

## Solid Waste Management

### Waste Generation

The resident of the city generate solid waste at an estimated of 200 grams per capita per day. Based on Census 2001 population figures of 0.32 million for Kollam city, the total waste generated would be 64.00 MT/day. Table 9-11 indicates the source wise solid waste generation at the corporation level.

Table 9-11 Waste Generation in Kollam (2001)

Sr. No.	Source of Waste Generation	Waste Generation per day(MT)	Percentage to the Total
1.	Domestic waste	54.80	63.76
2.	Shops and establishment	14.55	22.73
3.	Vegetable and fruit market	3.70	5.78
4.	Meat fish and slaughter house	2.00	3.12
5.	Clinical waste	1.40	2.18
6.	Construction/Demolition	1.55	2.43
	Total	74.00	100.00

### Street Cleansing

Under the Kerala Municipalities Act 1994, road/street sweeping and drain cleaning are obligatory responsibilities of the Municipal Corporation area has been geographically divided into 50 wards deploying Sanitary Workers and Drivers under the supervision of a Sanitary Inspector . The sweepers of the Kollam Municipal Corporation (MC) are provided with the tools /Equipment like brooms made of coconut leaves, baskets, wheelbarrow/push carts and shovels for the street cleansing operation. Only the main roads and city centre area are cleaned daily b between 06.30 hours and 12.30 hours; other parts of the city are not. Street sweepers keep the waste collected in small heaps, which are removed by a handcart collection crew.

### Primary Collection and Storage

In Kollam, a large section of household, shops and commercial establishments generally do not practice waste segregation at source. A few households/commercial establishments separate recyclable/reuse waste and sell the same to scrap dealers.

Currently residents leave their household refuse at the nearest open temporary storage point in the morning from where it is collected by the Municipal Corporation (MC) staff. Market waste is directly collected from large heaps accumulated in front of the market; none of the market stalls have individual containers. At the SNT fish and meat market the common practice is to dump waste in to the adjacent area long side a canals. Every day after 1800 hours the waste is openly burnt. Shops have no individual storage bins.

There are 260 waste collection points located within the M C area using a variety of methods for the primary collection and storage of solid waste comprising : (i) open storage points;(ii) concrete cylindrical bins: (iii) small steal bins. All bins are emptied manually.

Secondary open collection points are open places of waste disposal conveniently identified by the conservancy staff for waste disposal from households, street sweepings and drain cleanings. These are spread all over the city where waste is stored openly prior to being collected and transported for disposal .

Concrete cylindrical bins have been placed in residential areas but are mostly phased out due to difficulty in emptying.

### **Transportation of wastes**

Kollam MC's Health Department has a fleet of 26 collection vehicles of which four vehicles (tractor trailers) are its own. The remaining 22 vehicles are hired Lorries and this number could increase during festivals or as per requirements. All loading and unloading operations are manually handled. At present there are no waste transfer points (temporary dumping yard) and waste is transported directly to the disposal site. In FY 2003-04 the MC spent Rs. 320,000 on hired Lorries.

There is no routine planning for the collection and transportation of waste from different parts of the city. Vehicles collect waste from open storage areas/dustbins as and when required especially in residential areas. These sites are often attended to more on the basis of the complaints received. Most open storage points/dustbins are not cleared every day. The garbage is removed from 06.30 hours to 12.30 hours.

### **Disposal and Treatment of Wastes**

Kollam MC is operating a municipal waste composting plant and disposal site (4Ha) at Kureepuzha 6 k m from the city centre, functioning since 2002. A total of 30 to 35 MT of unsegregated waste is transported to the site out of which 15 to 20 MT is converted into compost. The rejects of the compost plant are disposed into trenches, which is then covered with clay. The compost plant was constructed at a cost of Rs. 1.75 crores which has been handed over to PMT Earthmovers for operation. There are the three Orgavor machines each having a processing capacity of 15 MT per day. The Corporation makes a

payment of Rs 281,000 per month to the contractor for operating the plant. The current installed capacity of the plant is 45MT per day. There is a need for providing a weighbridge and extension of the present shed at the composting plant. The area required for sanitary landfill up to the year 2021 is 3 Ha.

Bio Medical Waste: There are 20 private clinics, hospitals and nursing homes within Kollam Municipal Corporation. The Corporation does not dispose of any medical waste. There is a biomedical treatment plant (BMTP) located pallakad and a vehicle from BMTP, pallakad normally collects the waste from Kollam.