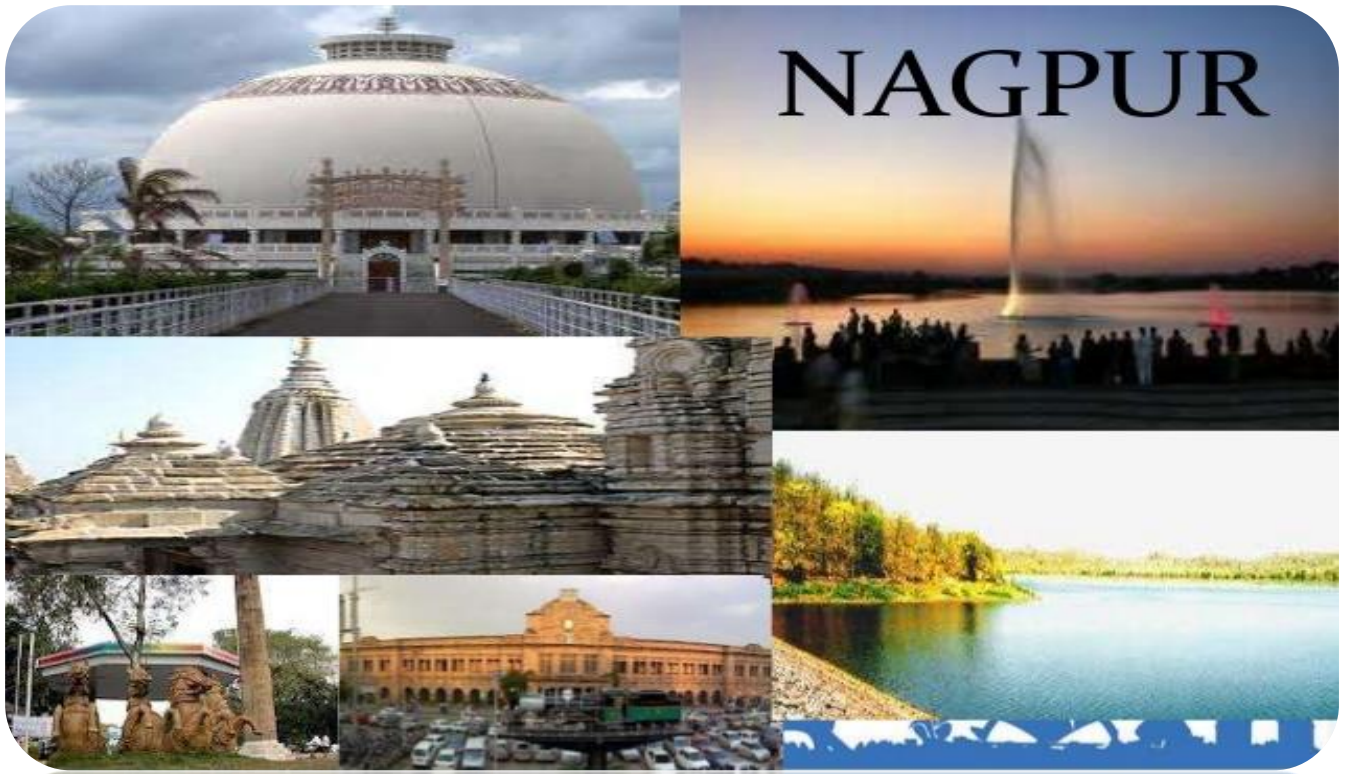


District Environment Plan



Prepared By



Environment Department, Government of Maharashtra



Maharashtra Pollution Control Board

Nagpur

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 and as per the model DEP prepared by CPCB, Environment Action plan for the district is prepared.

2.0 Introduction

Nagpur is the third largest city and the winter capital of the Indian state of Maharashtra. It is the 13th largest city by population in India. According to an Oxford Economics report, Nagpur is projected to be the fifth fastest growing city in the world from 2019-2035 with an average growth of 8.41%. It has been proposed as one of the Smart Cities in Maharashtra and is one of the top ten cities in India in Smart City Project execution.

Nagpur is the seat of the annual winter session of the Maharashtra state assembly. It is a major commercial and political centre of the Vidarbha region of Maharashtra. In addition, the city derives unique importance from being the headquarters for the Hindu nationalist organisation RSS and an important location for the Dalit Buddhist movement. Nagpur is also known for Deekshabhoomi, the largest hollow stupa among all the Buddhist stupas in the world.

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

Table 1 Nagpur District Profile

Description	Details
Average Climate	Summer: 22°C To 41°C. Winter :10°C TO 25°C. Rainfall: 1205 mm.
Geographical Location	It lies between 21.1458° North Latitude and 79.0882 East Longitude. Nagpur is located at the exact center of the Indian peninsula. The city has the Zero Mile Stone locating the geographical center of India, which was used by the British to measure all distances within the Indian subcontinent. The city lies on the Deccan plateau of the Indian Peninsula and has a mean altitude of 310.5 meters above sea level.
Area	9892 Sq. km.
Boundaries	The northern part of Nagpur district is surrounded by Chindwada and Seoni district of Madhya Pradesh and it is Bhandara district on the east. South and West are respectively Chandrapur and Wardha districts. So, some part of the northwest is covered by Amravati district.

