Sevadal Mahila Mahavidyalaya

Umrer Road, Sakkardara Square, Nagpur - 440 024



NAAC Criteria-7

7.1.3. Facilities in the institution for the management of degradable & Non- degradable waste.

Reports on

Solid Waste Management Liquid waste management Biomedical Waste Management Waste recycling system Hazardous chemical and radioactive waste management.

Solid Waste Management

This report presents findings from a survey on **solid waste** generation at Sevadal Mahila Mahavidyalaya, focusing on waste composition and management.

Survey indicate that paper waste constitutes 72% of total waste generated. Plastic waste follows at 12.79%, with significant portion being soft plastics. Biodegradable waste accounts for 9.44%, including refuse from the food and nutrition department, canteen, and surrounding gardens. Glass waste remains minimal, representing 2.46% of the total.

During construction development, an additional 2.46% of waste emerged, primarily from construction materials.

Solid waste generated at the college is collected and placed in designated dustbins for storage and transportation to Nagpur Municipal Corporation (NMC). Routine collection by NMC vehicles alleviates solid waste burden on campus.



1. Geo-Tag Photograph of the teams being given instructions by the mentor teacher



2. Geo-Tag Figure showing Storage, Segregation and transportation to NMC Vehicle collecting Solid waste



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Report on

Liquid waste management

2. Liquid Waste Management-

Our college generates liquid waste from various sources, including laboratories, washrooms, canteens, and rooftop runoff. This waste is managed through an integrated and sustainable liquid waste management system. A significant portion of the wastewater is directed through a drainage network to sinks and subsequently conveyed via pipelines to the Nagpur Municipal Corporation (NMC) sewage treatment system. Here, it undergoes primary, secondary, and sometimes tertiary treatment processes to ensure the removal of contaminants before safe disposal or reuse or recycle.

A noteworthy aspect of the system involves the management of rooftop runoff and other waste water. This water i diverted through dedicated pipelines directly to the campus gardens, where it is utilized for irrigation. Such water recycling practices are particularly effective in minimizing freshwater demand and promoting resource efficiency. For instance, terrace runoff during rain is redirected to garden areas, reducing the dependency on municipal or groundwater sources for maintaining green spaces.

The adoption of these practices is deeply rooted in the college's academic and institutional commitment to environmental sustainability. Since 1993, the institute has offered Environmental Science as a core subject, emphasizing its role as a leader in promoting ecological conservation. As part of its responsibility, the institution actively trains, educates, and raises awareness about water conservation and judicious resource use. Practical demonstrations, such as the use of treated and recycled water for gardening, serve as effective educational tools for students and staff, reinforcing the importance of sustainable practices.

A systematic investigation of the campus infrastructure reveals that the institute is meticulously designed to support efficient water management. By integrating advanced water conservation methods, such as separating rooftop runoff for direct reuse and ensuring proper wastewater disposal, the college adopted a scientific and proactive approach to environmental stewardship. This model not only optimizes water use but also demonstrates how academic institutions can align their operations with sustainability goals, contributing meaningfully to global water conservation efforts.

It is therefore necessary for all persons involved in water management to get together and find out ways and means to preserve water balance of the institution. The moment we adopt the technique of water management, it would be better to ensure the



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availability of quality water for all the time to come and it will also ensure a better future for our students.





Picture- Liquid waste management practices through pipeline system



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Principal Sevadal Mahila Mahavidyalaya Umrer Road, Nagpur.

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Report on

Biomedical Waste Management

3 Biomedical Waste Management

Biomedical waste Management: BMW are generated by Microbiology, Biochemistry and biotechnology departments in our institution in a smaller amount. BMW harms students and environment as they are highly infectious. CONSIDERING the seriousness of this solid waste problem Govt of India has passed Biomedical waste (Mgmt & Handling) Act in 1998. The act emphasizes on safe disposal methods to be strictly followed by the bio medical waste generating dept and other health care units, producing BMW.

About 80% of BMW are benign and comparable to domestic waste. The remaining 20% is hazardous- it may be infectious & toxic. BMW is reservoir of pathogenic micro-organisms, which can cause contamination and give rise to infection. Improper disposal of Bio-medical waste may also cause air, water and soil pollution. The untreated and improperly treated BMW dumped on the land can contaminate ground water supplies-exposing the entire population to the risk of diseases and parasites. Generally, Incineration is commonly employed for the treatment of BMW. The solid waste is burnt at a high temp in presence of oxygen. If the incineration burnt at a lower temp, the incineration is incomplete, the pathogens can survive. Due to insufficient temp in the process chamber, it may also produce harmful toxic compounds.



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Report on

Waste recycling system

Waste recycling system

Biodegradable waste undergoes vermicomposting, transforming it into valuable manure, exemplifying *"wealth from waste"* and contributing to sustainability efforts by converting organic waste into usable compost.



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NAAC Criteria-7

7.1.3. Facilities in the institution for the management of degradable & Non- degradable waste.

Report on Hazardous chemical and radioactive waste management.

Hazardous chemical and radioactive waste management.

Few chemicals used in the laboratory are **corrosive and hazardous**. These are diluted with a sufficient quantity of water before being disposed through pipe lines.

These waste management practices reflect a commitment to efficient waste disposal, promoting environmental sustainability.



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