

District Environment Plan



Prepared By



Environment Department, Government of Maharashtra



Maharashtra Pollution Control Board

Jalna

1.0 Preamble

Hon'ble National Green Tribunal vide order dated 26/09/2019 in O.A. No. 360 of 2018 filed by Shree Nath Sharma Vs Union of India and Others directed that CPCB shall facilitate the District Magistrates in preparation of District Environmental Plan by placing Model plan on its website. This model plan may be adopted as per local requirements by all Districts under supervision of District Magistrate.

The said Order also directs that Department of Environment in respective States / UTs should collect district plans to prepare State Environment Plan, which shall be monitored by respective Chief Secretaries of State/UT by 15/12/2019.

Based on State Environmental plans, CPCB and Ministry of Environment, Forest & Climate Change shall prepare National Environmental Plan, under the supervision of Secretary, MoEF&CC and Chairman, CPCB by 31/01/2020. The National Action Plan needs to be submitted before Hon'ble NGT 15/02/2020.

In compliance to above directions, CPCB has prepared a model District Environment Plan (DEP) that covers following thematic areas;

In compliance to above directions and as per the model DEP prepared by CPCB, Environment Action plan for Jalna District is prepared.

2.0 Introduction

Jalna district is one of the seventh districts of Aurangabad Administrative Region. Prior to the year 1981, Jalna was one of the tehsil of Aurangabad district. It has been formed as a separate district with effect from 1st May 1981 bifurcating it from Aurangabad district. The total population of Jalna is 4,34,737 as per Census 2011.

General Jalna district profile is presented in the **Table 1** and location is shown in **Figure 1**.

Table 1 Jalna District Profile

Description	Details
Average Climate	District Jalna within the Marathwada region has a semi-arid climate with average annual rainfall of 730 mm
Geographical Location	The range of geographical latitudes and longitudes of the district is from 19.01' N to 21.03'N and from 75.04'E to 76.04'E, with gently to moderately sloping topography. The Northern part of the district is occupied by the Ajanta and Satmala hill ranges.
Area	7,718 Sq. km.

Boundaries	The boundaries of Jalna district are adjacent to Parbhani & Buldhana on east, Aurangabad on west, Jalgaon on north and Beed on south.
Languages Spoken	Marathi, Hindi, English are major languages but all Indian languages are spoken
Population	Total; 434737 [According to 2011 Census Report]
Population Density	225 Per Sq. km.
Literacy Rate	81.24%
Rivers	The Godavari River flows along the southern boundary of the district, from west to east. The Purna River, one of the major tributaries of the Godavari, also flows through the district. The Dudhana, the principal tributary of the Purna, and the Kelana and the Girija, also tributaries of the Purna, as well as the Gulati and the Kundlika—which has been dammed to create the Ghanewadi Reservoir, which provides water to Jalna city—are other rivers draining the district.
ULBs	08 Numbers
Tahsils	Jalna Municipal Council, Partur Municipal Council, Ambad Municipal Council, Bhokardan Municipal Council. GHANSAWANGI, Badnapur, Jafrabad & Mantha
Pin code	431203

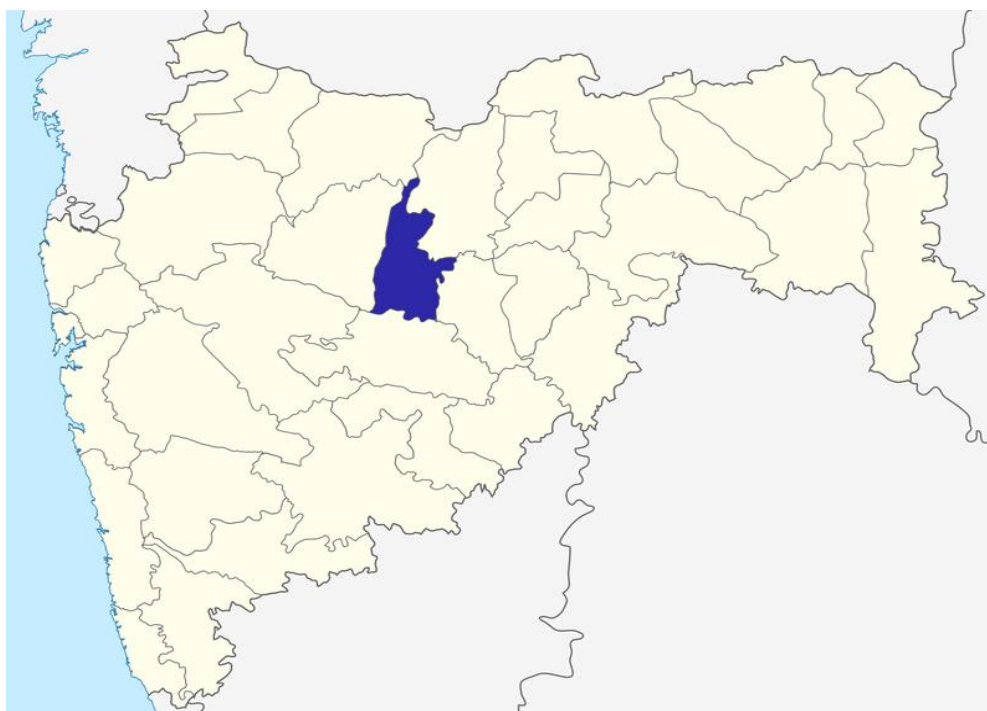


Figure 1 Location of Jalna District in Maharashtra State

Jalna district is an administrative district in the state of Maharashtra in western India. The district is divided into two sub-divisions, Jalna and Partur. The geographical area of Jalna district comprises of 2.53% of the area of Maharashtra State. A detail study of above mentioned thematic areas and action plan is presented in below section of report.