Description	Details
Languages Spoken	Marathi, Hindi, English are major languages but all Indian languages are spoken
Population	Total: 4,653,570; Male: 2,384,975, Female:2,268,595 [According to 2011 Census Report]
Population Density	470 Per Sq. km.
Literacy Rate	88.39
Rivers	Nag
ULBs	21 Numbers
Municipal Corporations	1 Numbers 1. Nagpur Municipal Corporation
Cantonment Boards	1 Numbers Kamptee
Sub districts	7 Numbers
Villages	1,859 Numbers
Statutory Towns	12 Numbers
Tahsils	13 Numbers Narkhed, Katol, Kalmeshwar, Savner, Parseoni, Ramtek, Mouda, Kamptee, Nagpur (Rural) , Hingna, Umred, Kuhi and Bhiwapur
Pin code	440002-440037

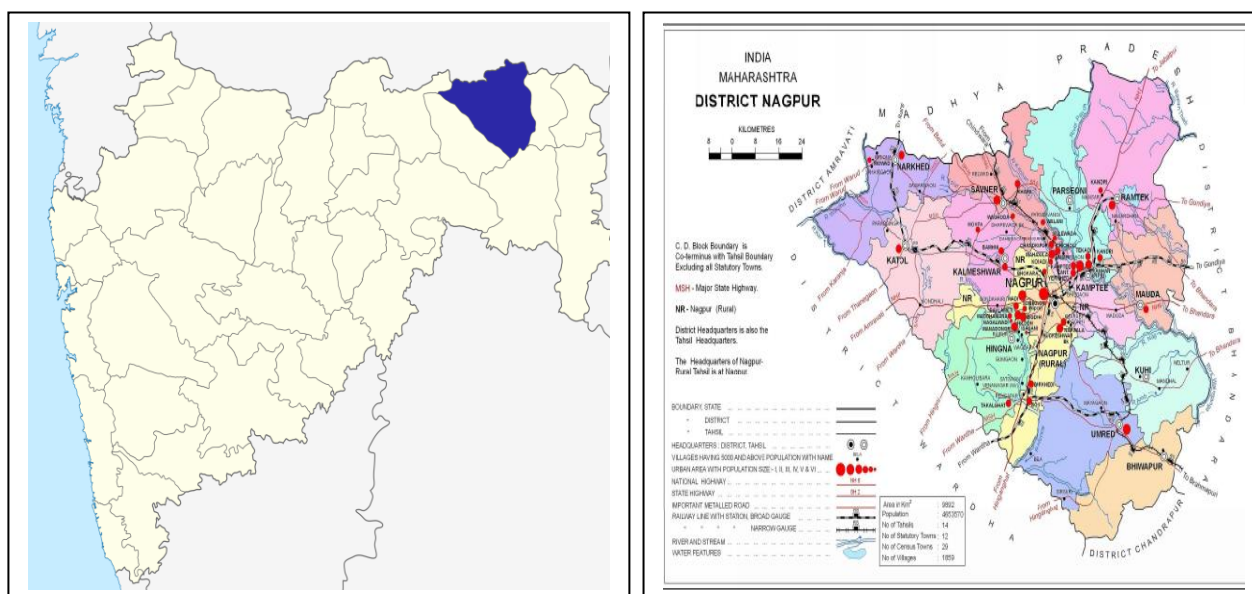


Figure 1 Location of Nagpur District

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 21 Urban Local Bodies [ULBs] in the district. **Table 2** represents the list of ULBs along with population.

Table 2 Name of ULBs with Population

Sr. No.	Urban Local Bodies	Population
1.	Nagpur Municipal Corporation	2,405,665
2.	MUNICIPAL COUNCIL KHAPA	14,659
3.	Municipal Council Mohpa	6987
4.	Municipal Council Kalmeshwar	19578
5.	Municipal Council Narkhed	21127
6.	Municipal Council Katol	51000
7.	Butibori Municipal Council	29248
8.	Municipal Council Saoner	34160
9.	Municipal Council Kamptee	86793
10.	Municipal Council Ramtek	22310
11.	Municipal Council Mowad	9096
12.	Municipal Council Wadi	54048
13.	Municipal council kanhan pipri	Not available
14.	Municipal Council Wanadongari	38410
15.	Nagar Panchyat Mouda	14606
16.	Nagar Panchyat Kuhi	10436
17.	Nagar Panchyat Bhiwapur	Not available
18.	Nagar Parishad Umred	53971
19.	Nagar Panchyat Mahadula	21481
20.	Nagrpanchayat Parseoni	12026
21.	Nagar Panchyat Hingna	7668

3.1 Domestic Solid Waste Management Plan

There are total 21 ULBs with 362 Wards in the district. Details of Domestic Solid Waste including Dry & Wet waste of each ULBs is given in the **Figure 2** whereas **Figure 3** represent details of Other Types of Waste for ease of understanding. Overall domestic solid waste generation from the district is 1,333.9MTD out of which 446.9MTD is Dry Waste and 721.9MTD is Wet waste.

