

# District Environment Plan



Prepared By



Environment Department, Government of Maharashtra



Maharashtra Pollution Control Board

## Jalgaon



## **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 Pune District is prepared.

## **2.0 Introduction**

Jalgaon is a city in western India. The city is located in northern Maharashtra, and serves as the administrative headquarter of the Jalgaon district. Jalgaon is nicknamed "Banana city" as the region contributes approximately two third of Maharashtra's banana production. It is also known for the gold production. Jalgaon is supposed to have the purest form of gold which is sold at a great price, which is how it came to be known as the Gold City. Jalgaon is rich in volcanic soil which is well suited for cotton production.

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

Table 1 Jalgaon District Profile

Description	Details
Average Climate	Max temp : 48.0°C, Min temp : 10.3°C ,Average rainfall :690.2 mm.
Geographical Location	It lies between 20° and 21° North Latitude and 74° 55" and 76° 28 East Longitude.
Area	11,765 Sq. km.
Boundaries	Satpuda mountain ranges in the North, Ajanta mountain ranges in the South.
Languages Spoken	Marathi ,Ahirani
Population	Total: 13,04,058 [According to 2011 Census Report]
Population Density	360 Per Sq. km.
Literacy Rate	78.2
Rivers	Tapi, Girna, Waghu
ULBs	16 Numbers
Villages	1,513 Numbers
Statutory Towns	15 Numbers
Tahsils	15 Numbers Dharangaon Amalner, Bhadgaon, Bhusawal, Bodwad, Chalisgaon, Chopda, Erandol, <b>Jalgaon</b> , Jamner, Muktainagar, Pachora, Parola, Raver, and Yawal.
Pin code	425001