3.0 Waste Management Plan

Urban India is facing an ever increasing challenge of providing for the incremental infrastructural needs of a growing urban population. According to the 2011 census, the population of India was 1.21 billion; of this 31% live in cities. It is further projected that by 2050 half of India's population will live in cities. With this increasing population, management of Municipal Solid Waste (MSW) in the country has emerged as a severe problem not only because of the environmental and aesthetic concerns but also because of the sheer quantities generated every day.

Solid waste management is among the basic essential services provided by municipal authorities in the country to keep cities clean. There are 8 Urban Local Bodies [ULBs]. in Jalna district. **Table 2** represents the list of ULBs along with population. Following section gives insight about waste management of Jalna districts

Table 2 Jalna District Profile

Sr. No.	Urban Local Bodies	Population
1.	Jalna Municipal Council	285577
2.	Partur Municipal Council	35883
3.	Ambad Municipal Council	31553
4.	Bhokardan Municipal Council	24416
5.	Ghansawangi	7524
6.	Badnapur	11869
7.	Jafrabad	15910
8.	Mantha	22005

3.1 Solid Waste Management Plan

Jalna district is having total 8 ULBs. Municipal Solid Waste [Dry & Wet] generated from each ULBs is given in the **Figure 2** and details of Other Types of Waste is presented in **Figure 3** for easy representation. As per collected data, total solid waste generation of Jalna district is 141.6MTD wherein, Dry Waste generation is 34.21MTD and Wet waste is 87.21MTD. It seems that Wet waste comprises of approximately 75% of total waste generated of the district and Dry waste contributes 25%. Jalna Municipal Corporation stands on top with the highest quantity i.e. 111MTD out of which dry waste is 24.68MTD and wet waste is 71.38MTD. Ghansawangi and Jafrabad generate lowest quantity i.e. 2MTD each out dry-wet waste is 50%-50%. It is observed that quantity of solid waste generation is in line with the respective population of ULBs.

