DISTRICT ENVIRONMENT PLAN, YAMUNA NAGAR

District Environmental Plan

Of

DISTRICT YAMUNA NAGAR

(As per Hon'ble NGT order dated 26.09.2019 in O.A. No. 360/2018 Titled as Shree Nath Sharma Vs Union of India & Ors.)

INDEX

CHAPTER 1. INTRODUCTION

1.0 Background

Hon'ble National Green Tribunal in order dated 26.09.2019 in O.A. No. 360/2018, M.A. No. 823/2018[SLP (Civil) No. 2959/2014] titled as Shree Nath Sharma Vs Union of India & Ors ordered regarding preparation of District Environment Plan. This Tribunal in O.A. No. 606/2018, while dealing with the compliance of Municipal Solid Waste Management Rules, 2016 also flagged other issues and required monitoring at the level of the Chief Secretaries and the District Magistrates.

In the above said order dated 26.09.2019, it is stated that among others

12. The Department of Environment of all States and Union Territories may collect such District Environment Plans of their respective States and finalize the 'State Environment Plan' covering the specific thematic areas referred in Para-7 including information as contained in Para-8 and template of Model/Models District Environment Plan provided by the CPCB. The action for preparation of State's Environment Plan shall be monitored by the respective Chief Secretaries of States and Administration of UTs. Let this action be completed by 15.12.2019 and compliance be reported to the Tribunal by 31.12.2019.

13. Based on States and UTs Environment Plans, MoEF&CC and CPCB shall prepare country's Environment Plan accordingly. Let the Secretary, MoEF&CC and Chairman, CPCB steer the preparation of country's Environment Plan. Let their action be completed by 31.01.2020 and compliance be reported to the Tribunal by 15.02.2020.'

Hon'ble NGT, New Delhi also referred to order dated 15.07.2019 in O.A. No.710/2017, Shailesh Singh vs. Sheela Hospital & Trauma Centre, Shahjahanpur & Ors. directing as follows:

"We find it necessary to add that in view of Constitutional provisions under Articles 243 G, 243 W, 243 ZD read with Schedules 11 and 12 and Rule 15 of the Solid Waste Management Rules, 2016, it is necessary to have a District Environment Plan to be operated by a District Committee (as a part of District Planning Committee under Article 243 ZD) with representatives from Panchayats, Local Bodies, Regional Officers, State PCB and a suitable officer representing the administration, which may in turn be chaired and monitored by the District Magistrate. Such District Environment Plans and Constitution of District Committee may be placed on the website of Districts concerned. The monthly report of monitoring by the District Magistrate may be furnished to the Chief Secretary and may be placed on the website of the District and kept on such websites for a period of one year. This may be made operative from 1.08.2019. Compliance of this direction may also be seen by the Chief Secretaries of the States/UTs. This may not only comply with mandate of law but provide an institutional mechanism for effective monitoring of environment norms."

Hon'ble National Green Tribunal in O.A. No. 360/2018 dated 26.09.2019 ordered regarding preparation of District Environment Plan/State Environment. In the above said order, it is also stated that the action for preparation of state's Environment Plan shall be monitored by the respective Chief Secretaries of the state and admiration of the Union Territories. Based on the state and UTs Environment Plans, MoEF&CC & CPCB shall prepare country's Environment Plan. In this regard, Director, Environment & Climate Change Department, Haryana directed to all District Magistrates & Regional Officers of HSPCB for preparation of District Environment Plan (DEP) as per the orders of Hon'ble NGT with covering specific thematic areas as referred in para no. 7 of said NGT orders

dated 26.09.2019 vide his Memo No. DEH/2020/6021-56 dated 06.01.2020. Plan shall be covering the specific thematic areas as mentioned below:-

The District Environmental plans cover the following environmental issues:

- Municipal Solid Waste Management
- Plastic Waste Management
- Construction and Demolition Waste (C&D)
- Biomedical Waste Management
- Hazardous Waste Management
- E-Waste Management
- Water Quality Management Plan
- Domestic Sewage Management Plan including Status of STPs and their performance & Utilization/Re-used of treated effluent
- Industrial Wastewater Treatment and its Utilization and Management Plan including Status of CETPs/ETPs
- Air Quality Management Plan
- Fire Management Plan, Forest Department
- Mining Activity Management
- Noise Pollution Management

Further, as per the decision taken by the committee headed by Retd. Justice Pritam Pal during the meeting held on dated 15.02.2021 at Haryana Niwas, Chandigarh and directions received from Additional Chief

Secretary, Govt. of Haryana, Environment & Climate Change Department, Chandigarh vide her DO No. PS/ACS, Env./2021/359-359/21 dated 17.02.2021 the District Environment Committee has been formed in the Yamuna Nagar District vide Deputy Commissioner Office orders dated 03.03.2021 comprising of following members to evolve and execute District Environmental Plan:-