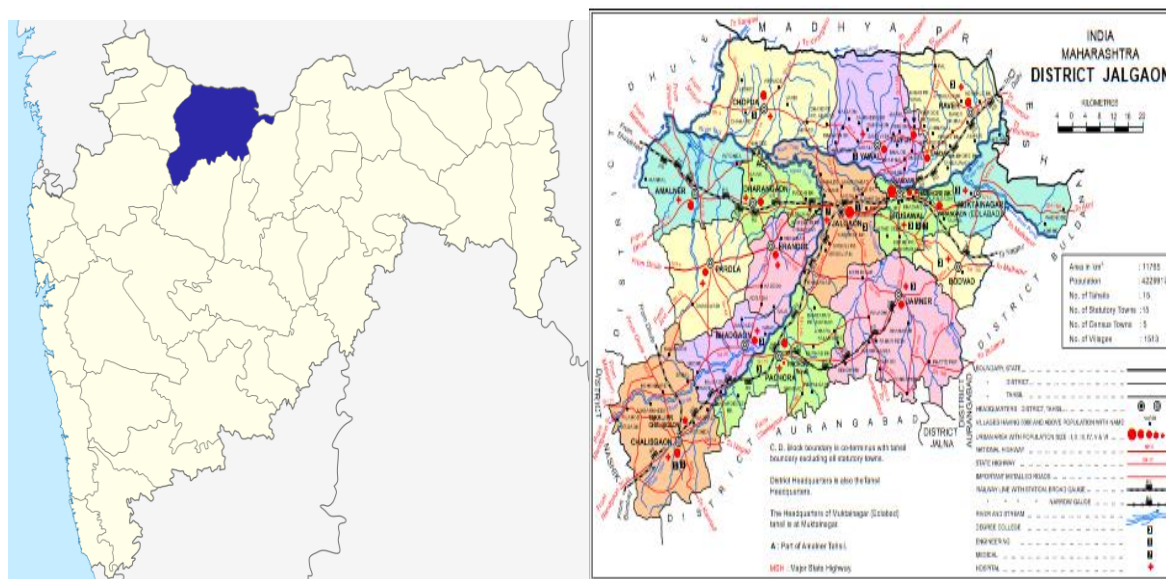


Figure 1 Location of Jalgaon District

### 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.

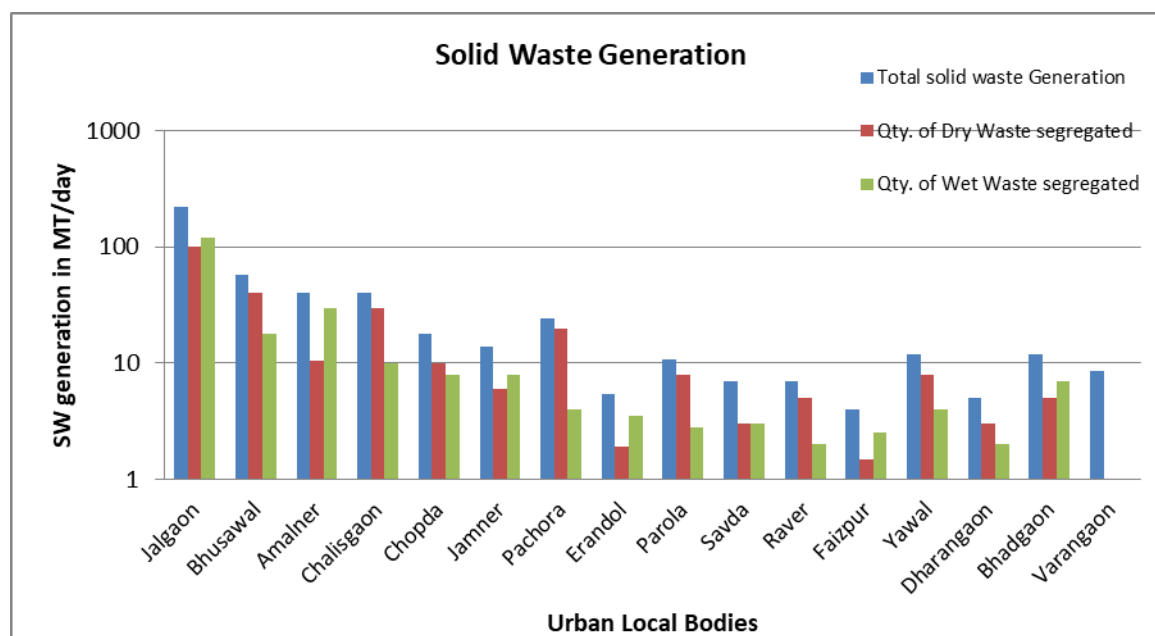
Solid waste management is among the basic essential services provided by municipal authorities in the country to keep cities clean. Primary sources of solid waste are local households, commercial establishments, hospitals, hotels, restaurants, and markets. Local Bodies are responsible for collection, storage, segregation, transportation and disposal of all solid waste generated in the city. There are 16 Urban Local Bodies [ULBs]. in the district. **Table 2** represents the list of ULBs along with population. Following section gives insight about waste management of the district.

**Table 2 Jalgaon District Profile**

Sr. No.	Urban Local Bodies	Population
1.	Jalgaon	460,228
2.	Bhusawal	187,421
3.	Amalner	95,994
4.	Chalisgaon	97,551
5.	Chopda	72,783
6.	Jamner	46,762
7.	Pachora	59,609
8.	Erandol	34,114
9.	Parola	37,666
10.	Savda	20,584
11.	Raver	27,039
12.	Faizpur	26,602
13.	Yawal	36,706
14.	Dharangaon	35,375
15.	Bhadgaon	37,214
16.	Varangaon	28,410

### 3.1 Domestic Solid Waste Management Plan

Jalgaon district is having 16 ULBs with 289 Wards. 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 Jalgaon district is 485.68MTD wherein, Dry Waste generation is 251.805MTD and Wet waste is 224.395MTD.

