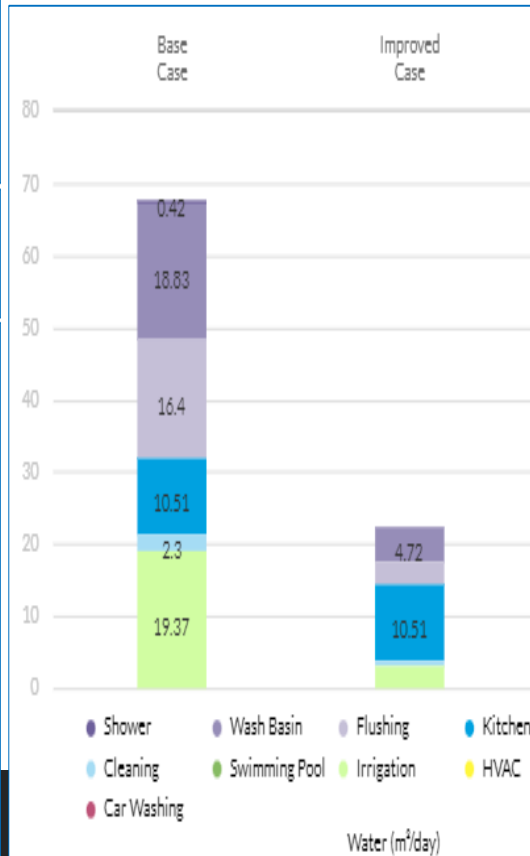
Base Case Value: Single Flush, 8 L/Flush

Type Of Wa...: Dual Flush
 High Volume...: Low Volume...:

WEM05* Efficient Water Closets for Public Bathrooms: 6 L/High volume flush and 3 L/Low v...

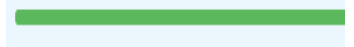
Base Case Value: Single Flush, 8 L/Flush

Type Of Wa...: Dual Flush
 High Volume...: Low Volume...:



62.5%
Savings

62.54% Meets EDGE Water Standard



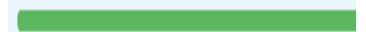
WATER EFFICIENCY MEASURES

Water Measures	JJS Medical College	Required to Achieve 20% and more
Water efficient faucets for private bathrooms	9.25 LPM	It is suggested to install water conservative fittings with aerators and restrict water consumptions to 2LPM
Water efficient faucets for public bathrooms	9.25 LPM	It is suggested to install water conservative fittings with aerators and restrict water consumptions to 2LPM
Efficient water closet for all bathrooms	No information	It is recommended to install efficient water closets (dual flush) of 6L/flush for high volume and 3 L/flush for low volume
Efficient water closet for public bathrooms	No information	It is recommended to install efficient water closets (dual flush) of 6L/flush for high volume and 3 L/flush for low volume
Water efficient urinals	No information	It is necessary to install water efficient urinals of 0.5 L/flush
Water efficient Irrigation System	No information	It is advisable to install water efficient irrigation system like drip irrigation with reduce law area and recommended to have native species
Rainwater Harvesting System	Doing	It is recommended to harvest 50% of the roof rainwater
Wastewater treatment & Recycling System	Not installed	It is suggested to treat the wastewater by 100% and it can be reused for landscaping and flushing purpose
Smart meters for water	Not installed	It is recommended to install separate meters for Borewell, Rainwater, Municipal and treated water to monitor the water usage pattern.



62.5%
Savings

62.54% Meets EDGE Water Standard





74%



62.5%



97%

ENERGY

WATER

MATERIAL



Meets EDGE Energy, Water and Material Standards

EDGE Advanced

Recommendation

ENERGY

WATER

Measures	Make/Model	Specification
Ceiling fan	Atomberg	30W
LED Lights	1. Lighting technology 2. Havells 3. Philips 4. Regent	20W
Roof SRI Paint	1. Asian 2. Berger 3. Dulux	SRI $\geq$ 85 Above

Measures	Make/Model	Specification
Washbasin Faucets	1. Hindware 2. Parryware 3. Jaquar	2 L/min
Water closets	1. Hindware 2. Parryware 3. Jaquar	3L/low volume flush & 6L/High volume flush
Urinals	1. Hindware 2. Parryware 3. Jaquar	2L/flush

