

PROFORMA FOR SUBMITTING INFORMATION ON SOLID WASTE MANAGEMENT

Name of City/Town:	Panvel	District:	Raigad
Name of Municipal Body:	Panvel Municipal Council	Division:	Konkan
Address:	Panvel 410206	State:	Maharashtra
Telephone:	7458040,41,42	Fax:	7462881
Email:		Website:	
<ul style="list-style-type: none"> DEMOGRAPHY 			
.1	Name of Officer In-Charge	Sanitary inspector	
.2	Area of Municipal Corporation /Council (Please provide map showing legal limits of municipal body) (km ²)	Total municipal Area- 12.17 sq km. Panvel Municipal council gives service to 3.63 sq km area. Area control by CIDCO 8.54 sq km.	
.3	No. of wards / zones	12 election wards	
.4	Total population (as per 1991 census)	58,986 (whole area 12.17sq km)	
.5	Total population (as per 2001 census)	1,04,031 residing in Panvel municipal area – 65,812 Residing in CIDCO area – 38,229	
.6	Population		
	<ul style="list-style-type: none"> Urban Slums & urban poor 	7541	
.1	Floating population	40,000	
.2	Total no. of household	20,938 13,289 in Panvel municipal area & 7649 in CIDCO	
.3	Average maximum temperature (°C)	-	
.4	Average minimum temperature (°C)	-	
.5	Average yearly maximum rainfall (mm)	-	
.6	Average maximum humidity	-	
.7	Average minimum humidity	-	
.8	Average depth of water table	-	
.9	Altitude (<i>i.e.</i> mean sea level)	-	

- **GENERATION OF MUNICIPAL SOLID WASTE**

.1	Total MSW generation (MT/day)	18
.2	MSW generation (gms/capita/day) per person	270
.3	Of the total MSW generated	
	• Quantity of domestic MSW (MT/day)	13
	• Quantity of commercial MSW (MT/day)	2
	• Quantity of industrial (non-toxic and non-hazardous) waste (MT/day)	Nil
	• Quantity of waste from markets (MT/day)	2
	• Quantity of waste from hotels and restaurants (MT/day)	1

- .1 Composition of MSW (Attach separate sheet)

• Physical characteristics	Analysis has not been carried out
○ Biodegradable (%)	-
○ Paper (%)	-
○ Plastic (%)	-
○ Glass (%)	-
○ Metal (%)	-
○ Inert, ash, debris (%)	-
○ Rags (%)	-
○ Stone (%)	-
○ Rubber / Tyre (%)	-
○ Coconut shell (%)	-
• Chemical characteristics	Analysis has not been carried out
○ Carbon (%)	-
○ Nitrogen (%)	-
○ Phosphorous as P ₂ O ₅ (%)	-
○ Potassium as K ₂ O (%)	-
○ C/N ratio	-
○ Calorific value (kCal/kg)	-
○ Density of MSW (kg/m ³)	-
○ Moisture content (%)	-

- **SWEEPING**

.1	Total length of roads (with or without footpath) (km)	
	• Total length of cement-concrete roads (km)	1500 km, width 12.5 mtr
	• Total length of asphalted roads (km)	39.627 km, width 10 mtr
	• Total length of Kutchha roads (km)	4.428 km, with 3 mtr
.1	Total no. of sweepers employed	67
	• Departmental	-
	• Contracted	-
.1	Working hours of sweepers	-
.2	Norms of sweeping (e.g. one sweeper per ... population, or one sweeper per ... sq. m. area, or one sweeper per ... RMT road)	650 RMT for road sweeping
.3	Sweeping carried out at a location by	-
.4	Sweeping waste is put in a...	-
.5	Frequency of sweeping	Six day in a week
.6	Total no. of wheel barrows provided	-
.7	Total no. of containerised handcarts provided	15 handcarts
.8	Total capacity of wheel barrow (kg)	-
.9	No. of containers and its capacity in kg	-
.10	Type of broom provided	67 long handle brooms, Tin Ghamela
.11	Any other equipment provided (e.g. spade, shovel, tikow)	-
.12	Protective gear provided (e.g. leather hand gloves, gumboots, mask)	-
	• COLLECTION, STORAGE AND TRANSPORTATION	
.1	Area covered for collection of MSW	3.63 sq km
.2	No. of households covered	13,289
.3	No. of households covered under door-to-door collection (bell ringing)	1.50 sq km
.4	Is the collection carried out by municipal authority or private contractor or NGO?	House to house collection done departmentally collection from bins by private agency
.5	Is the segregation is carried out at source?	No
	If no, what steps have been taken?	Segregation of waste & the waste is collected in mixed form
.6	Total quantity collected (MT/day)	14

.7	MSW collected in mixed form (MT/day)	-
.8	MSW collected in segregated form (MT/day)	-
.9	Whether littering is prohibited by the municipality?	-
.10	Whether litterbins are provided?	-
.11	Frequency of waste collection	Six day in a week
.12	Is waste collected every day <i>i.e.</i> 7 days a week and 365 days a year?	-
	If no, give details	-
.13	Total number, type, size, and capacity of storage bins / container / trailers provided	-
.14	Whether the bins are open or closed?	-
.15	Whether all bins are attended/cleaned daily? <i>(i.e.</i> 7 days a week and 365 days a year)	-
	If no, mention details	-
.16	Whether the lifting of waste from the bins is manual or mechanical?	Manual