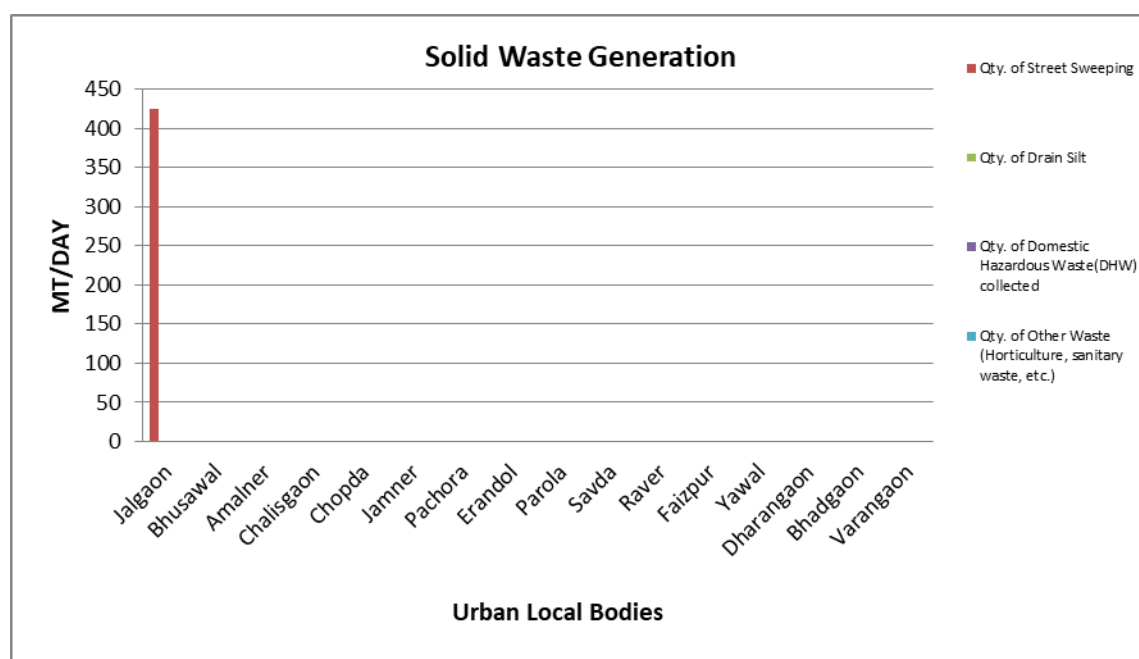


**Figure 2 Solid Waste Generation of Jalgaon District**

It seems that Wet waste comprises of approximately 48% of total waste generated of the district and Dry waste contributes 52%. Jalgaon Municipal Corporation stands on top with the highest quantity i.e. 220MTD out of which dry waste is 100MTD and wet waste is 120MTD. Faizpur generates lowest quantity i.e. 4MTD out dry waste is 1.5MTD and wet waste is 2.5MTD. It is observed that quantity of solid waste generation is in line with the respective population of ULBs.

As per the data presented in the **Figure 3**, details of other types of waste generation is presented as below;

Jalgaon district generates 425.15MTD of Street Sweeping Waste. Maximum quantity of Street Sweeping Waste is generated by Jalgaon with total quantity of 425MTD followed by Sawda stands lowest with 0.15MTD. Drain Silt is not estimated.



**Figure 3 Other Waste Generation of Jalgaon District**

There is no facility for collection of DHW generated in district except Savda. Total Quantity of Horticulture, Sanitary and other waste also not estimated yet. Jalgaon district is having total 56 bulk Waste Generator with the highest numbers in Jalgaon Corporation and total number of onsite facility provided for treatment of wet waste is 220MTD.