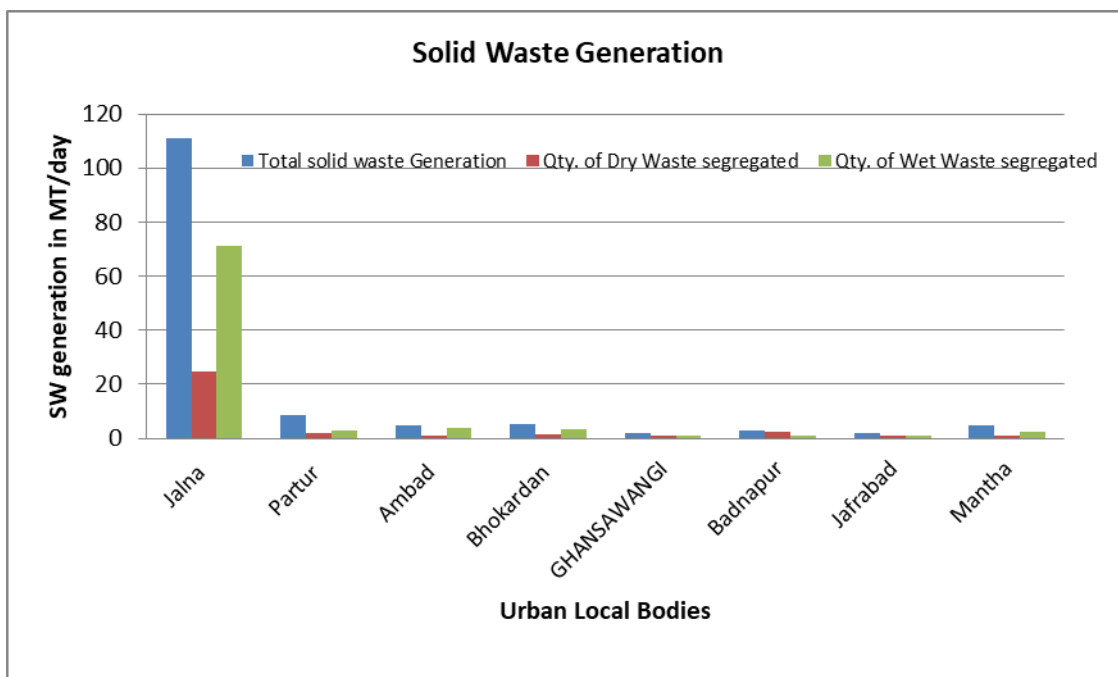


Figure 2 Total Solid Waste Generations

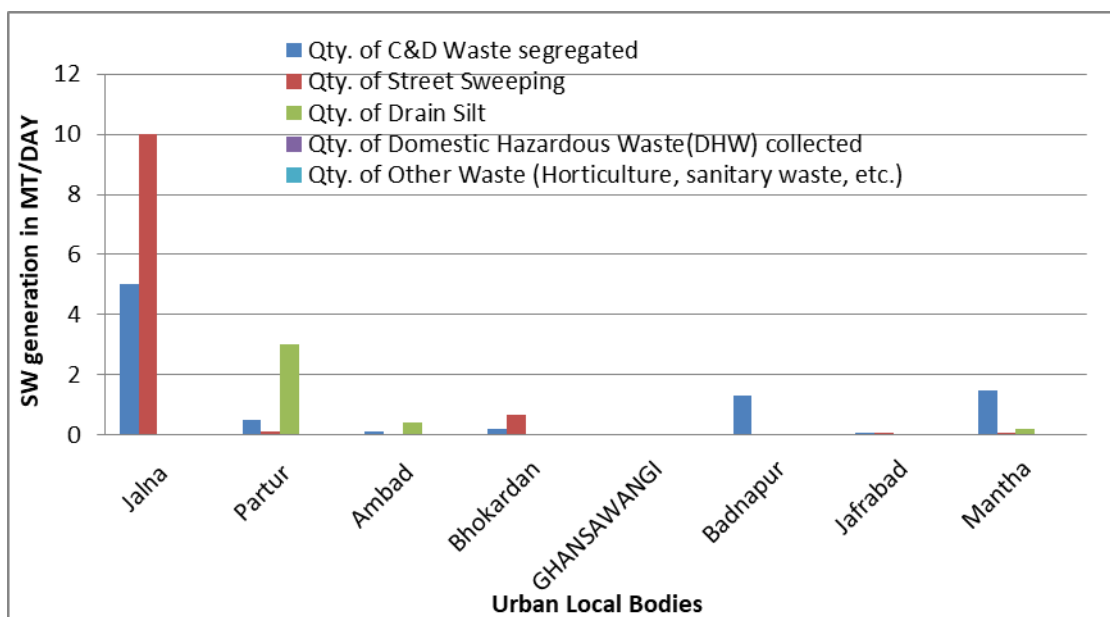


Figure 3 Other Waste Generation of Jalna District

Jalna district generates 11.05MTD of Street Sweeping Waste. Maximum quantity of Street Sweeping Waste is generated by Jalna Municipal Council with total quantity of 10MTD followed by Bhokardan Municipal Council with 0.67MTD and Badnapur stands lowest with 0.05MTD.

Total quantity of Drain Silt Waste generated is 3.64MTD. It seems that maximum quantity of Drain Silt Waste is generated by Partur Municipal Council with total quantity of 3MTD followed by Ambad Municipal Council with 0.4MTD. Badnapur stands lowest with 0.04MTD. However, it is observed that quantity of Drain Silt waste is not estimated for other ULBs.

Total DHW quantity generated is 0.131MTD. Maximum quantity of DHW is generated by Jalna Municipal Council with total quantity of 0.05MTD and Ghansawangi stands lowest with 0.001MTD.

Total Quantity of Horticulture, Sanitary and other waste is 0.01MTD generated by Partur Municipal Council alone. It is noted that no waste is generated from other ULBs. Data is not available for Jalna Municipal Council.

Jalna district is having total 10 bulk Waste Generator with the highest numbers in Jalna Municipal Council and total number of onsite facility provided for treatment of wet waste is 13. [Data seems mismatched as number of onsite facility is more than the number of generators].

Total Waste generation from Jalna district is 141.6MTD and almost all waste is being segregated.

3.1.1 Adequacy of Infrastructure

It seems that overall 100% door to door system is implemented in Jalna district. No ULBs has not initiated mechanical road sweeping. Almost 90% of waste is being transport through segregated waste transport system. Jalna district generates approximately 87.21MTD of wet waste and Out of which 50% is treated through composting. Out of 8 ULBs, 7ULBs is using Multi Re Use Facility to separate and prepare recyclable material whereas 1 ULB has not installed the facility. Out of 8 ULBs, only 1 ULB have provision of Sanitary Landfill.

3 ULBs have started reclamation of old dump site. Only 1 ULB have linkage with recycler whereas 6 ULBs have initiated the process. All ULBs have issued authorization to the waste pickers. For disposal of the generated solid waste there are only total 2 no's of old dump sites each one located within Jalna Municipal Council and Partur Municipal Council. Total quantity of waste stored in these dumpsites is 210MT of which 200MT is stored at Partur. The area of dumping site based on daily generation of district must be 47200Sq.km. Verification of area available at these dumping sites must be carried. Availability of infrastructure to handle the waste generated from the Jalna district is presented in Figure 4

