

Town Municipal Administration Gulshan-e-Iqbal Town.



Annual Sector Plan.

For Specific Reforms through Improvements / Rehabilitation and Restructuring of Solid Waste Management Services (SWM Sector) of Gulshan-e-Iqbal Town.

Program Support Unit

Sindh Devolved Social Services Programme,

Finance & Co-Operation Department

Govt. of Sindh.

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Vision

A Clean, Green, Beautiful and Prosperous Town of Karachi
City to which.

All others Town Envoy.

Introduction:

Town Municipal Administration, Gulshan-e-Iqbal Town was created with the introduction of New System of Local Government on the 14th August 2001 under Sindh Local Govt. Ordinance 2001.

Area & Location:

Gulshan-e-Iqbal Town is one of the major Town of City District Govt. of Karachi, the town consist of Areas, which were previously (prior to inception of town) under Administrative control of DMC, East Dehi Councils, KDA / Revenue Schemes, Deh Gujro, DMC Malir, its boundaries can be detailed as under.

Started from Baloch Colony-Shahrah-e-Faisal at one end towards South.

Teen Hatti towards west along with Liyari River upto Super Highway towards North end.

Upto Malir Cantt. Towards East.

The Town Covers an area of approximately 65 Square K.M. and comprises of 13 Union Councils.

Union Councils / Population and Infrastructure.

Union Council

Name of Union Council

Previous Administration

Population

Infrastructure

1 Million

Developed

Undeveloped

UC-1

Dehli Mercantile Society

DMC East

95%

5%

UC-2

Civic Centre

DMC East

95%
5%

UC-3
P. I. B.
DMC East

95%
5%

UC-4
Essa Nagri
DMC East

40%
60%

UC-5
Gulshan-e-Iqbal (I)
DMC East

95%
5%

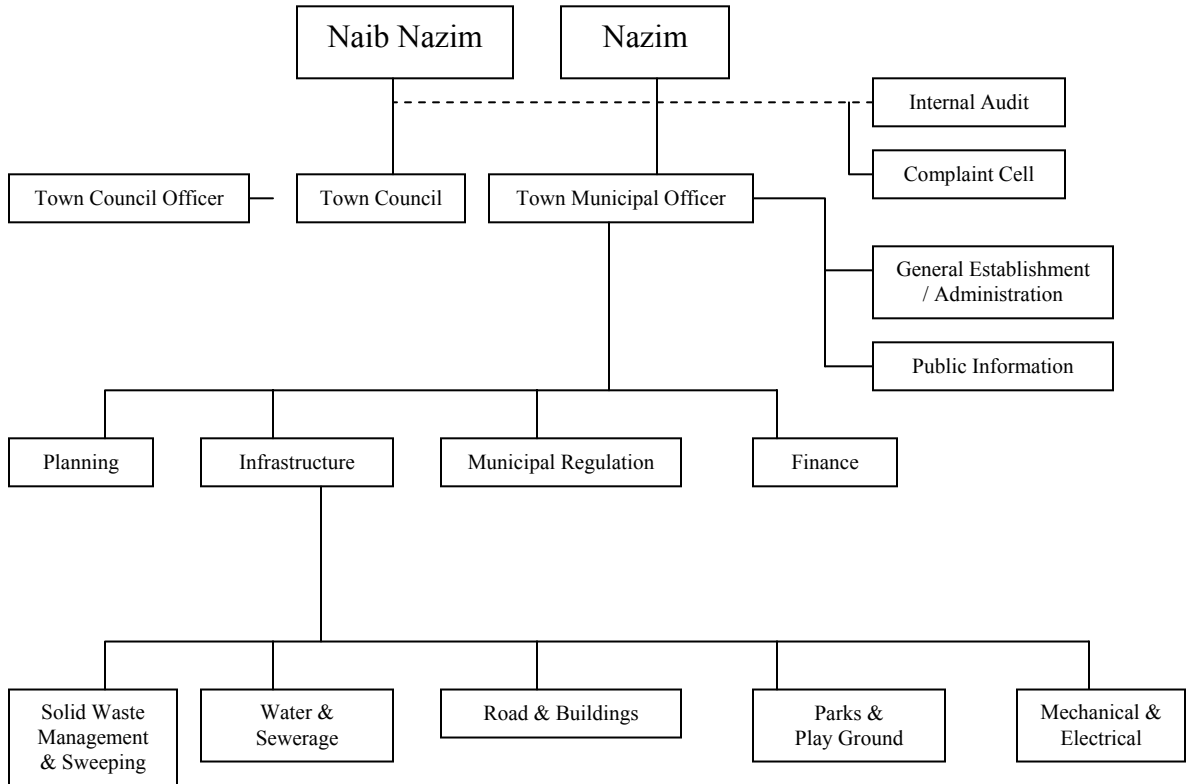
| | | | | |
|---|------------------------|----------------------|------------|------------|
| UC-6 | Gilani Railway Station | DMC East | 90% | 10% |
| UC-7 | Shanti Nagar | DEHI Council | 50% | 50% |
| UC-8 | Jamali Colony | DMC East | 80% | 20% |
| UC-9 | Gulshan-e-Iqbal (II) | DMC East | 100% | - |
| UC-10 | Pehlwan Goth | KDA Gulistan-e-Johar | 30% | 70% |
| UC-11 | Metrovil Colony | KDA/Revenue | 75% | 25% |
| UC-12 | Gulzar-e-Hijri | DEHI Gujro | 40% | 60% |
| UC-13 | Safora Goth | DMC (Malir) | 40% | 60% |
| Total 13 Union Councils Population 1 Million | | | 70% | 30% |