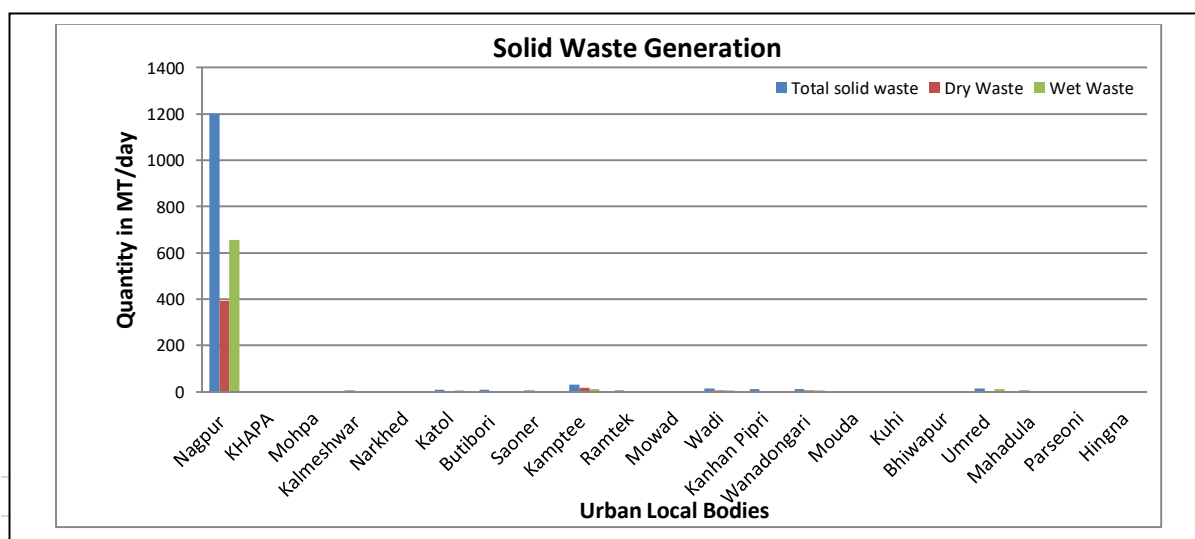


Figure 2 Details of Domestic Solid Waste Generation

Nagpur city generates maximum quantity i.e. 1200MTD out of which dry waste is of 393.5MTD and wet waste is 655MTD. Kuhi Nagar Panchayat generates lowest quantity i.e. 0.2MTD with dry and wet waste of 0.05MTD and 0.15MTD respectively. 58 Bulk Waste Generator are identified within the district. However only 24 number of onsite treatment facility is provided.

Quantification of Other types of waste is presented as below;

A] Street Sweeping Waste: Total generation of Street Sweeping Waste is 368.6MTD. Mahadula generates maximum quantity i.e. 363MTD and Umred generates lowest quantity i.e. 0.05MTD.

B] Drain Silt Waste: Overall quantity of Drain Silt Waste is 6.7MTD. Kanhan Pipri Municipal Council generates maximum quantity i.e. 1.8MTD and lowest quantity is generated by Narkhed i.e. 0.0001MTD.

C] Domestic Hazardous Waste (DHW): Domestic HW generation of districts seems very low with total quantity of 2.5MTD.

D] Other Waste (Horticulture, sanitary waste, etc.): Total Quantity of Horticulture, Sanitary and other waste is 8.7MTD.

