MVS Government Arts and Science College (Autonomous),
Mahabubnagar, Telangana State 509001.
Affiliated to Palamuru University.
NAAC Re-accredited with B++.

Estd: 1965 mahaboobnagar.jkc@gmail.com , **95426 96721**

The management activities for degradable and non-degradable waste in the campus by the College.

Environmental conservation is one of the major responsibilities of every individual in the campus. The continuous efforts of the college to enhance and ensure the protection of environment has been made mandatory. NSS and Eco Club strive to impart eco-consciousness among students. A formal structure for managing the solid, liquid and e-waste is set in the campus:

Solid Waste Management

A well-planned Waste Management System helps to maintain a clean campus. The college provides basic recycling service throughout the campus by keeping separate bins for biodegradable and non-biodegradable wastes. The solid waste received from the classrooms and canteens are disposed regularly. Dustbins are placed in the classrooms, staffrooms and in common areas to collect the waste. The wastage collected is cleared regularly by the local Municipality. Organic waste is dumped in the organic pits which turns into manure over a period of time and is utilised as bio manure. Paper waste collected from the classrooms, staffrooms and offices, old News Papers collected all through the year in the College Library are sent for recycling.

- The campus is Wi-Fi enabled and hence all communication is made online minimizing the use of paper.
- Internal and external communications are made through e-mail and WhatsApp to promote paperless office.
- To minimize the impact of paper use, online Tests are encouraged.
- Online platforms are used in collecting feedback and other academic activities.
- Metal waste and other recyclable wastes are sold to the authorized vendors.
- Usage of plastic cups and plates are banned in the campus as a green initiative.
- Sanitary napkins are burnt in the incinerators installed in rest rooms.

Liquid Waste Management

The Institution follows the systematic procedure for proper management and disposal of liquid waste. The wet waste from the college, hostels and canteen is used to make eco-friendly fertilizers. Institution also conducts discussions with students to make them aware about the liquid waste management techniques. Laboratory wastes, including dangerous and hazardous liquids can be disposed of by using a wide variety of techniques and methods. Liquid waste that is generated in the institute falls into three following categories.

i. Septic tank effluents from various sanitary blocks, water used for washing and cleaning of utensils etc. from canteen
ii. Wastewater from laboratories using chemicals
iii. Wastewater from RO plant

As the college is located in rural un-sewered area, waste water generated from the sanitary facilities is disposed of into septic tanks located at different places in the campus and their effluents combined with canteen waste water is used for gardening, watering trees etc. The excess wastewater will be directed into natural drain passing near by the college campus.

E-Waste Management

Separate bins are provided across the campus to collect the E-waste from all the departments. The collected material is sent for recycling through an authorized vendor suggested by CCE Hyderabad, Telangana.

Waste Management Steps:

Waste management Steps Include the Institution has taken up various initiatives to maintain an environment friendly campus.

The campus is full of greenery and is kept clean and tidy. The gardens, lawns and plantations inside the campus is maintained by a dedicated group of caretakers, sweepers and housekeeping staff.

The Green Audit is organized in our Institution and various measures have been taken up to implement the suggestions provided in the audit. The main objective of conducting the Green Audit is to determine the steps to be taken to maintain an eco-friendly environment in the campus.

The Institution implements effective waste management through waste segregation and recycling of the waste. Students and faculties were also actively involved by knowing their perspective about the waste management techniques in the campus.

1. Solid waste management: Solid waste includes both biodegradable and non-biodegradable components. The non-biodegradable solid waste generated in the campus include, paper, polythene covers, metal cans etc. Biodegradable waste includes food waste, fallen leaves etc.

'Use and throw' items like plastic cups, plates etc. used in the college canteen are replaced by reusable items steel glasses and plates. Glass, paper and metal waste is sold for recyclers.

Food waste and non-biodegradable waste are collected in separate bins. Biodegradable waste is disposed of in our biodegradable pits specially earmarked for the purpose.

The Institution implements solid waste management by enforcing the waste segregation rules. Dustbins are placed in every classroom, laboratory, rest room, canteen and at different locations in the campus.

Sweepers are allotted to each floor who manages all the waste generated in the campus. All waste/garbage from college and hostel is segregated at source and disposed of in a proper manner.

The wet waste from the hostels/ canteen is given away to bio fertilizer plants for making eco-friendly fertilizers.

Wastes like newspapers and stationery is sold to proper recycling agencies/vendors. Through recycling the transport of large quantities of garbage to far-off dumps has been reduced.

