

PROFORMA FOR SUBMITTING INFORMATION ON SOLID WASTE MANAGEMENT

Name of City/Town	: Bhadreswar	District:	Hoogly		
Name of Municipal Body:	: Bhadreswar	Division:			
Address:	: 35, G.T. Road, P.O.Bhadreswar, Hoogly.	State:	West Bengal		
Telephone:	: 2633-5283	Fax:	2633-1020		
Email:		Website:			
<ul style="list-style-type: none"> <li><b>DEMOGRAPHY</b></li> </ul>					
.1	Name of Officer In-Charge	:	Swapan Kumar Nath, Sanitary Inspector.		
.2	Area of Municipal Corporation /Council (Please provide map showing legal limits of municipal body) (km <sup>2</sup> )	:			
.3	No. of wards / zones				
.4	Population as per 2001 census	:	1,05,944		
	<ul style="list-style-type: none"> <li>Urban</li> <li>Slums</li> </ul>				
.1	Floating population				
<ul style="list-style-type: none"> <li><b>GENERATION OF MUNICIPAL SOLID WASTE</b></li> </ul>					
.1	MSW generation (gms/capita/day) per person	:			
.2	Total MSW generation (MT/day)	:	22.26 MT/day		
.3	Of the total MSW generated MT/day	:			
	<ul style="list-style-type: none"> <li>Sources: domestic, commercial MSW, industrial, markets, hotels and restaurants waste (MT/day)</li> </ul>				
.1	Composition of MSW				
	<ul style="list-style-type: none"> <li>Physical characteristics</li> </ul>				
	Biodegradable (%)	Paper (%)	Plastic (%)	Glass (%)	Metal (%)
	Inert, ash, debris (%)	Rags (%)	Stone (%)	Rubber/Tyre (%)	Coconut shell (%)
	<ul style="list-style-type: none"> <li>Chemical characteristics</li> </ul>				
	Carbon (%)	Nitrogen (%)	Phosphorous as P <sub>2</sub> O <sub>5</sub> (%)	Potassium as K <sub>2</sub> O (%)	
	C/N ratio	Calorific value (kCal/kg)	Density of MSW (kg/m <sup>3</sup> )	Moisture content (%)	
<ul style="list-style-type: none"> <li><b>SWEEPING</b></li> </ul>					
.1	Area: (Total length with or without footpath) in various types of road (km)				
	Cement-concrete roads (km)	Asphalted roads (km)	Kutchha roads (km)		

.2	Total no. of sweepers employed	Departmental	Contracted
.3	Working hours of sweepers		
.4	Norms of sweeping		
	one sweeper per ... population / one sweeper per ... sq. m. area / one sweeper per ... RMT road		
.5	Sweeping carried out at a location by		
.6	Sweeping waste is put in a...		
.7	Frequency of sweeping		
.8	Total no. of wheel barrows, containerised handcarts provided		
.9	Total capacity of wheel barrow, containers (kg)		
.10	Type of broom provided		
.11	Any other equipment provided (e.g. spade, shovel, tikow)		
.12	Protective gear provided (e.g. leather hand gloves, gumboots, mask)		
	<b>• COLLECTION, STORAGE AND TRANSPORTATION</b>		
.1	Area covered for collection of MSW	: 60 % of Total Area	
.2	No. of households covered	: 5600 nos.	
.3	No. of households covered under door-to-door collection (bell ringing)		
.4	Is the collection carried out by municipal authority or private contractor or NGO?	: by Municipality	
.5	Is the segregation is carried out at source? If no, what steps have been taken?		
.6	Total quantity collected (MT/day)	: 22.26 MT/day	
.7	MSW collected in mixed, segregated form (MT/day)		
.8	Whether littering is prohibited by the municipality?		
.9	Whether litterbins are provided?		
.10	Frequency of waste collection		
.11	Is waste collected every day <i>i.e.</i> 7 days a week and 365 days a year? If no, give details		
.12	Total number, type, size, and capacity of storage bins / container / trailers provided	: Plastic bins- 25 litres capacity Tricycle Van (Rectangular)- 4' x 2.5'X 1' - 60 nos Containers -4.5 m <sup>3</sup> , 14 nos	

.13 Whether the bins are open or closed?