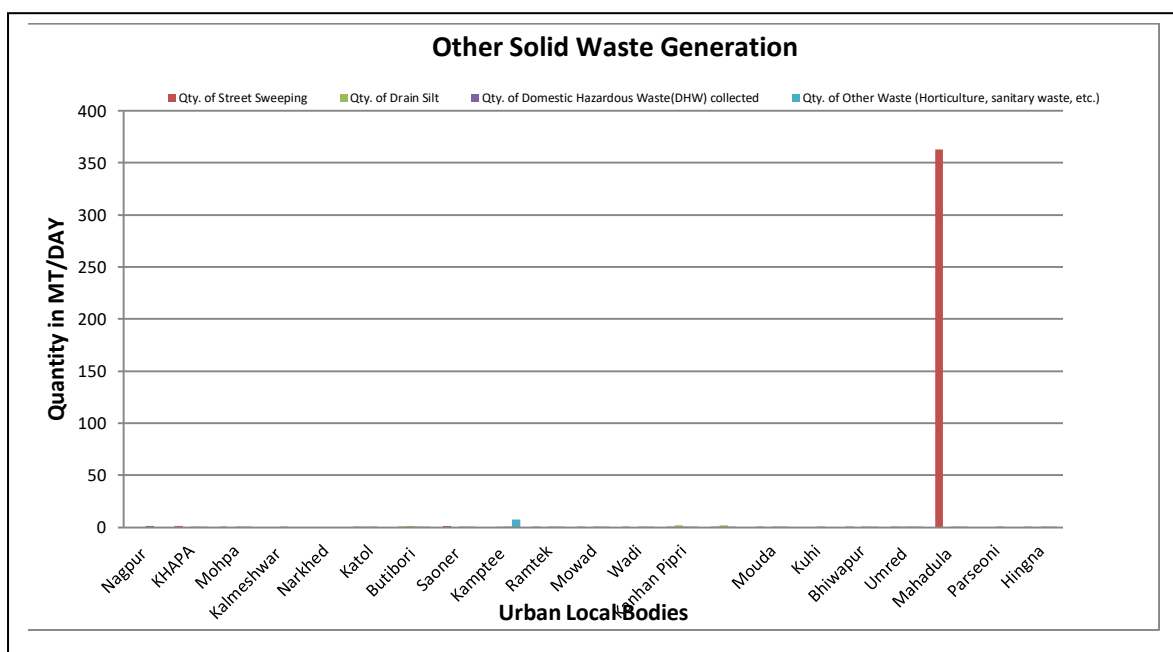


Figure 3 Details of Other Waste Generation

3.1.2 Adequacy of Infrastructure

Door to door collection system has implemented 100% in all ULBs. Few ULBs out of 21 ULBs have initiated Mechanical Sweeping. There are 16 numbers of old dump sites with total stored material of 22,30,306MT. Khapa, Kalmeshwar, Saoner, Mowad Municipal Council and Mouda Nagar Panchyat has completed 100% reclamation of old dump site. Details of treatment facilities provided across the district is presented in **Figure 4**.

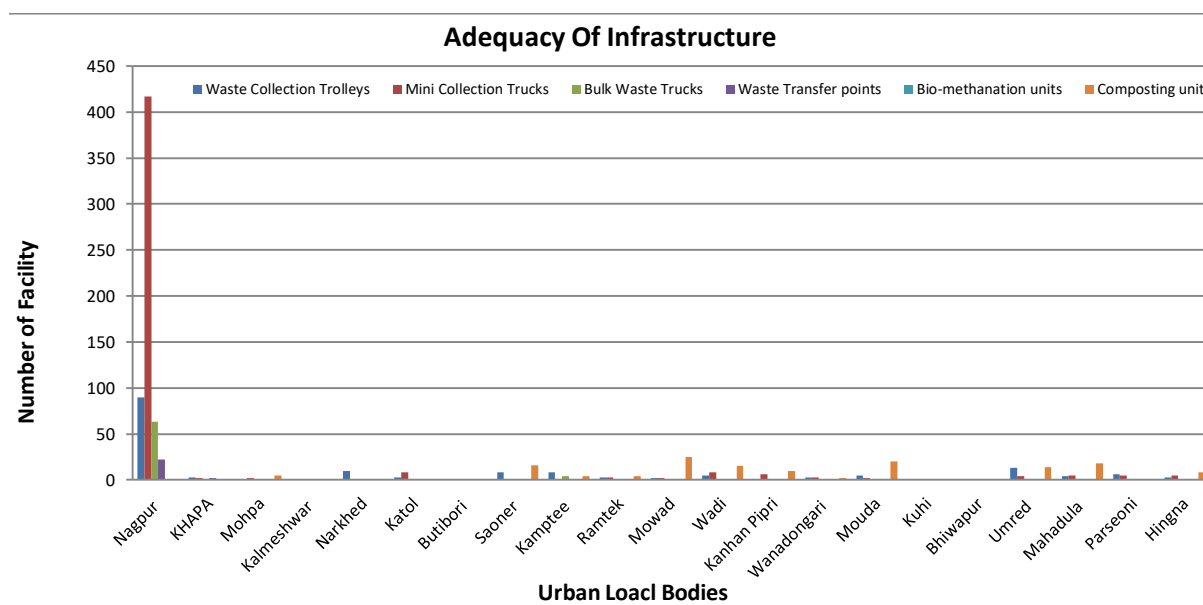


Figure 4 Adequacy of Solid Waste Infrastructure

District has provided 37 numbers of waste Transfer points for all types of waste collection & transportation and 18 waste deposition centres for DHW across the entire district. There are 172 Trolleys, 489, Mini Trucks, 77 Bulk Trucks for collection and transportation of solid waste. 4 Sanitary Landfill sites are available with capacity of 40,03,330MT. There are 174 Composting units and 8 Bio-Methanation. Most of the wet waste is treated through composting. District authorities has implemented Solid Waste Management Rules in all the ULBs.