An Overview of Town Infrastructure:

| | |
|--------------------|-----|
| Pakki Abadi | 70% |
| Katchi Abadi | 30% |
| Developed Area | 70% |
| Non Developed Area | 30% |
| Flat (Units) | 15% |

Gulzar-e-Hijri
60%

Town Administration Organizations:
and Function of Infrastructure Development



Solid Waste Production:

Municipal Solid Waste (MSW) more commonly known as trash or garbage consist of every items such as:

House Hold waste, for example; vegetable, fruits, peels/husk/pulp/and other wasted, food products empty bottles, shoppers, packing, Newspaper etc.

Factory wastage for example; wood and cloth cuttings was etc.

Plants / Trees cuttings / roots and bushes / branches / leaf and many.

Solid Waste production depends upon the area its development, habit of residents and dwelling. It also depend upon, commercial activities, going on in the shopping areas / markets / hawkers zones. Its quantity also fluctuates during holidays / festival.

Therefore production of Solid Waste and its nature varies with localities, social and commercial activities and dwellings, such as Katchi Abadies developed areas etc.

Since the town dwelling various from developed area to Katchi abadies, flats systems to residential units and to Goths, Small Houses, Commercial areas, Shopping Centers and Hospital, therefore out of the total produce, major production of Solid Waste came from UC-1, UC-2 UC-3 and UC-6, this comprises of 40% of total Solid Waste of the Town, where as the remaining 60% came from other Nine Union Councils.

Total Solid Waste Per Day:

Town Municipal Administration has made an exercise on experimental basis, during which, Town Vehicles were directed to dispose off the solid waste collected from every Union Councils of the Town at a Temporary Transfer Station (at Scheme 33) from where, private vehicles (managed through contract) were directed to lift / transport the same by weight and disposed off the garbage to Land Fill site. This exercise which is being continued has confirmed on the based of actual date collected during one year practical experience, that in total about 300 Tons per day of Solid Waste is produced in the town and that the density of solid waste is 24 Kg / Cft. (for ally type of Solid Waste in mixed condition).