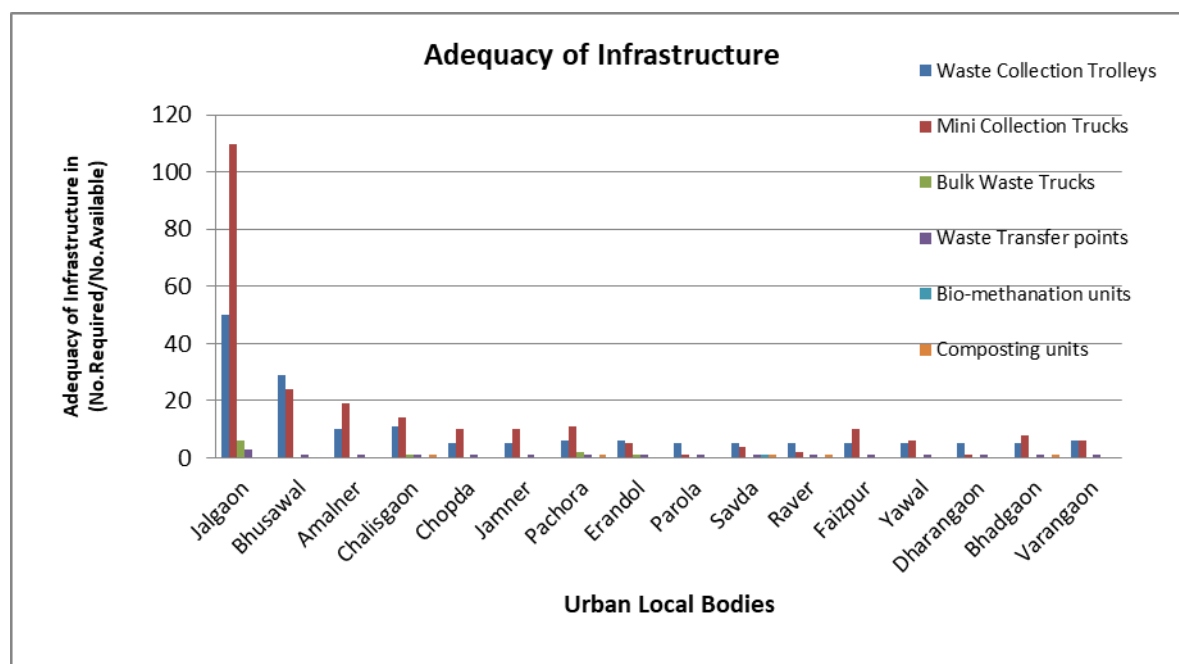
### 3.1.1 Adequacy Infrastructure

Out of 16 ULBs, 15 of them have provided 100% door to door collection facility. Only Yawal Council has provided 83% door to door collection facility respectively. All ULBs have implemented Manual Road Sweeping facility and have not initiated mechanical sweeping system in district. Almost 70% of waste is being transport through segregated waste transport system. Out of 16 no ULBs have installed digester with biomethanation facility.

Jalgaon district generates approximately 224.395MTD of wet waste and Out of which 7MTD generated by Bhadgaon is 100% treated through composting. All of 16 ULBs are using Multi Re Use Facility to separate and prepare recyclable material. It is observed that Sanitary landfill is under construction in Savda. Rest 15 ULBs do not have provision of Sanitary Landfill.

Out of all ULBs only Savda has started reclamation of old dump site. All 16 ULBs have initiated linkage with recycler. All ULBs have also issued authorization to the waste pickers and have obtained linkage with TSDF / CBMWTF.

Availability of infrastructure to handle the waste generated from the Jalgaon district is presented in **Figure 4**.



**Figure 4 Adequacy of SW Infrastructure**

It is observed that there are total 18 waste transfer points in Jalgaon district with waste trolley of 158, Mini collection trucks 241 numbers and Bulk transport trucks 10. Total number of Bio - Methanation units are not estimated]. Composting units available to treat wet waste are not estimated. As per record, all ULBs have implemented the Solid Waste Management Rules.

### 3.2 C&D Waste Management Plan

The Construction and Demolition Waste [C&D Waste] generated by Jalgaon district is about 3110.7MTA C&D. Non availability of data will not help in preparing ingenious and executable plan for waste management of the district hence local bodies must ensure proper sampling and factual measurement of the various types of waste being generated.