3.2 C&D Waste Management Plan

District generates 44042MT per year of C&D Waste out of which 0.08MT is processed or recycled, 333.2MT is directly disposed by land filling without processing. Illegal dumping is to the tune of 43708.72MT. There are 3 storage facilities across the district. All ULBs have identified Deposition Points for deposition of C&D waste however till date, no facility is installed for recycling of C&D waste.

3.3 Plastic Waste Management

Overall Plastic waste generated in the district is 26.9MTD. Nagpur being largest city generates maximum waste with 16MTD. Door to door collection and segregation of plastic is implemented 100% almost in all ULBs. There are total 24 Plastic Waste Collection Centre across the district with 263 Plastic Waste Pickers and 247 numbers of Plastic Waste Recycler and 10 Plastic manufacture. 1MT/Month plastic is use in road making and 244.8MT/Month is sent to for Co-processing in Cement Kiln. PW Management Rules, 2016 is implemented in all the ULBs. However no information is available related to programme conducted for mass awareness of public regarding plastic waste.

3.4 Biomedical Waste Management

There are total 3150 Health Care Facilities including bedded, non bedded hospitals, Veterinary hospitals, Pathology Labs, Clinics and Blood banks etc. Authorization is taken by 1687 HCFs [724 Bedded & 963 Non bedded]. Total BMW generation from all HCFs are 1075MT. There is only 1 Common Facility and 47 Captive Disposal Facilities are available which collects 2.6MTD BMW for further treatment and disposal. It seems that 80% pre segregation of waste is being done. Details are mentioned in **Figure 5**.

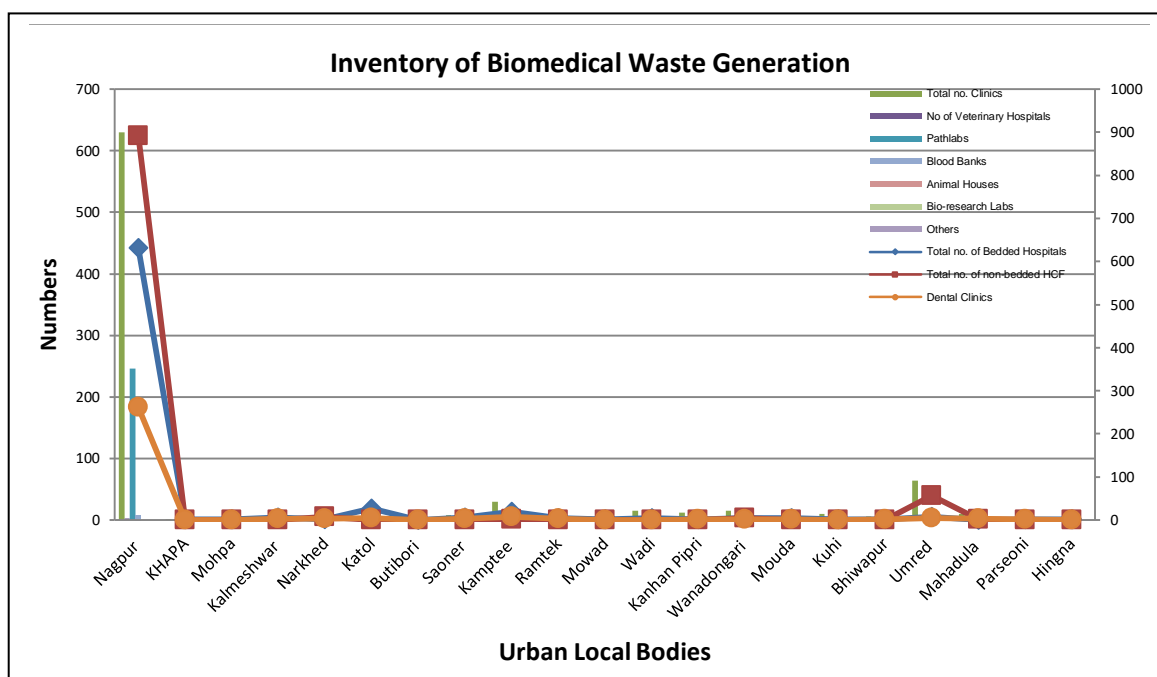


Figure 5 Inventory of BMW Generating Units

3.5 Hazardous Waste Management

There are 301 industries which generates Hazardous Waste to the tune of 72,637.72 MT/Annually. Out of which 8,856.32 MT is sent for incineration, 28,042.58 MT is sent for land filling and 35738.82MT is processed for recovery of recyclable/realizable materials. All industries have taken authorization for HW generation and all members of CHWTSDF. One Common Hazardous Waste TSDF is installed in the district. There is also one HW dumpsite is identified.