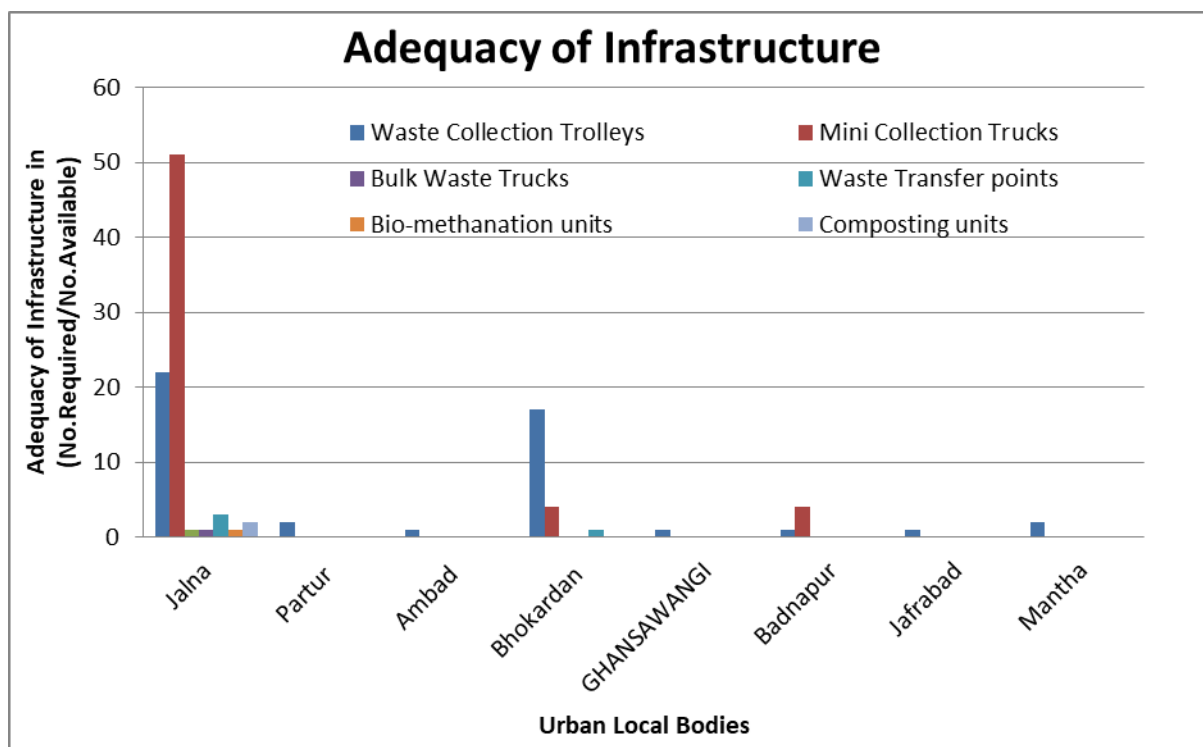


Figure 4 Adequacy of Infrastructure

It is observed that there are total 3 waste Transfer points in Jalna district with waste trolley of 47, Mini collection trucks 59 numbers and Bulk transport trucks 4. Total 2 number of Bio - Methanation units are in progress in the district. Composting units available to treat wet waste are 68.

ULB's have also initiated issuance of ID card of personnel's involved in management of solid waste. As per record, all ULBs, have implemented the Solid Waste Management Rules.

3.2 Plastic Waste Management

Plastics are integral part of society and have varied application. Jalna district generates total 8.053MT/Day of plastic waste. Jalna Municipal Council generates maximum quantity of plastic waste i.e. 5MT/Day from total generated in Jalna District. Generation details from all local bodies are presented in below **Figure. 5**

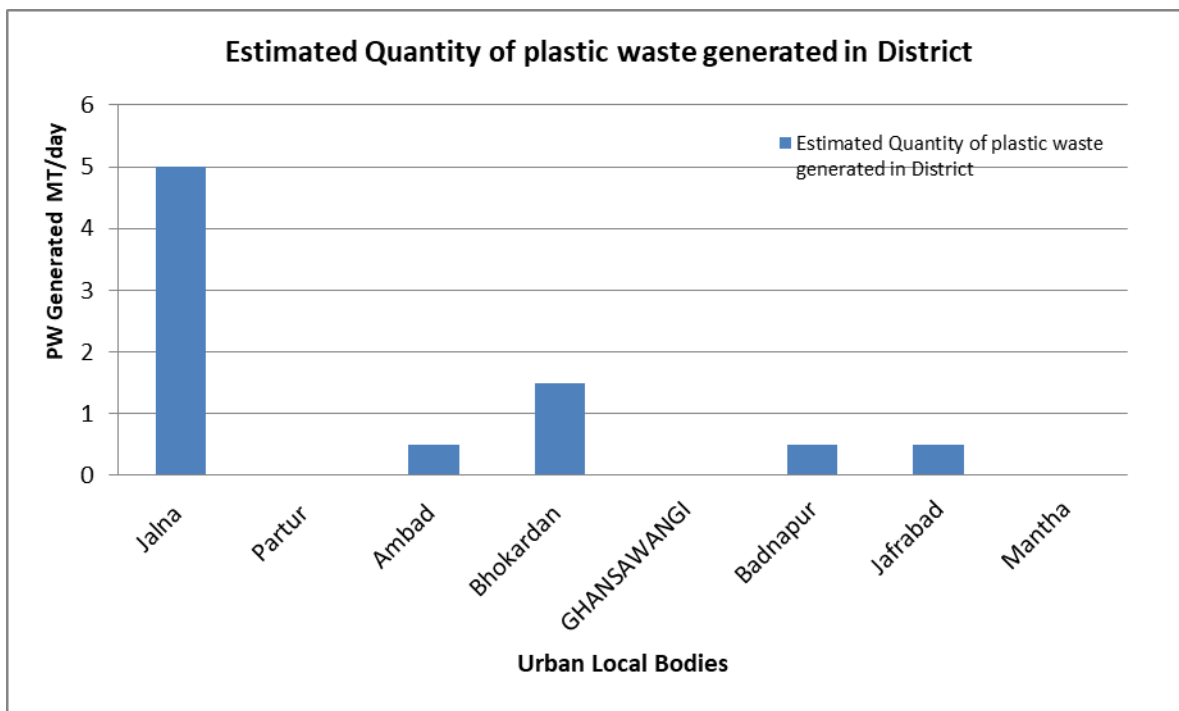


Figure 5 Plastic Waste Generations

It is noted that Ghansawangi generates minimum waste of 0.0089MT/Day. The waste generated is being 100% collected through Door to Door collection mechanism. Facilities for Material Recovery from Plastic is been used in all UBL's. Ambad Municipal Council as established linkage with NGO's for proper plastic waste management. Details of infrastructure available in district for collection of waste is presented in below **Figure 6**

