

Sustainable waste management practices are employed for minimization of waste/“zero waste” on campus through several measures for degradable and non-degradable waste.

A. SOLID WASTE MANAGEMENT

Waste disposal are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

- Each and every department, hostel, residential complex, shopping complex of SLIET as well as administrative offices collect the waste and dumped in small waste bin/ Big waste structure located at several locations of the Institute. Dry waste includes paper, cardboard, glass tin cans etc. on the other hand; wet waste refers to organic waste such as vegetable, left-over food etc. From the big waste structure the solid waste are transferred through the Institute tractor and sanitation workers to the isolated area in the campus. Disposal of these waste results in the production of good quality organic manure that can be used as soil amendments and source of plant nutrients.
- The use of plastic has been banned in the Institute.
- Dustbins are placed at strategic locations within the campus.
- Further, the tree leaves, plants, grass and other green waste is transported through Institute tractor by the horticulture workers to the isolated area in the campus. The solid waste is then used for the manure and **vermicompost** production by the horticulture wing. The manure is used for landscaping and plantations including fruit bearing trees. The organic wastes filled in the pits are subjected to composting which forms a best practice in the campus.
- The solid part of the digestive from the plant is mixed with waste vegetative materials in a Vermi composting pit to produce manure.
- Old building Scrap materials are reused for construction of fencing.

B. LIQUID WASTE MANAGEMENT

- Liquid waste is generated from departments, laboratories, Hostels, Residential quarters and canteen. Liquid wastes generated include toilet, washroom, kitchen, canteen, residential complex etc. The liquid wastes are mainly drained through pipe to **sewerage collection manhole chambers**. The collection chamber has been constructed to collect raw sewage.
- The Institute has installed Sewerage collection plant for collection of liquid waste. Further, an **open oxidation** pond has been provided for the treatment of waste water. Oxidation ponds, also called lagoons or stabilization ponds are large, shallow ponds designed to treat wastewater through the interaction of sunlight, bacteria, and algae. During the process of photosynthesis, the algae releases the oxygen needed by aerobic bacteria. Algae helps the bacteria break down the sewage and effluent. The wind helps with the evaporation of the water and serves

- to get oxygen into the water. This helps in water getting cleaned.
- Rainwater is also collected for recharging of ground water through several open wells and for use in

RECYCLING OF WASTE WATER

- The recycled waste water is used for irrigation of forest area of Institute and horticulture activities in the informal garden of the campus near BH-08. Oxidation pond of the campus has is handling 5,00,000 litres/day.

C. E-WASTE MANAGEMENT

SLIET has very efficient mechanism to dispose E wastes generated from various sources. E-wastes are generated from computer laboratories, electronic labs, Physics Labs, Chemistry Lab, Biotech Labs, Academic and Administrative Offices. Electronic waste (e-waste) is collected by Store & Purchase department. The E-waste includes out of order equipments or obsolete items like lab instruments, circuits, desktops, laptops and accessories, printer, charging and network cables, Wi-fi devices, cartridges, sound systems, display units, UPS, Biometric Machine, scientific instruments etc. All these wastes are put to optimal use. The usable parts are reused for the replacements. E-waste generated is disposed-off as per E-waste Management Rules 2016, as amended from time to time. All such equipment's which cannot be reused or recycled is being disposed off through Notice Inviting Quotation or E-tender. The bidders are required to submit a valid Registration Certificate issued by the concerned Pollution Control Board along-with auction bid. A copy of orders issued in respect of e-waste disposed-off is enclosed for reference. The ACSS department of the University repairs and re-uses the computer/Laptop, accessories, printers, batteries, etc and the unusable electronic equipment is sent for recycling/disposal.

D. BIOMEDICAL WASTE MANAGEMENT

In SLIET, the bio medical waste is produced through Health Center. Though the amount of waste is very negligible. Health Centre, SLIET is managing its Bio Medical Waste strictly according to guidelines issued by Punjab Pollution Control Board for disposal of Bio Medical Waste. Bio Medical Waste at health centre is segregated and stored in various waste bins as per approved color code. For proper disposal of Bio Medical waste from Health Centre a contract is signed with Medicare Environment Private Ltd. (Ludhiana). Waste collecting van from above mentioned company is visiting regularly at Health Centre for collection of bio medical waste.

- a) Photographs of bins being used for segregation and collection of BMW at HC.
- b) Copy of agreement with MEPL.
- c) Copy of latest Daily Collection Report from MEPL.

E. WASTE RECYCLING SYSTEM

Solid wastes (degradable) are generally recycled via manure and Vermi composting units. Liquid waste is treated and used for horticulture and toilet flushes. Usable e-wastes are used as replacements in repairs. Construction and demotion debris like iron/wood etc. are also recycled for various applications (e.g., furniture/fences, landscaping etc.).

F. HAZARDOUS CHEMICALS AND RADIOACTIVE WASTE MANAGEMENT

Hazardous waste after segregation at source are treated as per general or specific Standard Operating Procedure as part of green practices being followed in the laboratories. The effluents generated thus are finally discharged through a hazardous chemical waste disposal system. There is no radioactive waste generated in the campus. The Institute do not generate radioactive waste.