3.6 E Waste Management

According to the E Waste Rules, PROs has established 10 Collection Centres under EPR scheme. There are 2 authorized E-Waste recyclers / Dismantler.

3.7 Action Plan

As per the above data it is observed almost all ULBs are handling & disposing generated solid waste as per the Solid Waste Management Rules, however certain practices needs to be strengthen and can be improved by adopting precise and excitable action plan 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 ▪ Quadrante sampling methodology to be adopted in order to reduce quantity as well as quality 	Immediate
Collection, handling & 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 ▪ Additionally 47 Collection Trolley are required ▪ Need to procure additional 24 Mini Collection Truck ▪ Additionally about 6 Bulk Trucks shall required 	Short to Mid Term
Infrastructure	<ul style="list-style-type: none"> ▪ Mostly composting is the main treatment methodology with about 95% coverage ▪ Sanitary landfill is not installed in 5ULBs ▪ Bio - Methanation unit is not installed though major treatment of wet is through composting ▪ No any RDF Facility installed in entire district 	<ul style="list-style-type: none"> ▪ Intermediate / Transfer station based decentralized waste treatment facility to be evaluated ▪ According to the waste generation and present facility, additional 6 transfer points are required ▪ Need to provide at least one SLF per ULB, accordingly additional 5 SLF is required ▪ Need to install RDF facility at least one in each ULB ▪ Composting facility can be further augmented with aid-on of at least one Bio-Methanation plant per ULBs ▪ Need to provide additional 35 Composting units 	High
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 	<ul style="list-style-type: none"> ▪ Strengthening surveillance of life cycle assessment for type and quantity of Plastic Waste ▪ Effective EPR Policy ▪ Mass awareness through ULBs 	High & Immediate
C&D Waste	<ul style="list-style-type: none"> ▪ No facility for C&D Waste Recycling Plant ▪ Illegal dumping of C&D 	<ul style="list-style-type: none"> ▪ Minimum 1 such facility at each of the ULB to be established ▪ System for utilization of 	High

Sectors	Gaps	Action Points	Priority
	waste is to the tune of 43708.72MT <ul style="list-style-type: none"> ▪ Directly disposed without processing is 333.2MT by land filling without processing 	recovered material and processed C&D waste to be effectively implemented and monitored	
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 ▪ Compliance w.r.t. provision of barcode is still 70% ▪ Pre-segregation is of BMW is 80% ▪ Linkage with CBMWTFs is only 60% 	<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 facility 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] ▪ Process of Monitoring and review of onsite handling of BMW handling should be stringent and digital surveillance measures can be adopted to achieve 100% compliance ▪ Closure direction along with imposing environmental compensation should be initiated immediately in case of non compliance 	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 of Domestic HW 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
E Waste	<ul style="list-style-type: none"> ▪ Lack of inventory ▪ Limited understanding of E waste rule and management ▪ Neither segregation nor separate transfer / handling facility ▪ No Awareness programme conducted by ULBs & PROs 	<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

Sectors	Gaps	Action Points	Priority
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 3 notified Rivers flows within the district with 911.3km in length and 156 drain / nalla are identified meeting the river. Area covered by Lake and Ponds are 582 Ha. & 35860.97Ha. respectively. Total number of bore-well are 7,487, out of which permission is given for only 567. Water quality of the region is monitored through water sampling and analysis for multiple parameters throughout the years and also represented digitally in form of WQI on various platform.

MPCB conducts regular ground water monitoring through SWMP and NWMP at 7 locations for Surface water and 8 locations for ground water [under NWMP] throughout the districts. Analysis results of surface water & ground water quality is presented in the **Table 3 & Table 4** respectively.

Table 4 Surface Water Quality

Station Code	pH			DO (mg/L)			BOD (mg/L)			FC MPN/100ml		
	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
1315	7.7	8.6	8.2	6.3	7.9	7.1	3.6	6.0	4.3	33.0	350.0	119.8
1908	8.1	8.9	8.3	4.3	8.0	6.7	3.1	5.8	4.3	33.0	350.0	87.9
1909	7.8	8.1	8.0	1.8	7.8	6.2	3.5	22.0	7.2	27.0	540.0	108.6
1910	7.5	8.6	8.0	3.9	8.0	6.7	3.0	6.6	4.1	26.0	540.0	82.6
2170	7.2	8.7	8.2	3.4	8.6	6.9	3.3	7.2	4.3	17.0	170.0	45.3
2171	7.4	8.7	8.2	4.3	8.2	6.6	3.4	21.0	6.0	22.0	350.0	60.2
2722	7.9	8.7	8.2	5.0	8.4	6.9	3.2	4.7	3.9	17.0	170.0	41.2
2723	7.8	8.8	8.2	5.2	7.8	6.3	4.2	7.6	5.3	22.0	280.0	59.8
Average	7.7	8.6	8.2	4.3	8.1	6.7	3.4	10.1	4.9	24.6	343.8	75.7