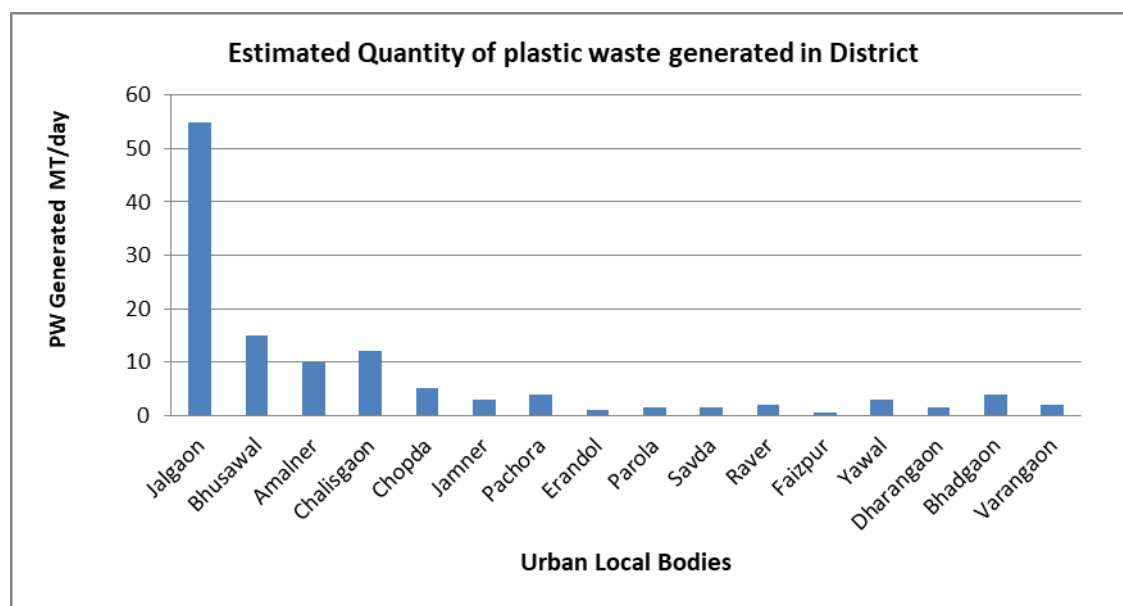
### 3.3 Plastic Waste Management

Total Plastic waste generated by Jalgaon district is 63.33MTD. With 55MTD quantity, Jalgaon Corporation is the highest plastic waste generator and Pachora generates lowest plastic waste i.e. 0.05MTD.

In almost all ULBs, 100% door to door collection system is implemented whereas segregation system is implemented partially i.e. 68% only with 18 Plastic Waste Collection



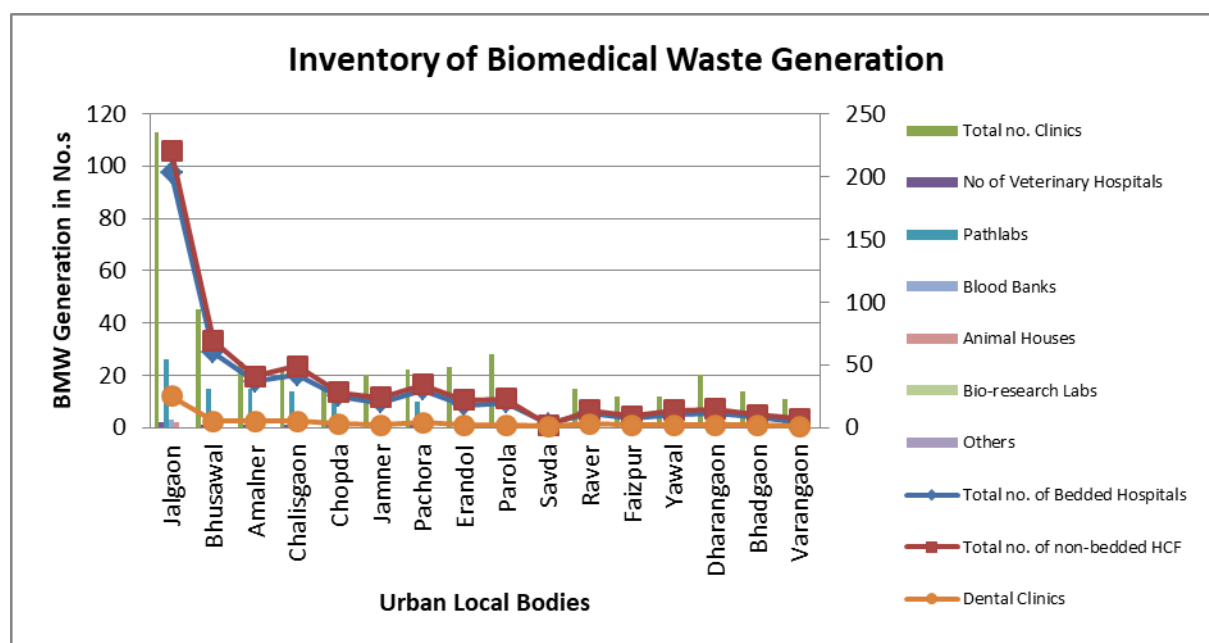
Centre. There are 215 Plastic Waste Pickers with the authorization for waste collection. District is having 22 Plastic Waste Recyclers.



**Figure 5 Details of Plastic Solid Waste Generation**

### 3.4 Biomedical Waste Management

1092 hospitals present in the Jalgaon district. Bedded hospitals are 511 numbers, of which all HCF have taken authorization. 581 are non-bedded hospitals and all of them have taken authorization. 398 Clinics and 10 Veterinary hospitals. Total BMW generation from all above mentioned sources are to the tune of 457 Kg/day



**Figure 6 Details of Biomedical Solid Waste Generation**

There is only one Common Facility available for treatment and disposal of BMW and average BW taken by these facilities are 457kg/day. There is requirement of at least one CBWTF in each ULB. Inventory of BMW generating units are mentioned in the **Figure 6**.