.14 Whether all bins are attended/cleaned daily? : Thrice a week  
(i.e. 7 days a week and 365 days a year)  
If no, mention details

.15 Whether the lifting of waste from the bins is manual : Manual (from roadside and house to house collection) or mechanical?

.16 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 <sup>3</sup> containers)								
Dumper placer (with 4.5 m <sup>3</sup> / 7 m <sup>3</sup> containers)								
Open truck								
Open truck with tipping								
Tractor-trailer with/ without tipping	5							
Auto rickshaw with/ without tipping								
Tricycle with/without tipping	60							
Any other type	Covered container	5						
<b>Total</b>								

.17 If the vehicles are open to atmosphere, are they covered with temporary plastic sheet? Yes/No

• **COLLECTION SYSTEM**

.1	Approximate MSW collected (MT)	: 22.26 MT/day		
	Household (urban)	Slums	Street sweeping	Shops & commercial establishments
	Markets	Hotels	Restaurants	Eating houses
	Gardens	Parks	Fairs	Slaughter houses
	Building sites			
.2	No. of premises / establishments			
	Households	Shops	Commercial establishments	Slums
	Population	Vegetable and fruit markets	Fish and meat markets	Households
				Hawker
.3	No. of hotels, restaurants, eating houses			
	<ul style="list-style-type: none"> <li>• Grade / class I</li> <li>• Grade / class II</li> <li>• Grade / class III</li> <li>• No. of star hotels</li> </ul>			
.4	Guesthouses, Marriage halls, Hostels, Cinema halls, Theatres, Stables and no. of animals,			
.5	Hospitals/ clinics/ nursing homes Total no. of beds			
.6	Parks, gardens, recreation places like lakes, amusement parks, Building sites (under construction), Slaughter houses			
	<ul style="list-style-type: none"> <li>• <b>PROCESSING AND DISPOSAL OF MSW</b></li> </ul>			
.1	Total quantity of MSW processed (MT/day)	7 MT/day		
.2	Technology / technologies adopted			
	<ul style="list-style-type: none"> <li>• Composting (MT/day) : 4 MT/day</li> <li>• Vermiculture (MT/day) : 3 MT/day</li> <li>• Pelletisation (MT/day)</li> <li>• Waste to energy (MT/day)</li> </ul>			
.3	Composting			
	Compost produced (MT/year)			
	Is it done mechanically?			
	Is it the compost sold?			
	If yes, the quantity sold (MT/year)			
	<ul style="list-style-type: none"> <li>• Total revenue generated (Rupees/year)</li> </ul>			
.1	Vermi-composting			

	Vermi-compost produced (MT/day)
	Is the vermi-compost sold?
	If yes, the quantity sold (MT/year)
	<ul style="list-style-type: none"><li>• Total revenue generated (Rupees/year)</li></ul>
.1	Pelletisation
	Pellets produced (MT/day)
	Are the pellets sold?
	If yes, the quantity sold (MT/year)
	<ul style="list-style-type: none"><li>• Total revenue generated (Rupees/year)</li></ul>
.1	Waste to energy
	<ul style="list-style-type: none"><li>• Energy produced (MW/MT/day)</li></ul>
	Incineration, Pyrolysis, Bio-methanation, Any other (Please mention)
	<ul style="list-style-type: none"><li>• Revenue generated (Rupees/year)</li></ul>
.1	Dumping grounds/landfill sites
	<ul style="list-style-type: none"><li>• MSW disposed off by open dumping (MT/day) [mixed/inert]</li><li>• MSW disposed off by controlled dumping (MT/day) [mixed/inert]</li><li>• MSW disposed off by sanitary landfill (MT/day) [mixed/inert]</li><li>• No. of dumping grounds/ landfill sites : one</li></ul>
	Whether municipality legally owns them?
	<ul style="list-style-type: none"><li>• Area of each dumping ground/ landfill site : 6 acres</li><li>• Whether the area will be sufficient for next 25 years</li><li>• If no, then what steps have been taken to acquire land?</li><li>• Distance (in km) of dumping ground / landfill site from ...<ul style="list-style-type: none"><li>• Habitation</li><li>• Drinking water source</li><li>• Religious or monument places</li></ul></li></ul>

- 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, Fencing, Approach roads/ internal roads, Lighting facility, Site office with monitoring equipment, Managerial staff and manpower,
- Covering material used daily as per Rules 2000 : No  
Is it available in sufficient quantity?
- Gas venting arrangement : Not Available
- Leachate collection system : Provisions have been made

- **INSTITUTIONAL ARRANGEMENTS**

.1 SWM services provided in the city/town by

.2 Total no. of Supervisory Staff provided (e.g. Health officer/ Assistant Health officer/ Chief Sanitary Inspector/ sanitary Inspector/ Sanitary Supervisors, etc.)