NSS Students segregating the solid waste

2. Liquid waste management: The Institution follows the systematic procedure for proper management and disposal of liquid waste. The wet waste from the college, hostels and canteen is given away to bio fertilizer plants for making eco-friendly fertilizers. Institution also conducts discussions with students to make them aware about the liquid waste management techniques.

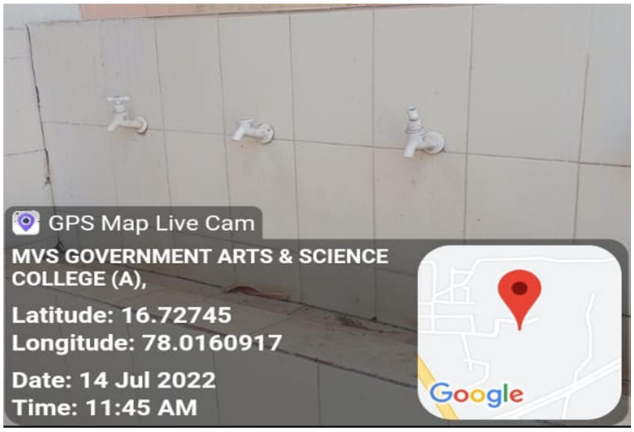
Proper disposal of liquid waste is a must in order to maintain good human and animal health. Laboratory wastes, including dangerous and hazardous liquids, can be disposed of by using a wide variety of techniques and methods. Sewage treatment facility can be provided to re-use the waste water for applications other than drinking. Liquid waste that is generated in the institute falls into three following categories.

iv. Septic tank effluents from various sanitary blocks, water used for washing and cleaning of utensils etc. from canteen
v. Wastewater from laboratories using chemicals
vi. Wastewater from RO plant

As the college is located in rural un-sewered area, waste water generated from the sanitary facilities is disposed of into septic tanks located at different places in the campus and their effluents combined with canteen waste water is used for gardening, watering trees etc. The excess wastewater will be directed into natural drain passing near by the college campus.

Waste water generated from the laboratories is very small in quantity; hence they are handled along with septic sewage.

RO plant wastewater is diluted with canteen wastewater and used for gardening, watering trees etc.



The future vision of the college is to establish full-fledged sewage treatment plant for sewage treatment and recycling the same fully within the campus, thus achieving the goal of zero discharge campus.

Following details are given for guidance to dispose the laboratory chemical waste

Solution

Disposal Procedures for Laboratory Chemicals: It is the clear responsibility of all research workers to ensure the safe and correct disposal of all wastes produced in the course of their work. Improper and irresponsible disposal of chemical wastes down drains, to the Local Authority refuse collection, or into the atmosphere is forbidden by law.

Wash down drains with excess water

- Concentrated and dilute acids and alkalis
- Harmless soluble inorganic salts (including all drying agents such as $CaCl_2$, $MgSO_4$, Na_2SO_4, P_2O_5)
- Hypochlorite solutions from destroying cyanides, phosphines, etc.

It should be noted in particular that no material on the "Red List" should ever be washed down the drain. This list is as follows:

- Compounds of the following elements: - antimony, arsenic, barium, beryllium, boron,

cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, tellurium, thallium, tin, titanium, uranium, vanadium and zinc.

- Organohalogen, Cyanides and thiocyanides.
- Mineral oils and hydrocarbons

Laboratory waste bins and controlled waste

All waste suitable for the Local Authority refuse collection, except recyclable paper and glass, is termed 'controlled waste'. Items in this category which includes dirty paper, plastic, rubber and wood, should generally be placed in the waste bins available in each laboratory and will be collected by the cleaners. However, each laboratory must also have a container for certain items which are not allowed to be put in the normal waste bins. In this special controlled waste container should be put: - all broken laboratory glassware, any sharp objects of metal or glass, all fine powders (preferably inside a bottle or jar) and dirty sample tubes or other items lightly contaminated with chemicals (but not any syringes or needles). Laboratory controlled waste containers must be emptied regularly and never allowed to overflow. Under no circumstances must any item of glass, sharp metal or fine powder ever be put in a normal laboratory waste bin. The tops must be removed from all bottles put out for disposal and there should be no detectable smell of chemicals from any bottle put for disposal.

3. E-waste management: The Institution has undertaken a number of E-waste Management initiatives with the objective of creating an eco-friendly environment in the campus. E-waste such as computers and its peripherals are upgraded regularly to continue usage and to avoid its wastage. Moreover, the HEI will follow the rules and regulations issued by Commissionerate of Collegiate Education, Hyderabad, Telangana State.

PRINCIPAL
MVS Govt. Arts & Science College (A)
Mahabubnagar