1.	Deputy Commissioner, Yamuna Nagar District	Chairman
2.	Commissioner, Municipal Corporation, Yamuna Nagar Jagadhri	Member
3.	Sub Divisional Magistrate, Yamuna Nagar - Jagadhri	Member
4.	Sub Divisional Magistrate, Radaur, District Yamuna Nagar	Member
5.	Sub Divisional Magistrate, Bilaspur, District Yamuna Nagar	Member
6.	District Development Panchayat Officer, Yamuna Nagar	Member
7.	Chief Medical Officer, Health Department, Yamuna Nagar	Member
8.	Superintending Engineer, PHED, District Yamuna Nagar	Member
9.	Superintending Engineer, Water Supply & Irrigation, District Yamuna Nagar	Member
10.	District Forest Officer, Yamuna Nagar	Member
11.	District Revenue Officer, Yamuna Nagar	Member
12.	Joint Director, DIC, Yamuna Nagar	Member
13.	Deputy Director, Animal Husbandry, Yamuna Nagar	Member
14.	Executive Engineer, PWD & BR, Yamuna Nagar	Member
15.	Mining Officer, Mines & Geology Department, Yamuna Nagar	Member
16.	Deputy Director, Agriculture Department, Yamuna Nagar	Member

17.	Secretary, Municipal Committee, Radaur	Member
18.	Secretary, Municipal Committee, Sadhaura	Member
19.	Regional Officer, HSPCB, Yamuna Nagar	Member Convener

1.1 Objectives of District Environment Plan:-

In the process of development, the issues confronting today are achieving desired development for economic or social reasons on one hand and safeguarding the environment and maintaining good quality of life on the other. While taking up developmental activities, the assimilative capacities of the environmental components i.e. air; water and land to various types of pollution are rarely considered. Also, lack of proper land use control is resulting in poor land use compatibility. The developmental activities being haphazard and un-controlled are leading to overuse, congestion, incompatible land use and poor living conditions. The problems of environmental pollution are becoming complex and are creating high risk environment.

Conventionally, the environmental pollution problems are solved by introducing environmental management techniques such as control of pollution at source, providing of sewage treatment facilities etc. However, environmental risks are not being controlled completely by such solutions.

The environmental aspects are to be induced into each of the developmental activities at the planning stage itself and are to be well co-ordinate and balanced.

Presently, the environmental aspects are not usually considered while preparing master plans or regional plans and the process is skewed towards developmental needs. For all developmental activities, a crucial input is land and depending on the activity a specific land use is decided. The environmentally related land use such as trade and industry, housing construction, mining etc. is likely to have some impact on the environment.

These land uses need proper planning and integration as some of the activities have interdependencies such as industry with transport, housing etc.

The various Objectives of District Environment and Management Plan (DEMP) are described below:-

1. To ensure conservation of environment and natural resources at district level.
2. Restore ecological balance.
3. To achieve the Sustainable Development Goals and district level targets within the prescribed timeline.
4. To ensure sustainability at district level following the principles of resource efficiency.
5. To ensure decentralized micro level planning, execution and monitoring regarding environment conservation.
6. To incorporate all facets of environmental conservation in micro level planning.
7. To harness active participation of all stakeholders in planned environment conservation actions.
8. Assess, Mitigate and monitor adverse impacts of various pollution sources at district level.
9. Capacity building of stakeholder, department, agencies, organizations and individuals at district level to understand and implement micro level environmental conservation actions.
10. To harness inter-departmental coordination for implementation of action plans.
11. To develop local knowledge centers and expertise for developing environmental conservation strategies at district level.
12. To develop and implement micro monitoring system at district level.

1.2. District Profile

1.2.1: Physiography & Demography

Yamuna Nagar district, surrounded by the state Himachal Pradesh in 30° 17′ latitude , by the state of Uttar Pradesh in the east, by Ambala district in the south east, and the district of Karnal and Kurukshetra in the south north. Yamuna Nagar district is situated at an altitude of 274 meters. From the sea level, this district is located in the top 53/F, 2,3,4,7,8,11 and 12 of India's survey. The Yamuna River flows from Yamuna Nagar district.