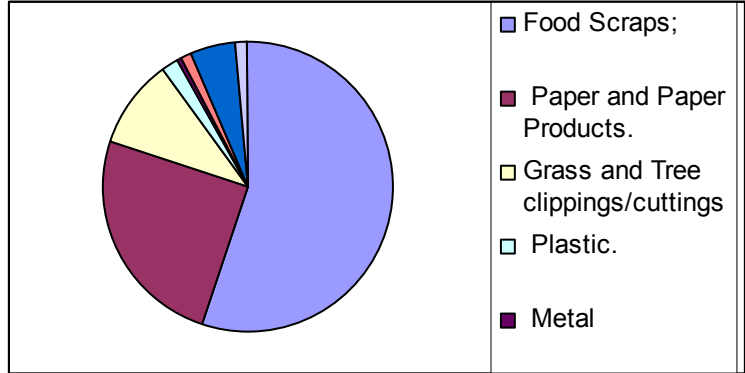
Composition of Solid Waste:

Solid Waste produced in the town consist mostly of house hold waste and waste from shooping areas, where as industrial waste as component of total solid waste produced is very minima. Approximately there are one lac and fifty thousands residential units in the town. Record of the current census indicates an average of six person per residential unit. Therefore in view of the population of the town which is 0.9 to 1 Million and approximately ten to twelve thousand shops, the garbage generation in the town per residential unit comes an average of 2 Kg per Unit including waste from commercial shops.

Composition of Solid Waste Generation in the Town:

The Solid Waste generation in the Town is more commonly composed of the followings based on tentative observatory estimation:

Food Scraps; 55%
Paper and Paper Products. 25%
Grass and Tree clippings/cuttings 10%
Plastic. 2%
Metal; 0.5%
Glass and Rubber Products. 1%
Sand and Fine Earth. 5%
Combustible and others 1.5%



Population Growth and Solid Waste Generation

Population growth in our country is about 3% where as migration rate in our Town from other Towns of City District Govt. Karachi is nearly 3%. Therefore trend of population grown is nearly 6%, here in this town.

Therefore in few years it can be safely expected that Solid Waste generation in the town shall increase from 300 to 400 tons per day.

Importance of Transfer Station and Transfer Points:

Transfer Stations are centralized facilities where waste is unloaded from smaller collection vehicles and reloaded into longer vehicles for transport to a disposal or processing site. This transfer station of waste is frequently accompanied by some removal, separation, or handling of waste in areas where wastes are not already dense they may be compacted at transfer station.

Transfer stations represents sound practice where there is a need for vehicles servicing a collection route to travel a shorter distance, unload and return quickly to their primary task of collecting the waste.

The Landfill Site nearer to Gulshan-e-Iqbal Town is at Jam Chakroo it is sited at a considerable distance from collection service areas. In this circumstances, since transporting waste from the route to the facility takes longer time and use more fuel, Transfer Station can be very attractive.

Transfer Trailers of compacting vehicles type can carry larger volumes of Municipal Solid Waste, than regular collection trucks / vans, which allows them to travel longer

distance carrying more waste. This lowers fuel costs, increase labour productivity and saves on vehicles wear, therefore lowers maintenance cost.

Therefore TMA has planned to purchase long vehicles and loaders to increase efficiency of waste collection/disposal at comparatively lower cost.

Temporary Transfer Station and Shifting Capacity of Solid Waste by Town Vehicles

In order to improve and to manage Solid Waste produced in the town properly and to ensure efficient and timely lifting of Solid Waste from various Katchra Kudis at every Union Councils, the Town is divided in three zones, and the available vehicles for lifting of Solid Waste is distributed accordingly. Temporary Transfer Station is also established at Scheme-33 with in the Town Jurisdiction , so as to reduce haulage distance and to increase cartage trips of each vehicles which has resulted in reduced maintenance cost of vehicles, fuels cost, and more coverage to Solid Waste collection and transportation; but even than, in view of old vehicle, (which are now working beyond working life) which are not efficient enough to handle and lift the total Solid Waste produced, beside these vehicles are not available in required No. so that total Solid Waste produced could be lifted on daily basis as such about 20 Tons of Solid waste usually present un lifted daily, where as Town Municipal Administration has to contract out lifting of Solid waste from Transfer Station to Land Fill site Jam Chakroo at additional cost. Therefore the lifting and transportation of Solid Waste needs to be improved by inducting same lading and transporting vehicles.