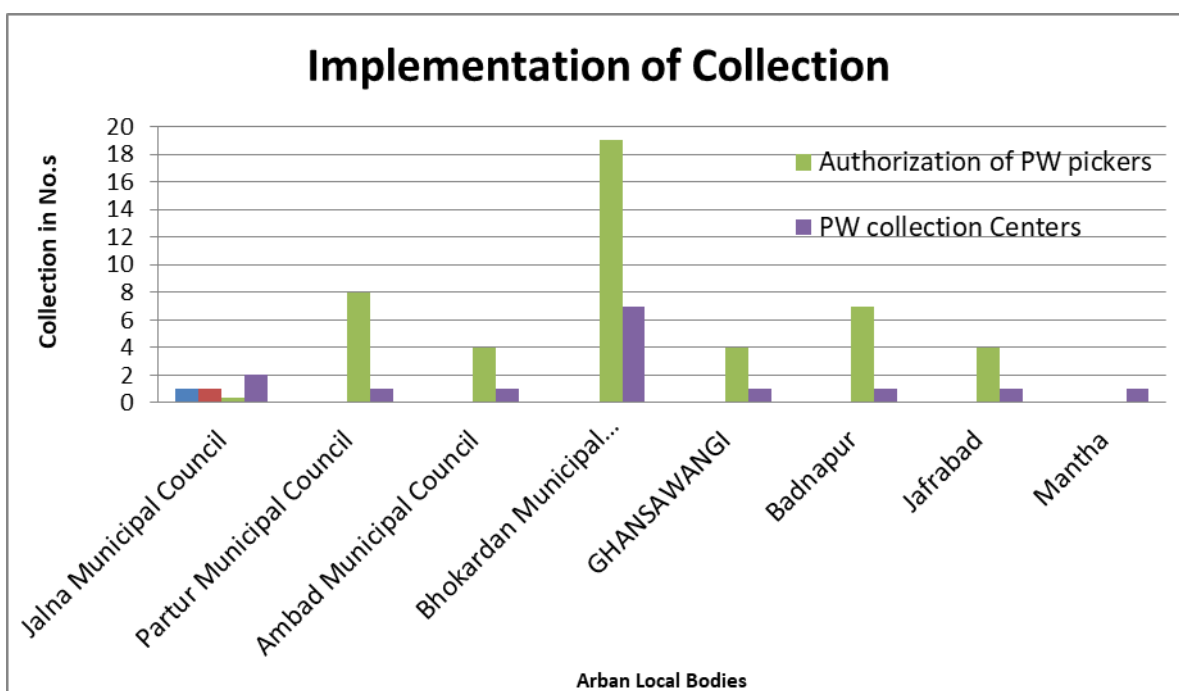


Figure 6 Implementation of Collection

Figure 1.4 summarizes that Total 15 no's of Plastic waste collection centre are established in Jalna district of which maximum number i.e. 7 no's are in Bhokardan Municipal Council. Maximum number of authorized pickers i.e. 19 no's are located in Bhokardan Municipal Council. It is observed that Mantha does not have any authorized pickers for collection of waste.

Total 7 no's of Plastic waste recyclers are located in Bhokardan Municipal Council. Jalna Municipal Council consists of one Pyrolysis oil plant for recovery of energy; same is represented in below **Figure 7**

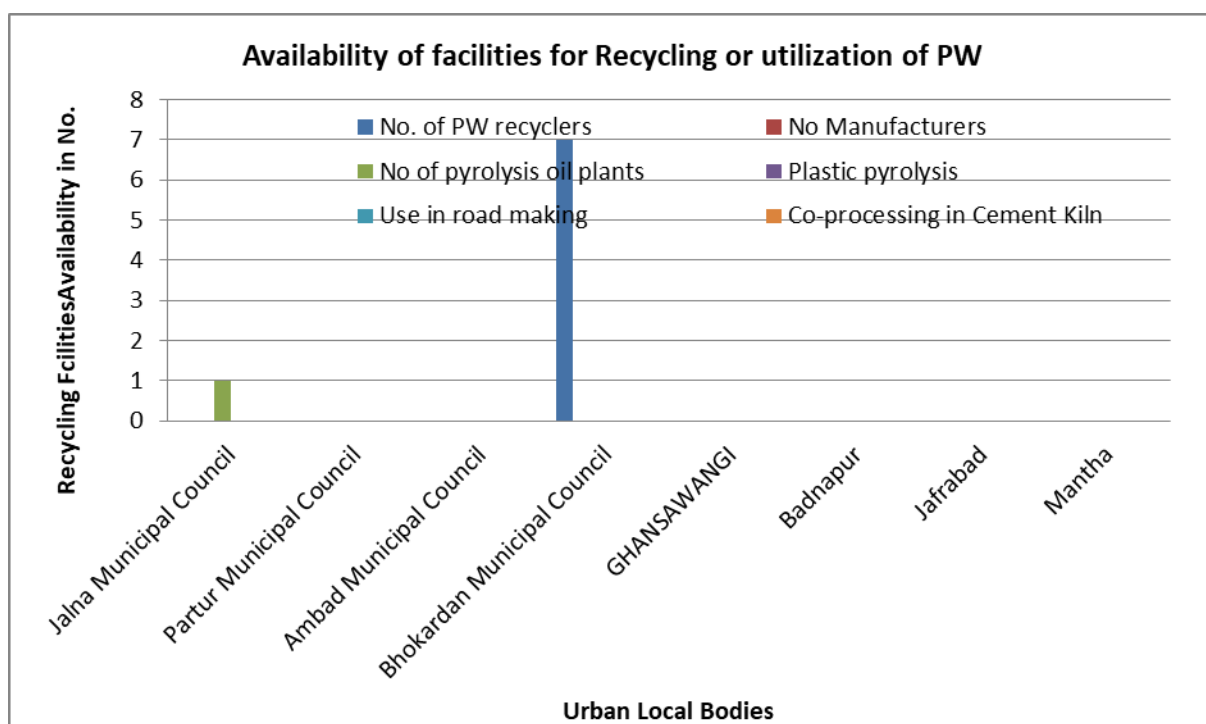


Figure 7 Facilities in Jalna District

All ULB's have prohibited the sale of carry bags < 50 micron and have banned Carry bags and other single use plastics as notified by State Government.