### 3.5 Hazardous Waste Management

89 numbers of industry are established and generating 78022.92 MT/Annually, out of which 1572.97 MT is Incinerable and 5751.14 MT is sent for land filling and 70698.81MT is sent to recovery / reutilization of HW. The waste generated is sent to Common Treatment Storage Disposal Facility present at Ranjangaon, Pune and all industries are members of CHWTDSF.

### 3.6 E Waste Management

There are no Collection Centres established by ULBs and Producer under EPR scheme. There are 2 number of authorized E-Waste recyclers / Dismantler and 2 numbers are Authorized E-Waste collectors. It is observed that district have not conducted Awareness Campaigns.

### 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
<b>Domestic Solid Waste</b>			
Quantification	<ul style="list-style-type: none"> <li>Methodology for solid waste quantification should be ascertained</li> <li>Quantification based on Income group, culture affluence and technology to be considered</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Quadrante sampling methodology</li> </ul>	Immediate

Sectors	Gaps	Action Points	Priority
		to be adopted in order to reduce quantity as well as quality	
Collection System & Transport System	<ul style="list-style-type: none"> <li>Some of the places, efficiency of the collection system is not up to the mark</li> </ul>	<ul style="list-style-type: none"> <li>Ideally most proven method of SWM is 3 Tier System with door to door, community and transfer station approach</li> <li>100% efficiency to be achieved</li> <li>Intermediate</li> <li>Approximately 98 Ghanta Gadi would be required</li> </ul>	Short to Mid Term
Infrastructure	<ul style="list-style-type: none"> <li>Data not available of composting units, if any</li> </ul>	<ul style="list-style-type: none"> <li>Intermediate / Transfer station based decentralized waste treatment facility to be evaluated</li> <li>Additional alternative treatment such as bio-Methanation can be explored [Data not available]</li> </ul>	High
Plastic Waste	<ul style="list-style-type: none"> <li>Lack of SOP for not only quantification but also life cycle analysis [LCA]</li> <li>Limited understanding / interpretation of EPR / PRO</li> <li>Segregation is only 68%</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening surveillance of life cycle assessment for type and quantity of Plastic Waste</li> <li>Effective EPR Policy</li> <li>Need to take measures for 100% segregation at source</li> </ul>	High & Immediate
C&D Waste	<ul style="list-style-type: none"> <li>Establishment of recycling plant</li> </ul>	<ul style="list-style-type: none"> <li>Minimum 1 such facility at each of the ULB to be established</li> <li>System for utilization of recovered material and processed C&amp;D waste to be effectively implemented and monitored</li> </ul>	High
Biomedical Waste	<ul style="list-style-type: none"> <li>Rooting and effective collection within 48hrs from the time of generation to be effectively handled</li> </ul>	<ul style="list-style-type: none"> <li>Regular Inventorization through automatic / digital platform to be developed</li> <li>Up-gradation of existing facility to meet 2016 CPCB norms</li> </ul>	Very High & Immediate

Sectors	Gaps	Action Points	Priority
	<ul style="list-style-type: none"> <li>Treatment facility lacks implementation of 2016 Notification in line with CPCB audited report. CBMWTF not complying to standards</li> <li>Limited Inventorization</li> </ul>	<ul style="list-style-type: none"> <li>Additional facilities to cover the of umbrella zone along with increasing burden on the existing coverage area to be planned</li> <li>Collection mechanism to be strengthen with additional vehicles to cover vast area and scattered HCF [miniscule quantity ]</li> </ul>	
Hazardous Waste	<ul style="list-style-type: none"> <li>Domestic HW being mixed with solid waste posing threat</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	Very High & Immediate
E Waste	<ul style="list-style-type: none"> <li>Lack of inventory</li> <li>Limited understanding of E waste rule and management</li> <li>Neither segregation nor separate transfer / handling facility</li> </ul>	<ul style="list-style-type: none"> <li>Detailed inventory for domestic e waste under 26 different categories</li> <li>Mass awareness campaign</li> <li>Every ULB to have at least one E waste management centre and minimum one collection / drop centre in a radius of 25-30km</li> </ul>	Very High & Immediate

#### 4.0 Water Quality Management Plan

There are 16 ULBs generate about 159.32MLD of sewage with no STP which after treatment flows into the rivers. It is observed that additional 160MLD capacity STP is required for treatment.

The average pH of rivers flowing in Jalgaon is 7.15. Whereas the average DO and BOD of these surface bodies is 5.9 and 3.94 respectively. The Waghur river shows highest number of MPN Count i.e. 280MPN/100ml. and lowest 44.50MPN/100ml in Tapi river.