The detail of Solid Waste management as privatized partially and the comparison of results as came out due to privatization of Solid Waste Management and that maintained through TMA resources is give at Annexure“ A”

Lifting of Debries and Dismantled Construction Material.

Construction / Renovation of House / Flats and construction activities for building new house / flats particularly in UC-1, UC-2, UC-10, UC-11 is at its peak. People need to dispose off the debries on the road sides, which the Town Municipal Administration has to lift using TMA vehicles, this further adds to back log of Solid Waste in the Town, the back-log increased further due to engaging the available vehicle to anti encroachment activities by Land Department of the Town.

Vehicles available for Lifting / Transportation of Solid Waste in the Town.

(A) Garbage Carriers (Transporting Machinery)

| Type | Make | Nos. |
|--------------|--------|----------------|
| Arm Roll | Volvo | 08 Nos. |
| Arm Roll | Hino | 04 Nos. |
| Dumper | Hino | 02 Nos. |
| Dumper | Isuzu | 01 Nos. |
| Dumper | Hino | 02 Nos. |
| Dumper | Nissan | 01 Nos. |
| Multi Loader | Hino | 01 Nos. |
| Refuse Van | | 02 Nos. |
| Compactor | Volvo | 02 Nos. |
| Compactor | Hino | 01 Nos. |
| Compactor | Isuzu | 01 Nos. |
| Total | | 23 Nos. |

(B) Garbage Loaders (Loading Machinery)

| Type | Nos. |
|--------------|---------------|
| Loader | 02 Nos. |
| Bobcat | 03 Nos. |
| Total | 05 Nos |

Function of Sanitation Department:

1. Sweeping of back lanes / Streets and Main Roads.
2. Collection, Lifting and Transportation of Solid Waste from various Katchra Kundies of the town and disposal to Landfill Site / Temporary Transfer Station including lifting of sweeping waste collected on road sides.
3. Lifting and disposal of Roads Side debries.
4. Participation in Anti Encroachment activities of the Town through TMA Vehicles.
5. Anti Pye-dog Activities.
6. Brushing, Sweeping of Storm Drainage water accumulated on road sides. Sprinkling of lime powder and other emergent cleaning campaign.

List of Katchra Kundies / Dust Bin ((Designated)).

Union Council No.1 Dust Bins

| | Container |
|-------------------------|------------------|
| 1. Baloch Colony. | 02 Nos. |
| 2. A. B. N Amro Bank | 01 Nos. |
| 3. Alamgir Trust | 01 Nos. |
| 4. Sher Pao Basti. | 02 Nos. |
| 5. Dhora Ji | - |
| 6. Car Saz Service Road | - |

Union Council No.2 Dust Bins

| | |
|---|---------|
| 1. Shamsi Park | 01 Nos. |
| 2. Back Side of Medi Care Hospital | 01 Nos. |
| 3. Sharf abad Park | 01 Nos. |
| 4. Home Economics College. | - |
| 5. Shaheed-e-Millat Serivice Road near National College | - |
| 6. Jail Point | 01 Nos. |
| 7. Aameena Park (Lady Park) | 01 Nos. |
| 8. University Road near PSO Petrol pump. | - |
| 9. Block-14 near Old D. C. Office. | 01 Nos. |

Union Council No.3 Dust Bins

| | |
|--|---|
| 1. P. I. B. Colony near Ebrahim Ali Bhai School. | - |
| 2. Nafees abad | - |

Union Council No.4 Dust Bins

| | |
|---|---------|
| 1. Essa Nagri Service Road (Three Points) | 01 Nos. |
| 2. Football Ground. | 01 Nos. |
| 3. Dolat Ram Road | - |
| 4. Haji Oil Goth. | - |