.17 Vehicle details					
Dumper placer (with 4.5 m ³ / 8 m ³ containers)					
Open truck					
Open truck with tipping					
Tractor-trailer without tipping					
Auto rickshaw with or without tipping					
Tricycle with or without tipping					
Any other type (please mention)					

.18 Collection details								
Type of vehicle	No. of vehicles used	No. of shifts	Capacity (MT)	No. of trips/ shift	Distance travelled / shift	Quantity of MSW carried / shift (MT)	Quantity of MSW carried out / day (MT)	No. of workers / vehicle
Compactor (mobile)	-	-	-	-	-	-	-	-
Dumper placer (with 2.5 m ³ containers)	-	-	-	-	-	-	-	-
Dumper placer (with 4.5 m ³ / 7 m ³ containers)	-	-	-	-	-	-	-	-
Open truck	4	-	2.5	1	2	-	10	-
Open truck with tipping	2	-	1.5	1x2+1	2	-	4	-
Tractor-trailer with tipping	-	-	-	-	-	-	-	-
Tractor-trailer without tipping	-	-	-	-	-	-	-	-
Auto rickshaw with/ without tipping	-	-	-	-	-	-	-	-
Tricycle with/without tipping	-	-	-	-	-	-	-	-
Any other type	-	-	-	-	-	-	-	-
Total								
.19	If the vehicles are open to atmosphere, are they covered with temporary plastic sheet?			Yes/No				
• COLLECTION SYSTEM								
.1	Approximate MSW collected (MT)			18				
	o Household (urban)			9.6				

	o Slums	0.5
	o Street sweeping	0.8
	o Shops & commercial establishments	0.7
	o Markets	2.0
	o Hotels, restaurants, eating housesGardens, parks, fairs	0.5 ----
	o Slaughter houses	-----
	o Building sites (debris, earth, etc.)	0.50
.2	No. of premises / establishments	
	o Households	-
	o Shops, commercial establishments	-
	o Slums, households, population	-
	o Vegetable and fruit markets	-
	o Fish and meat markets	-
	o Hawkers	-
.3	No. of hotels, restaurants, eating houses	-
	o Grade / class I	-
	o Grade / class II	-
	o Grade / class III	-
	o No. of star hotels	-
.4	Guesthouses	-
.5	Marriage halls	-
.6	Hostels	-
.7	Cinema halls	-
.8	Theatres	-
.9	Stables and no. of animals	-
.10	Hospitals/ clinics/ nursing homes Total no. of beds	-
.11	Parks, gardens, recreation places like lakes, amusement parks	-
.12	Building sites (under construction)	-
.13	Slaughter houses	-

- **PROCESSING AND DISPOSAL OF MSW**
- .1 Total quantity of MSW processed (MT/day) -
- .2 Technology / technologies adopted -
 - Composting (MT/day) Project in progress
 - Vermiculture (MT/day) -
 - Pelletisation (MT/day) -
 - Waste to energy (MT/day) -
- .3 Composting -
 - Compost produced (MT/year) -
 - Is it done mechanically? -
 - Is it the compost sold? -
 - If yes, the quantity sold (MT/year) -
 - Total revenue generated (Rupees/year) -
- .1 Vermi-composting -
 - Vermi-compost produced (MT/day) -
 - Is the vermi-compost sold? -
 - If yes, the quantity sold (MT/year) -
 - Total revenue generated (Rupees/year) -
- .1 Pelletisation -
 - Pellets produced (MT/day) -
 - Are the pellets sold? -
 - If yes, the quantity sold (MT/year) -
 - Total revenue generated (Rupees/year) -
- .1 Waste to energy -
 - Energy produced (MW/MT/day) -
 - Incineration -
 - Pyrolysis -
 - Bio-methanation -
 - Any other (Please mention) -
 - Revenue generated (Rupees/year) -
- .1 Dumping grounds/landfill sites -

• MSW disposed off by open dumping (MT/day) [mixed/inert]	Entire waste
• MSW disposed off by controlled dumping (MT/day) [mixed/inert]	-
• MSW disposed off by sanitary landfill (MT/day) [mixed/inert]	-
• No. of dumping grounds/ landfill sites	One
Whether municipality legally owns them?	-
• Area of each dumping ground/ landfill site	-
• Whether the area will be sufficient for next 25 years	waste can be dispose for next 5 years
• If no, then what steps have been taken to acquire land?	-
• Distance (in km) of dumping ground / landfill site from ...	1.75 Acre ,
○ Habitation	-
○ Drinking water source	-
○ Religious or monument places	-
• Distance from airport or airbase	-
• Has it been designed scientifically	-
• Has the existing dumping ground been upgraded as required by MSW Rules, 2000	-
If no, what steps have been taken (provide details)	-
.1 Whether the following facilities are provided	-
• Weighbridge	No
• Fencing	No
• Approach roads/ internal roads	-
• Lighting facility	No
• Site office with monitoring equipment	-
• Managerial staff and manpower	Nil
• Covering material used daily as per Rules 2000	Covering material is used periodically. It is adequately available
Is it available in sufficient quantity?	-