3.3 Construction and Demolition (C & D) waste Management

"Construction and Demolition waste" means the waste comprising of building materials, debris and rubble resulting from construction, re-modelling, repair and demolition of any civil structure. Total quantity of C & D Waste generated in Jalna district is 1825Kg/Day. Maximum C&D waste is generated from Partur Municipal Council an all other ULB's generates approx. 100Kg/Day except Mantha which generates 70Kg/Day. Out of total 8 ULBs 5 ULB's have initiated issuance of Permissions by ULBs. Almost 6 ULBs have established Deposition

points for collection of C & D Waste. It is observed that total 4 ULBs out of 8 have established recycling plants with total recycling capacity of 0.25MT/Day each.

3.4 Bio-medical Waste Management Plan

Biomedical waste (BMW) is any waste produced during the diagnosis, treatment, or immunization of human or animal research activities pertaining thereto or in the production or testing of biological or in health camps. BMW in Jalna is majorly generated from Hospital and Clinics only. Total number of bedded hospitals in Jalna is 287 of which 112 are in Jalna Municipal Council. Further, total 117 no. of non-bedded HCF are present in the district of which 61 are in Jalna Municipal Council only. Total 54 numbers of Clinics are there in district. It is observed that Mantha and Jafrabad have only 3 clinics each. There are total 27 Pathlabs in Jalna Municipal Council. Figure 8 below represent inventory of sources of BMW.

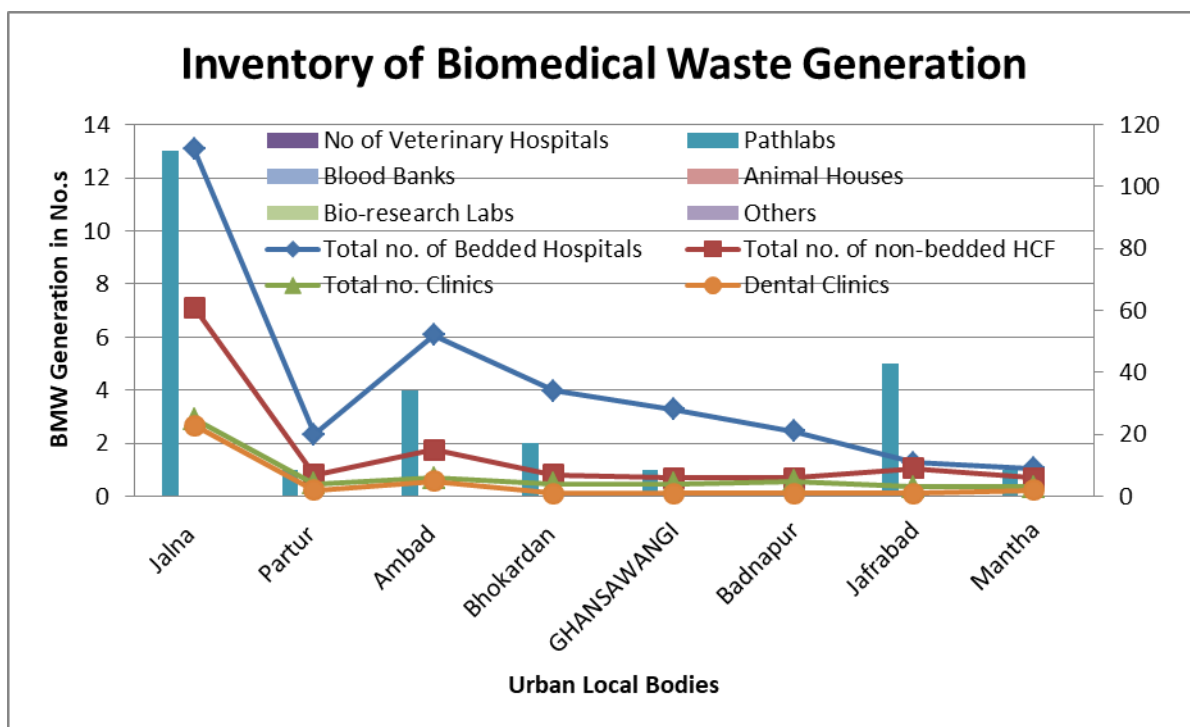


Figure 8 BMW Generation

Jalna consists of total 989 and 4 authorized bedded and non-bedded facilities respectively. It is observed that there is only 1 Common Biomedical Waste Treatment Facility with adequate capacity for disposal of BMW generated in the district. The CBMWTF have partly implemented the barcode tracking system to the special vehicles. The total quantity of BMW lifted daily by these facilities is 138Kg. It is observed that only 60% pre-segregation is done by the Healthcare facilities and only 80% of total facilities are associated with CBMWTF.

3.5 Hazardous Waste Management

Hazardous waste is waste that has substantial or potential threats to public health or the environment. Characteristic hazardous wastes are materials that are known or tested to exhibit one or more of the hazardous traits such as Ignitability, Reactivity, Corrosivity, Toxicity. It is observed that there are only 2 Industries generating Hazardous waste in Jalna. The total quantity of Hazardous waste generated from these Industries is 24.7MT/Annum. These Industries have also displayed Board of HW Generation in front of their main gate. It is observed that there is no TSDF within Jalna district and thereby sent to other districts within state.

3.6 E-Waste Management

Electronic waste or e-waste describes discarded electrical or electronic devices. Used electronics which are destined for refurbishment, reuse, resale, salvage recycling through material recovery, or disposal are also considered e-waste. However, in Jalna district it is observed that there are no unit generating E-waste and thereby the district has not provided and recycling or dismantling units for management of E-waste generated within Jalna district.