Union Council No.5 Dust Bins

| | |
|--------------------------------|--------|
| 1. Bangali Para Zia Colony. | 01 Nos |
| 2. Ground of Masjid-e-Aqsa | - |
| 3. Rab Medical Centre | - |
| 4. Behind Noman Centre Block-5 | - |

Union Council No.6 Dust Bins

| | |
|---------------------------------------|---------|
| 1. Jhari wala Point | 01 Nos. |
| 2. Faran Club | 01 Nos. |
| 3. Block-19 | - |
| 4. Urdu College Ground | 01 Nos. |
| 5. Gilani Mazar near National School. | - |

Union Council No.7 Dust Bins

| | |
|--|---------|
| 1. Football Ground. | - |
| 2. Internal Road of National Cement Factor | - |
| 3. Meenara Masjid Point. | 01 Nos. |
| 4. Behind Sindbad | 02 Nos. |

Union Council No.8 Dust Bins

| | |
|----------------------------|---|
| 1. Gillani Railway Station | - |
| 2. 7-H Bus Stop | - |

Union Council No.9 Dust Bins

| | |
|-----------------------------|---------|
| 1. Disco Bakery. | 02 Nos. |
| 2. Time Square. | 01 Nos. |
| 3. Foundation School | 01 Nos. |
| 4. Aero Club Ground Block-6 | 01 Nos. |
| 5. NED Staff Colony | - |
| 6. Ala Din Park | 01 Nos. |

Union Council No.10 Dust Bins

| | |
|-------------------------------|---------|
| 1. Hoor Palace Block-11 | - |
| 2. Pehlwan Goth Main Road. | - |
| 3. Gullistan-e-Johar Block-15 | 02 Nos. |

Union Council No.11 Dust Bins

| | |
|---|---------|
| 1. Rajput Point | - |
| 2. Graveyard of Limo Goth. | 01 Nos. |
| 3. Behind Karachi University in front of Asma Garden. | - |

Union Council No.12 Dust Bins

| | |
|---|---------|
| 1. Shopper Plaza | - |
| 2. Bakhar Goth | - |
| 3. University Road in front of Sheraton Apartment. | - |
| 4. Behind Ghaziani Flat (in front of Dr. Qadeer Centre) | 01 Nos. |
| 5. Ayub Goth | - |
| 6. Sachal Goth Point. | - |
| 7. County Garden. | 01 Nos. |

Union Council No.13 Dust Bins

| | |
|-------------------------------|---|
| 1. Narial Bagh | - |
| 2. Behind Johar Complex. | - |
| 3. In front of Kiran Hospital | - |
| 4. Bhitai abad | - |
| 5. Bakhtawar Goth | - |
| 6. Lashari Goth (Bhitai abad) | - |
| 7. Safoora Goth. | - |

Distribution of vehicle for lifting / Transportation of Solid Waste With in Three Zones

| | | | |
|-----------------|-----------------------|----------|---------|
| Zone-I | UC-1 to UC-4 | Loader | 01 Nos. |
| | | Bobcat | 01 Nos. |
| | | Vehicles | 10 Nos. |
| Zone-II | UC-5 to UC-9 | Loader | 01 Nos |
| | | Vehicles | 06 Nos. |
| Zone-III | UC-10 to UC-13 | Bobcat | 01 Nos. |
| | | Vehicles | 03 Nos. |

Landfill Sites.

The near by landfill site is at Jamchakroo which is almost 23 KM distant from the Town, and as trip (up & down) it is 46 KM, to this distance, Town vehicles could make only 3 trips a day for lifting transporting and disposal of Solid Waste, these less No. of trip causes an increased back log of garbage. At present to take maximum output through available resources, a Temporary Transfer Station has been established at Scheme-33, even then 80 Tons of Garbage remains un lifted in various Union Council of Town..