•	Gas venting arrangement	No
•	Leachate collection system	Provision not made
•	INSTITUTIONAL ARRANGEMENTS	
.1	SWM services provided in the city/town by	Health Department
.2	Total no. of Supervisory Staff provided (e.g. Health officer/ Assistant Health officer/ Chief Sanitary Inspector/ sanitary Inspector/ Sanitary Supervisors, etc.)	4
.3	Total no. of sweepers/ Pourakarmikas/ labourers/ Mukadam/ Jathedars/ Daffedars, etc.	67
.4	Organisational structure	Chief officer – sanitary Inspector – Supervisory staff – subordinate staff
•	PRIVATISATION	
.1	Whether any of the following service is privatised?	
•	Sweeping	No
•	Door-to-door collection	No
•	Community collection	-
•	Transportation	No
•	Processing of MAW	Work under progress for treatment of 5MT of waste using vermiculture biotechnology
•	Sanitary landfilling	
	If yes, provide details	-
	If no, whether any future plans for privatisation	Plan to privatise total solid waste treatment using vermiculture biotechnology
•	Details of NGO/ CBO/ Residential groups involved in any schemes/ projects initiated by municipal body in SWM/ clean city program	No
•	COST IMPLICATIONS IN SWM	
.1	Expenditure (in Rupees/Year)	

	• Total cost of SWM services under various heads	
	• Establishment including salaries, uniforms, <i>etc</i>	45,87,194
	• Tools, equipment, and consumables including disinfectant	72,643
	• Operation and maintenance of garbage vehicles including fuel, oil, spare parts, tyres, batteries, <i>etc</i>	63,602
	• Hiring charges for contractors' vehicle & machinery, bulldozers, JCBs, <i>etc</i>	18,64,392
	• Other miscellaneous expenses	2,62,660
.1	The above total cost in terms of following activities (Rupees/Year)	
	• Sweeping cost	45,82,918
	• Collection cost	2,14,602
	• Transportation cost	-
	• Processing cost	-
	• Disposal / sanitary landfill cost	1,21,342
.1	Cost recovery	
	• Tipping fee or trade refuse charges (Rupees/Year)	-
	• Revenue generation (by sale of compost, vermi-compost, energy/ gas, <i>etc.</i> (Rupees/Year)	-
	• Annual expenditure for SWM services	68.50 lacs
	Cost of SWM services in Rupees per capita per year	104.10
	Cost of SWM services in Rupees per tonne of MSW	1902.85
	• OTHER FACILITIES	
.1	What facilities are provided for the following?	-

• Biomedical waste	Hospital Medical Waste: there are 190 private hospitals and clinics. At present there is no separate system for managing Bio – medical waste
• Diary related activities	Nil
• Slaughter house and unauthorised slaughtering	Nil
• Construction, demolition, debris and silt	Collected separately and disposed for land reclamation sites
• Encroachments on footpaths, in parks	-
• How many slums have been identified and whether there are provided with sanitation facilities?	-
• Is there any enforcement wing for taking renal actions?	-
Recovery of administrative charges	-
Fines under Municipal/Police Act	-
Recourse to Municipal Act bye-laws	-
• Whether any cases are registered and settled during last three years?	-
No. of cases registered during last three years	-
No. of cases settled during last three years	-
Total recovery during last three years	-
• SPECIAL/ UNIQUE SCHEMES OR INITIATIVES¹	
.1 Recycling schemes for plastic, PET bottles	-
.2 Encouraging community activity such as ALM ² formation	-
.3 Encouraging people's participation by building-wise or building complex-wise waste segregation and processing of organic waste by vermi-composting or composting	-
.4 Training needs for sanitary workers on health and safety issue	-
.5 Development of tools and implements	-
.6 Please provide list of potential NGO for implementing any of the initiatives (any	-

¹ Details of schemes can be provided on a separate sheet

² Advance Locality Management

association registered with municipal body/
unregistered local area management)

- **AWARENESS**

- .1 Are you aware of the various notifications of the Ministry of Environment and Forests, Government of India -
- Municipal Solid Waste (Management and Handling) Rules, 2000 -
- Recycled Plastics Manufacture and Usage Rules, 1999 -
- Biomedical Waste (Management and Handling) Rules, 1998 -
- Coastal Regulatory Zones Rules, 1991 (amended up to 2002) -

Place: Mumbai

Date: 24-01-05

Signature of the Municipal Commissioner /
The Health Officer/ The Chief Engineer (SWM)

Stamp

Note: Please provide small note on the geographical and historical background of the city, tourist places, monuments, pilgrimage places, main industrial areas, industries, GNP, GDP, Airport, Airbase, main events and main people of national and international importance, *etc.*