3.7 Action Plan

As per the above mentioned observation, it seems that almost all ULBs are handling solid waste generated as per the Municipal Solid waste Management Rules, however there are certain issues that needs to be addressed for 100% implementation of the rules as mentioned in **Table 3**

Table 3 Action Plan for Solid Waste Management

Sectors	Gaps	Action Points	Priority
Domestic Solid Waste			
Quantification	<ul style="list-style-type: none"> ▪ Methodology for solid waste quantification should be ascertained ▪ Quantification based on Income group, culture affluence and technology to be considered 	<ul style="list-style-type: none"> ▪ Mechanism for graded weighing system either through intermediate transfer station or at the common receiving station to be created. Usually one weigh bridge at any treatment / disposal location required ▪ Quadrature sampling methodology to be adopted in order to reduce quantity as well as quality 	Immediate
Collection System & Transport System	<ul style="list-style-type: none"> ▪ Some of the places, efficiency of the collection system is not up to the mark 	<ul style="list-style-type: none"> ▪ Ideally most proven method of SWM is 3 Tier System with door to door, community and transfer station approach ▪ 100% efficiency to be achieved ▪ Intermediate ▪ Approximately 27 Ghanta Gadi would be required 	Short to Mid Term

Sectors	Gaps	Action Points	Priority
Infrastructure	<ul style="list-style-type: none"> ▪ Mostly composting is the main treatment methodology with about 80% coverage ▪ MRF facility is also available but limited to few ▪ Sanitary landfill are limited to 2 ULBs ▪ 	<ul style="list-style-type: none"> ▪ Intermediate / Transfer station based decentralized waste treatment facility to be evaluated ▪ Additional 20% alternative treatment such as Bio-Methanation can be explored 	
Plastic Waste	<ul style="list-style-type: none"> ▪ Lack of SOP for not only quantification but also life cycle analysis [LCA] ▪ Limited understanding / interpretation of EPR / PRO ▪ All ULBs lacking implementation of PW notification 	<ul style="list-style-type: none"> ▪ Strengthening surveillance of life cycle assessment for type and quantity of Plastic Waste ▪ Effective EPR Policy ▪ Initiation of 100% compliance to PW Rules at the earliest 	High & Immediate
C&D Waste	<ul style="list-style-type: none"> ▪ ULB need to establish C&D Waste management system 	<ul style="list-style-type: none"> ▪ Minimum 1 such facility at each of the ULB to be established ▪ System for utilization of recovered material and processed C&D waste to be effectively implemented and monitored 	High
Biomedical Waste	<ul style="list-style-type: none"> ▪ Rooting and effective collection within 48hrs from the time of generation to be effectively handled ▪ Treatment facility lacks implementation of 2016 Notification in line with CPCB audited report ▪ Limited Inventorization 	<ul style="list-style-type: none"> ▪ Regular Inventorization through automatic / digital platform to be developed ▪ Up-gradation of existing facility to meet 2016 CPCB norms ▪ Additional at least 1-2 facilities to cover the of umbrella zone along with increasing burden on the existing coverage area to be planned ▪ Collection mechanism to be strengthen with additional vehicles to cover vast area and scattered HCF [miniscule quantity] 	Very High & Immediate
Hazardous Waste	<ul style="list-style-type: none"> ▪ Domestic HW being mixed with solid waste posing threat ▪ No separate handling of domestic HW ▪ Not effective segregation at source 	<ul style="list-style-type: none"> ▪ Either decentralized 4 - 5 step segregation practices to be initiated or at least advisory for intermittent storage and collection of domestic HW to be initiated ▪ Inventory to be initiated and maintained 	Very High & Immediate

Sectors	Gaps	Action Points	Priority
E Waste	<ul style="list-style-type: none"> ▪ Not one ULB is generating E-waste ▪ Lack of inventory ▪ Limited understanding of E waste rule and management ▪ Neither segregation nor separate transfer / handling facility 	<ul style="list-style-type: none"> ▪ Detailed inventory for domestic e waste under 26 different categories ▪ Mass awareness campaign ▪ Every ULB to have at least one E waste management centre and minimum one collection / drop centre in a radius of 25-30km ▪ Atleast one e waste processing unit in a district 	Very High & Immediate
Noise	<ul style="list-style-type: none"> ▪ Most of the source related noise areas show exposure beyond compliance ▪ Excessive exposure during noise generating potential events/ festivals 	<ul style="list-style-type: none"> ▪ Noise mapping to be carried out for zonation purposes ▪ At source control using physical or natural attenuation methods to be adopted ▪ In the path noise control methodologies using noise absorbers creating zone of inhibition / silence zone to be done ▪ End of the pipe measures such as PEs acoustic enclosures etc. to be adopted ▪ Event based noise control policy to be effectively implemented 	High

4.0 Water Quality Management Plan

There are total 31 Lakes and ponds in the district of about 1088.9 Sq. km. Total 3750 number of Bore wells are observed in districts; however, it is noted that till date no unit have taken permission for extraction of groundwater from bore well. Thus same needs to be verified if any unit is extracting groundwater without obtaining NOC form concern authorities.

The 8 ULBs generate about 24MLD of sewage and STP is not provided for the treatment of the same. However, it is also many a time the deficit as a representative of treatment capacity / capability.

Industrial effluent is much more regulated wherein 5.8 MLD from 15 numbers of industry, limited to 8 ULBs are made to treat almost the entire effluent to the best possible norms as stipulated by their permits. Industries in Jalna are prominently Agro-based, Metallurgic. It is observed that there is no CETP, however all Industries are meeting discharge standards Detailed Issue based management action plan is provided in **Table 4**.