Anti Pye-dog Campaign:

The Town comprises of 13 Union Councils and is scattered to an area of 65 Sq KM including Katchi Abadies and Goths, there are thousands strany dogs wandering all around. Dog Barking during nights hours and biting cases are increasing. To some public from dog biting Anti pye-dog campaign was being programmed to be carried out after every three months or so, but the methodology adopted to get rid of such dogs is too old, conventional and time consuming that as many dogs so killed, the some new grow up and emerged out during the period involved, therefore quick and modern techniques needed to be adopted through, some long distance fainting / shooting techniques similar to that used in Animal catching which requires the following equipments.

| | |
|-------------------------------|---------|
| Vehicle with Cage | 01 Nos. |
| Fainting / Shooting apparatus | 01 Nos. |
| Driver, Inspectors, Labour | 04 Nos. |

Solid Waste Lifting / Transporting
Machinery Required:

For proper quick and daily collection transportation and disposal of Solid Waste, road side debries following additional machinery is required.

| | | | |
|------------------------|------------|--------|---|
| Wheel Loader | Heavy Duty | 02 Nos | (Bucket capacity nearly to 2.6 Cubic Meter) |
| Wheel Excavator | Heavy Duty | 01 Nos | (Bucket capacity nearly to 2.0 Cubic Meter) |
| Long Vehicles | | 03 Nos | Prime mover with three axle trailer with container capacity of more that 40 Tons and of side tilting type to ease the disposal. |

The requirement can be met with the help and funding of Sindh Devolved Social Services Programme (Programme Support Unit) and Gulshan-e-Iqbal Town.

Questionnaire on SOLID WASTE:

| | Question | Answer | | | |
|----|---|--|--|----------------|-----------------|
| | | Year | Contingencies (Petrol, Diesel and Others) | Salary | Gross |
| 1. | <i>Annual allocations for SWM during last three Years.</i> | 2000-2001 | Rs.3,80,75,000 | | |
| | | 2001-2002 | Rs.4,31,05,000 | | |
| | | 2002-2003 | Rs.3,85,20,000 | Rs.5,36,14,000 | Rs.9,21,34,000 |
| | | 2003-2004 | Rs.4,12,80,000 | Rs.6,97,50,000 | Rs.11,10,30,000 |
| | | 2004-2005 | | | |
| 2. | <i>List of Existing and Proposed Solid Waste Project.</i> | <p>As for Solid Waste Management is concerned, TMA is managing the Solid Waste interms of its collection lifting, transportation and disposal to Transfer Station and there after to Landfill site without sorting, treating or otherwise its further utilization or recycling or energy production or so, the solid waste is simply disposed off to landfill site.</p> <p>It is proposed that transporting of solid waste and its disposal be managed from Transfer Station to Land Fill Site through Long Vehicles having container capacity of at least 40 Tons (uncompleted) this proposal will need 3 Nos. long vehicle of Prime Mover type with the facility of side tilting to ease disposal and 2 Nos Heavy Duty Loader for loading.</p> | | | |
| 3. | <i>What is the current made of Solid Waste Disposal (only Dumped, burned, Solid Recycled)</i> | Only Dumping. | | | |
| 4. | <i>Size and Location of Final Disposal site and since when it is operated</i> | Land Fill Site Jam Chakroo 23 KM far from the Town and scattered in acres, the Land Fill site is operated since 1970. | | | |
| 5. | <i>How many people are employees in SWM along with their Qualification.</i> | List attached. | | | |
| 6. | <i>List of Equipment currently under use.</i> | List attached. | | | |
| 7. | <i>Whether any incinerator is available and in use</i> | <p>No.</p> <p>City District Govt. Karachi on certain charges utilizing the facility of private incinerator where in Hospital waste of few Hospital of the town is disposed off.</p> | | | |