Where;

1315: Wardha river at Pulgaon Railway Bridge, Village. Pulgaon, Taluka. Wardha

1908: Kolar river before confluence with Kanhan river at Waregaon Bridge, Village. Waregaon, Taluka. Kamptee

1909: Kanhan river at D/s of Nagpur, Village. Agargaon, Taluka. Kuhi

2170: Kanhan river at U/s of M/s Vidarbha Paper Mills, Village. Sinora, Taluka. Parseoni

2171: Kanhan river at D/s of M/s Vidarbha Paper Mills, Village. Sinora, Taluka. Parseoni

2722: Wena river at U/s of Mohata Mills, near Railway bridge on Wardha-Chandrapur, Village. Hinganghat, Hinganghat

2723: Wena river at D/s of Mohata Mills, near bridge on Hinganghat. Wadner road, Village. Hinganghat, Taluka. Hinganghat

Surface water quality results reveals that Average pH is in the range of 8.1to 8.2, DO is in the range of to 4.3 to 6.7, and BOD is in the range of 3.4 to 4.9. Faecal Coliform in the range of 24.6 to 75.7.

Table 5 Ground Water Quality

Station Code	pH			DO (mg/L)			BOD (mg/L)			FC MPN/100ml		
	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
1995	8.7	8.7	8.7	6.1	6.1	6.1	3.2	3.2	3.2	27.0	27.0	27.0
1996	8.8	8.8	8.8	7.0	7.0	7.0	3.2	3.2	3.2	14.0	14.0	14.0
1998	9.0	9.0	9.0	6.3	6.3	6.3	3.8	3.8	3.8	4.5	4.5	4.5
2000												
1997	7.4	7.4	7.4	5.4	5.4	5.4	3.8	3.8	3.8			
2203	7.6	7.6	7.6	7.5	7.5	7.5	3.0	3.0	3.0			
2826	7.5	7.9	7.7	5.3	7.6	6.4	3.2	4.0	3.6			
Average	8.16	8.22	8.19	6.24	6.63	6.43	3.37	3.50	3.43	15.17	15.17	15.17

Where;

1996:Gram Panchayath Dug well , Near Balaji Gajbhiye House,Village-Khaperkheda (Ward No.4), Taluka- Saone

1998:Gram Panchayath Dug well , Near Jagadamba G. M. S. Mandir Sahakari Sanstha, Village-Koradi,Taluka- Kamptee

2000:Dug well near Sarode Kirana Store, Village-Bhandewadi,Taluka- Nagpur

1997:Bore well near Primary Health Centre, Village-Raipur,Taluka- Hingna

2203:Hand Pump - Zilla Parishad Primary School, Village- Bhugaon,Taluka- Wardha

2826:Dug well near Railway station & Cotton market, Village- Wardha, Taluka- Wardha

Ground water quality results reveals that Average pH is 8.2, DO found averagely 6.4 and average BOD concentration is 3.0mg/L. Average Faecal is in the range of 15.2

Overall 533.23MLD sewage is generated from 21 ULBs. Existing capacity of 345.3MLD of STP. However almost 37.% of sewage i.e. 187.93is left untreated which is a serious threat to the water resources and immediate requirement of at least 190MLD STP to treat the entire generated sewage of the district and prevent river pollution. Only 70% of population is covered under the sewage network.

There are 1262 industries, generating 35.3MLD of wastewater. Out of 1262 industries 47 industries are non-complying in terms of meeting discharge standards. Also there is 4 complaints of industrial pollution. There is One Common Effluent Treatment Facility.

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. 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 i the river bodies ▪ 6920 Bore-wells are being used without CGWB permission are identified but none of them have taken permission to withdraw water 	<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 	High

Sectors	Gaps	Action Points	Priority
		<ul style="list-style-type: none"> ▪ Notices and actions needs to be taken against violator who are withdrawing water without permission ▪ Protection methods to be developed for creative stoppage of dumping of solid waste in the surface water bodies 	
Domestic	<ul style="list-style-type: none"> ▪ Correlation between generation and treatment often misleading ▪ Water budgeting exercise often missing ▪ Computation of water footprint missing ▪ It seems there is no STP installed within the district and entire sewage is being discharged in to the river without treatment ▪ Sewage network covers approximate 70% of entire population ▪ 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 190MLD of STP needed ▪ In situ treatment for 2 Rivers of 196km stretches to be developed ▪ Need to construct sewage collection network to cover 100% Population ▪ Policy for reuse / recycle of treated wastewater 	Very high & Immediate
Industrial	<ul style="list-style-type: none"> ▪ Performance of CETP is questionable 	<ul style="list-style-type: none"> ▪ Need to explore option for provision of at least one CETP within the district ▪ Digital compliance methodology to be developed ▪ Disposal system to be under constant surveillance 	High

5.0 Air Quality Management

Both CPCB & MPCB through their NAMP & SAMP programme has set up 5 monitoring station in Nagpur region. Out of which 4 comes under NAMP and 1 comes under CAAQM. Air quality details of Nagpur district are taken from the Nagpur Region based on the Regional Offices / Areas declared by the MPCB and as Nagpur city comes under Nagpur region. Nagpur comes under list of Non Attainment cities with respect to the Ambient Air Quality India (2011-2015) & WHO reports 2014/2018.