.3 Total no. of sweepers/ Pourakarmikas/ labourers/ Mukadam/ Jathedars/ Daffedars, etc.

.4 Organisational structure

- **PRIVATISATION**

.1 Whether any of the following service is privatised?

Sweeping	Door-to-door collection	Community collection
Transportation	Processing of MSW	Sanitary landfilling

If yes, provide details

If no, whether any future plans for privatisation

- Details of NGO/ CBO/ Residential groups involved in any schemes/ projects initiated by municipal body in SWM/ clean city program

- **COST IMPLICATIONS IN SWM**

.1 Expenditure (in Rupees/Year)

- Total cost of SWM services under various heads

	<ul style="list-style-type: none"> <li>• Establishment including salaries, uniforms, etc</li> <li>• Tools, equipment, and consumables including disinfectant</li> <li>• Operation and maintenance of garbage vehicles including fuel, oil, spare parts, tyres, batteries, etc</li> <li>• Hiring charges for contractors' vehicle &amp; machinery, bulldozers, JCBs, etc</li> <li>• Other miscellaneous expenses</li> </ul>	
.1	<p>The above total cost in terms of following activities (Rupees/Year)</p>	
	<ul style="list-style-type: none"> <li>• Sweeping cost, Collection cost, Transportation cost, Processing cost, Disposal / sanitary landfill cost</li> </ul>	
.1	<p>Cost recovery</p>	
	<ul style="list-style-type: none"> <li>• Tipping fee or trade refuse charges (Rupees/Year)</li> </ul>	
	<ul style="list-style-type: none"> <li>• Revenue generation (by sale of compost, vermi-compost, energy/ gas, etc. (Rupees/Year)</li> </ul>	
	<ul style="list-style-type: none"> <li>• Annual expenditure for SWM services</li> </ul>	
	<p>Cost of SWM services in Rupees per capita per year</p>	
	<p>Cost of SWM services in Rupees per tonne of MSW</p>	
	<ul style="list-style-type: none"> <li>• <b>OTHER FACILITIES</b></li> </ul>	
.1	<p>What facilities are provided for the following?</p>	
	<ul style="list-style-type: none"> <li>• Biomedical waste, Diary related activities, Slaughter house and unauthorised slaughtering, Construction, demolition, debris and silt, Encroachments on footpaths, in parks</li> </ul>	<p>Biomedical wastes: burial in a pit. Diary related activities: Animal excreta is used for vermicomposting. Slaughter house : No Slaughter house, only licensed meat shop and the waste is used for composting by windrow method. Construction, demolition, debris and silt: For landfill and development of katcha path.</p>
	<ul style="list-style-type: none"> <li>• How many slums have been identified and whether there are provided with sanitation facilities?</li> </ul>	<p>: 6 and sanitation facilities are provided.</p>
	<ul style="list-style-type: none"> <li>• Is there any enforcement wing for taking renal actions?</li> </ul>	
	<p>Recovery of administrative charges</p>	

Fines under Municipal/Policy Act

Recourse to Municipal Act bye-laws

- Whether any cases are registered and settled during last three years?

No. of cases registered, settled during last three years

- **SPECIAL/ UNIQUE SCHEMES OR INITIATIVES<sup>1</sup>**

- .1 Recycling schemes for plastic, PET bottles
- .2 Encouraging community activity such as ALM<sup>2</sup> 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 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: Bhadreswar

Date: 27<sup>th</sup> July 2004

Signature of the Municipal Commissioner /

---

<sup>1</sup> Details of schemes can be provided on a separate sheet

<sup>2</sup> Advance Locality Management



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.*