| | | |
|-----|---|---|
| 8. | <i>Quantity of Garbage generated daily / monthly or on annual basis.</i> | Current generation of Solid Waste is 250 to 300 tons per day and it is expected that the quantity of Solid Waste shall be increased to a tune of 400 tons in future, this increase in generation is expected due to increasing trend of population due to migration of peoples to this Town in addition to usual population growth rate. |
| 9. | <i>Are there any statistics available on house hold, medical, industrial and hazardous waste.</i> | Not available. |
| 10. | <i>Do you have any Mohalla committees to monitor waste collection.</i> | A committee of elected representative of the Town as third party monitoring is present and monitoring the waste collection; where as Trackers are installed in TMA vehicles to monitor, the vehicles so that solid waste be dumped at Transfer Station / Landfill Site and not on the road side, this has also helped in monitoring the required trips of vehicles per day and Diesel Consumption |
| 11 | <i>Do you have any CBO(s) which has / have made contribution in the improvement of this sector. If so please name and provide details along with their made of financing.</i> | Nil. |
| 12. | <i>Major component of Solid Waste (Organic, Inorganic etc)</i> | Organic Inorganic solids are usually sold out at the door steps. |

At present sweeping which is apart of SWM is being done manually, however it is programmed that, mechanical sweepers be introduced for sweeping work in addition to manual sweeping.

Deputy Town Officer (Sanitation)
Gulshan-e-Iqbal Town.

**Town Officer (IS&S)
Gulshan-e-Iqbal Town.**

**Town Municipal Officer
Gulshan-e-Iqbal Town.**

**Town Nazim,
Gulshan-e-Iqbal Town.**

LIST OF EQUIPMENT CURRENTLY UNDER USE.

(A) GARBAGE CARRIERS.

Transporting Machinery.

| | | |
|------------------|----------------|---------|
| a) Arm Roll. | | |
| ▪ Volvo | 07 Nos | |
| ▪ Hino | <u>04 Nos.</u> | |
| | Total | 11 Nos. |
| b) Dumpers | | |
| ▪ Hino | 01 Nos. | |
| ▪ Isuzu | 01 Nos. | |
| ▪ Nissan | <u>01 Nos.</u> | |
| | Total | 03 Nos. |
| c) Multi Loader. | | |
| ▪ Hino | 01 Nos. | |
| d) Refuse Van | 01 Nos. | |
| e) Compactor | | |
| ▪ Volvo | 02 Nos | |
| ▪ Hino | <u>01 Nos.</u> | |
| | Total | 03 Nos. |

Total Transporting Machinery 19 Nos.

(B) GARBAGE LOADERS.

Loading Machinery.

| | | |
|----------|----------------|---------|
| ▪ Loader | 02 Nos | |
| ▪ Bobcat | <u>02 Nos.</u> | |
| | Total | 04 Nos. |

Total Loading Machinery 04 Nos.

Grand Total 23 Nos.

People Employed in SWM with Sanitary Staff and their Qualification

| Designation | Numbers | Grade | Qualification |
|--|----------------|--------------|--|
| Deputy Town Officer Sanitation (Sweeping and SWM). | 01 | 17 | B. A. (Diploma Associate Engineering) |
| Chief Sanitary Inspector. | 01 | 16 | Metric with Diploma in Sanitary Inspector |
| Motor Vehicle Incharge. | 01 | 14 | Metric with Diploma in Auto Mobile |
| Inspector. | 03 | 14 | Metric with Diploma in Sanitary Inspectors |
| Sub Inspector. | 13 | 11 | Metric |
| Mucaddam. | | 03 | Seniority cum Fitness Basis |
| Sanitary Workers. | 694 | 01 | Seniority cum Fitness Basis |
| Motor Cooly | 26 | 01 | Seniority cum Fitness Basis |
| Drivers | 31 | 05 | Driving License (HTV) |

Sweeping work for Union Council 3, 6, and 9 has been privatized totally where as in other ten Union Councils of the Town TMA is being managed sweeping utilized with available manpower and meaning as stated above.