From the **Figure 6** it seems that PM₁₀ concentration is above the standard limits at almost all monitored locations. An exceedance factor 1.65 is observed for PM₁₀ that needs immediate attention. Whereas in case of SO₂ & NO_x, it is within the permissible limit of NAAQS. In view of the same the primafacea of every ULB shall be to establish at least 1 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.

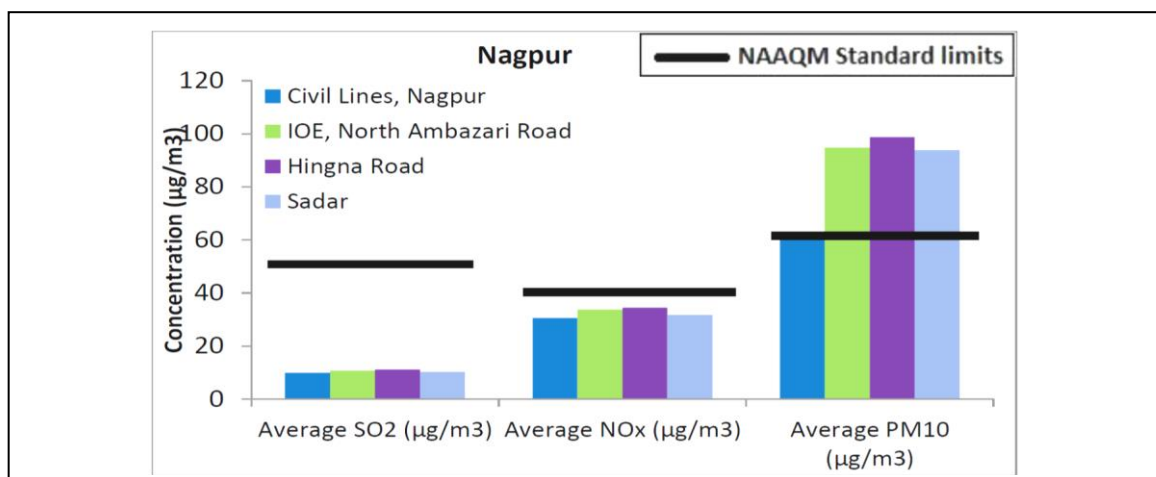


Figure 6 Details of Air Quality

Gap identified and action plan to be adopted with its priority for air quality of the district is presented 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 1.6 ▪ Limited CAAQMS to establish / corroborate inferences ▪ Sectoral action plans not effectively established ▪ 30 Numbers of industries not meeting air emission standards ▪ 68% of all ULBs covers under vehicle pollution check centres ▪ No provision for dust suppression vehicles ▪ Nagpur City comes under list of Non Attainment cities with respect to the Ambient Air Quality India (2011-2015) & WHO 	<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 atleast 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 ▪ Action against industries violating air emission norms under Polluter Pay Principle ▪ Installation of additional vehicle pollution check centre to meet 100% 	High

Sectors	Gaps	Action Points	Priority
	reports 2014/2018	coverage <ul style="list-style-type: none"> ▪ Provision of atleast one dust suppression vehicles per ULB ▪ Green barriers / Photo catalyst options to be evaluated ▪ Capacity building to be enhanced ▪ Compliance and specific mitigation measures need to initiated as per the requirement of Non Attainment Cities 	

6.0 Mining Activity Management plan

Nagpur region is known for mining activity. Mining activity in Nagpur district includes Coal, Manganese, Dolomite Basalt Mine (Stone quarry), Quartz/ Quartzite, White clay, Gravel, Clay for Bricks, River Sand, Sand for stowing in underground mines. Total area covered under mining is 36.36Sq.km. out of which 0.34km area is covered by sand mining. As on date 265 number of licenses for various Mining activates are issued by the respective authorities. However it seems only 18 mining areas are meeting consent conditions.

7.0 Noise Action Plan

Other than event base monitoring and special projects related / orders monitoring, MPCB carries out annual noise monitoring at 5 locations. There are 12 numbers of noise measuring devices with all ULBs. and 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. Monitoring results spells potential management plan that could be taken up on priority by each of the ULBs. There is no complaint received in lat one year related to the noise pollution. 2 complaints received on noise pollution in last 1 year. District authorities have installed Sign boards in towns and cities in silent zones.

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.