Table 4 Action Plan for Water Quality Management

Sectors	Gaps	Action Points	Priority
Water Resources	<ul style="list-style-type: none"> ▪ Limited information available on mapping of surface water resources in terms of quantity ▪ Limited Inventorization of quantity, usage, availability exploitation etc. ▪ Limited Rejuvenation / remediation of water bodies ▪ Solid waste dumping in the river bodies ▪ NOC for extracting groundwater 	<ul style="list-style-type: none"> ▪ Thorough Mapping of resources to be taken up ▪ Extensive assessment of quality to be done ▪ Criticality indicators to be established for each water body/resource ▪ Extend water quality monitoring network to include representativeness ▪ Based on the criticality initiate Rejuvenation / remediation ▪ Online Monitoring system for surface water bodies to be established ▪ Protection methods to be developed for creative stoppage of dumping of solid waste in the surface water bodies 	High
Domestic	<ul style="list-style-type: none"> ▪ Correlation between generation and treatment often misleading ▪ Water budgeting exercise often missing ▪ Computation of water footprint missing ▪ Surveillance /Inventorization in cradle to grave approach absolutely never applied ▪ Limited collection system and treatment facility especially in remote area ▪ Often polluting water resources ▪ No established reuse options / reuse network 	<ul style="list-style-type: none"> ▪ Digital Platform to accommodate water budgeting / reuse potential ▪ Approximately 25 MLD of STP needed ▪ In situ treatment for River stretches to be developed ▪ Strengthen the sewage collection network to cover 100% Population ▪ Policy for reuse / recycle of treated wastewater 	Very high & Immediate
Industrial	<ul style="list-style-type: none"> ▪ Limited information of industries discharging wastewater in to the river 	<ul style="list-style-type: none"> ▪ Digital compliance methodology to be developed ▪ Disposal system to be under constant surveillance 	High

5.0 Air Quality Management Plan

As it is Jalna district being one of the most vibrant and outgrowing areas in Maharashtra, Air quality assessment and sectorial management needs are ought to be essentially planned and executed. Both CPCB & MPCB through their NAMP & SAMP programme has set up 2 manuals and no CAAQM stations are set across the district. Cluster of Steel Industry is majorly observed in Jalna MIDC. There's one non-attainment city identified for which action

plan has already been prepared. Out of total Industries 27 are meeting the standards and 12 are not meeting the standards.

It seems that PM₁₀ is Ambient Air is one of the prime reason of the concern. An Exceedence factor as per the monitored data that needs immediate attention as is the case in most of the areas of India. In view of the same the primafecce of every ULB shall be to establish at least one such Ambient Air Monitoring Station and coordinate / collaborate with other monitoring organisation to provide for advisory to general public towards health associations and risk of exposure.

Inventory and policy formulation, action plans is stated in Table 5.

Table 5 Action Plan for Air Quality Management

Sectors	Gaps	Action Points	Priority
Air	<ul style="list-style-type: none"> ▪ Most of the places PM₁₀ seems to exceed by a factor of around 2 - 4 ▪ Limited CAAQMS to establish / corroborate inferences ▪ Sectoral action plans not effectively established 	<ul style="list-style-type: none"> ▪ Emission inventory and source apportionment supported with dispersion and health based iterative process for science based AQM strategy to be established ▪ Each ULB to have at least one urban and one rural CAAQMS or three manual stations at least to include criteria pollutants with minimum one location to include parameters of 2009 CPCB notification and meteorological data including cloud cover ▪ Fugitive emission control system for hot spot emission control to be installed ▪ Green barriers / Photo catalyst options to be evaluated ▪ Capacity building to be enhanced 	High

6.0 Mining Activity Management Plan

Being directly under the promissory control of District Collector, the total lease land and the mining in Jalna district is 0.5888 Sq.km. It is important to mention that the total sand mining in Jalna is 508.57 sq.km with the due permission from respective authorities of MPCB and State Environment Department.

7.0 Noise Pollution Management Plan

Other than event base monitoring and special projects related / orders monitoring, MPCB carries out annual noise monitoring at 8 locations. Noise quality reveals mainly source specific non-compliance such as traffic related in most of the kerb side analysis. There are total 13 No. of noise measuring devices with district administration. Though zoning categories and regulations therein are particularly specified, in limitation of noise regulations has always been challenge to the regulatory authority. No study of noise monitoring is carried out in district. It is also observed that there are no Sign boards in towns and cities in silent zones. **Table 6** spells potential management plan that could be taken up on priority by each of the ULBs.

Table 6 Action Plan

Sectors	Gaps	Action Points	Priority
Noise	<ul style="list-style-type: none"> ▪ Excessive exposure during noise generating potential events/ festivals 	<ul style="list-style-type: none"> ▪ Noise mapping to be carried out for zonation purposes ▪ At source control using physical or natural attenuation methods to be adopted ▪ In the path noise control methodologies using noise absorbers creating zone of inhibition / silence zone to be done ▪ End of the pipe measures such as PEs acoustic enclosures etc. to be adopted ▪ Event based noise control policy to be effectively implemented 	High

8.0 Conclusion

There seems to be vast data gaps and a detailed exercise to collate and validate data gathered through this process needs to be urgently taken up in addition to the adopting a holistic & inclusive consultative process of gathering information, collating & converging it in order to be able to device strategies of future. Also, it is equally important that projection for at least next 20 years be done in order to evaluate management plans for futuristic view to meet the objective of such vast exercise. Digital data availability needs to be one of the prime tasks of government & methods of its validation be created with scope for improvement in near future. The practise needs to be a continual one to be updated regularly in order to monitor progress and effectiveness of this process & shall be linked with financial allocations being designed to be promoted by government of the day. With regards to action plans, the priorities shall be aligned based on sustainability objectives.