All the above needs to be combined with the effort of sensitization and awareness at all level in order to formulate and implement successful water quality management strategy though

the same is limited to 16 number of ULBs as of now & a 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"> <li>▪ Limited information available on mapping of surface water resources in terms of quantity</li> <li>▪ Limited Inventorization of quantity, usage, availability exploitation etc.</li> <li>▪ Limited Rejuvenation / remediation of water bodies</li> <li>▪ Solid waste dumping in the river bodies</li> </ul>	<ul style="list-style-type: none"> <li>▪ Thorough Mapping of resources to be taken up</li> <li>▪ Extensive assessment of quality to be done</li> <li>▪ Criticality indicators to be established for each water body/resource</li> <li>▪ Extend water quality monitoring network to include representativeness</li> <li>▪ Based on the criticality initiate Rejuvenation / remediation</li> <li>▪ Online Monitoring system for surface water bodies to be established</li> <li>▪ Protection methods to be developed for creative stoppage of dumping of solid waste in the surface water bodies</li> </ul>	High
Domestic	<ul style="list-style-type: none"> <li>▪ Correlation between generation and treatment often misleading</li> <li>▪ Water budgeting exercise often missing</li> <li>▪ Computation of water footprint missing</li> <li>▪ Surveillance /Inventorization in cradle to grave approach absolutely never applied</li> <li>▪ Limited collection system</li> </ul>	<ul style="list-style-type: none"> <li>▪ Digital Platform to accommodate water budgeting / reuse potential</li> <li>▪ Approximately 160MLD of STP needed</li> <li>▪ In situ treatment for few River stretches to be developed</li> <li>▪ Strengthen the sewage collection network to cover 100% Population</li> </ul>	Very high & Immediate

	and treatment facility especially in remote area ▪ No established reuse options / reuse network	▪ Policy for reuse / recycle of treated wastewater	
Industrial	▪ Limited information of industries discharging wastewater in to the river ▪ Almost 270 number of industries Non-compliance of in terms of meeting discharge standards	▪ Digital compliance methodology to be developed ▪ Disposal system to be under constant surveillance	High

## 5.0 Air Quality Management

The prominent pollution sources in Jalgaon are Large Industry, Industrial Estate, Unpaved Roads, Burning of Waste Stubble. Both CPCB & MPCB through their NAMP & SAMP programme has set up 3 manual & no CAAQM stations across the district.

It seems that Ambient Air is one of the prima facie of the concern. An exceedance factor reveals 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 priamafecce 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 plan 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"> <li>▪ Limited CAAQMS to establish / corroborate inferences</li> <li>▪ Sectoral action plans not effectively established</li> </ul>	<ul style="list-style-type: none"> <li>▪ Emission inventory and source apportionment supported with dispersion and health based iterative process for science based AQM strategy to be established</li> <li>▪ Each ULB to have atleast one urban and one rural CAAQMS or three manual stations at least to include criteria pollutants with</li> </ul>	High

		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	
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## 6.0 Mining Activity Management plan

Being directly under the control of District Collector, the total lease land and the mining in Jalgaon district is 0.65Sq.kms. It is important to mention that the total sand mining in Jalgaon is 0.48Sq.kms with the due permission from respective authorities of MPCB and State Environment Department. There has been no pollution related complaints in the districts.

## 7.0 Noise Action Plan

Noise quality reveals mainly source specific non-compliance such as traffic related in most of the kerb side analysis. Though zoning categories and regulations therein are particularly specified, in limitation of noise regulations has always been challenge to the regulatory authority. 53 No. of noise measuring devices are available with district administration and 2 with SPCB. No noise monitoring study has been carried out in the district. **Table 5** spells potential management plan that could be taken up on priority by each of the ULBs.

**Table 5 Action Plan for Air Quality Management**

Sectors	Gaps	Action Points	Priority
Noise	▪ Most of the source related noise areas show exposure beyond compliance [ULB wise data not available] ▪ Excessive exposure during noise	▪ 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	High

	generating potential events/ festivals	inhibition / silence zone to be done <ul style="list-style-type: none"><li>▪ End of the pipe measures such as PEs acoustic enclosures etc. to be adopted</li><li>▪ Event based noise control policy to be effectively implemented</li></ul>	
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## **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.