- Yamunanagar is 106 Km far from Chandigarh.
- Linking Roads : Situated on the National Highway No. 73
- Longitude: 77.26 , Latitude: 30.12
- Area: 1,756 sq. km | Altitude : 255 m
- Population: 12,14,162 (Census 2011)
- Literacy Rate: 78.90 %

1.2.2: Geography

Yamunanagar district is situated on north-eastern tip of Haryana. It is bounded by Himachal Pradesh on northern side and Uttar Pradesh on eastern side. Land is plain with Shivalik hills on northern side, some high cliffs can also be found on northern side. The Kalesar Wild Life Santuary is spread in 11570 Acres area in the lap of lower hills of Shivaliks, situated in the eastern part of Yamunanagar. Mainly the forest has Saal, Khair, Shisam, Tun, Sain and Amla. In this forest there are many wild animals. A Herbal Nature Park Situated in village

Chuharpur on the Yamuna Nagar – Paonta road. The mountainous belt of Shivaliks in Haryana has a rich diversity of medicinal plant species. In view of the increasing market demand for medicinal plants, both national and international and to exploit the commercial potential of medicinal resources wealth of this region, the Ch. Devi Lal Herbal Nature Park has been created and developed at Chuharpur in district Yamunanagar to conserve and propagate the resource base of medicinal plant material in Haryana.

1.2.3: Climate

Yamuna Nagar is extremely hot in summer at around 45 °C (113 °F) and mild in winter. The hottest months are May and June and the coldest December and January. The climate is arid to semi-arid with average rainfall of 354.5 mm. Around 29% of rainfall is received during the months from July to September, and the remaining rainfall is received during the period from December to February.

1.2.4: Economy

The city of Yamunanagar is a gem for the state of Haryana as far as industries and revenue is concerned. This city generates the second highest revenue for the state and has expanded its trade and commerce aspirations in the recent times by many folds making it a economically successful city. This city is the apple of the eye for many industrialists and commercial giants, due to its fertile land and trade friendly policies, which makes it very easy for the industrial giants and manufacturing companies to set up their base here. Be it sugar mills, heavy machinery factories, plywood factories, paper mills, steel factories or any other industrial unit, this city has it all. Also, an erstwhile area of this city known as Jagadhri, which has been well developed and connected to this city

after a lot of developmental work from the Haryana Shahari Vikas Pradhikaran formerly Haryana Urban Development Authority, has a conglomerate of brass and stainless steel utensil industries.

Since the inception of Yamuna Nagar district it has made rapid stride in the sphere of development of industries. The District Yamuna Nagar has achieved a phenomenal growth in the field of small scale industries sector. The total number of small scale industries in existence are 3250. The main industries of Yamuna Nagar district are wood based and metal based. The total numbers of metal industries are approximately 600, wood based 760 and other manufacturing/servicing and repairing units are 2060. These units are providing employment to over 30000 persons. Small Scale industries in Jagadhri are engaged in the manufacturing of Stainless Steel, Aluminium and Brass utensils in a big way and earned a good name for the State not only in National Market but also in International Market. M/S Saraswati Sugar Mill of Yamuna Nagar is famous not only in India but also in foreign countries and sugar is exported in many countries and the district is said to be the sugar bowl of Haryana. This district is also famous for Engineering goods in the state and Plywood, Ply-board product of the district are gaining popularity throughout the state of Haryana and all over the country. As a result of spectacular achievement made in the industrial development the district now has a prominent place in the industrial map of Haryana and Yamuna Nagar and Jagadhri are important industrial centers.

There are 14 Large & Medium scale units in the district. Out of these, only one unit is in the Public Sector named M/s Railway Workshop, Jagadhri which is engaged in the repair of Railway carriage and wagons of Indian Railway. These units are engaged in the production of Paper, Sugar,Maize Starch, Sugar machinery, Hydraulic Press, Automobile Leaf Springs, Paper,Cement & chemical machinery, Mini Cement Plant, Plywood machinery, rectified spirit, periodical overhauling of coaches and wagons, Hydraulic jacks and Iron casting, Plywood, Block board, Calcium carbonate etc.

In view of the demand of the Industrial Associations for the Industrial plots, Government of Haryana developed an Industrial Estate in Village Manakpur in Chhachhrauli block, which is about 5 km away from Jagadhri. Through Haryana State Industrial Development Corporation 135 Acres of Land acquired for this purpose. In the year 2000, HSIIDC carved out 232 plots in Phase – I and out of these 231 plots have been allotted to Industries. In the year 2016 Phase- II of HSIIDC Manakpur was developed on 258 acre land. 318 Nos of plots were carved out by HSIIDC out of which 24 plots stands allotted.

In District Yamuna Nagar there are 24 exporting units, which are exporting their products to various countries. The major exporting units are namely M/s Indian Sugar & General Engineering Corporation, Yamuna Nagar, M/s Yamuna Gases & Chemical Ltd. Jagadhri, M/s Oriental Engineering Works P. Ltd.Yamuna Nagar, M/s Erol Export P.Ltd.Yamuna agar, M/s Pragati Engineers, Yamuna Nagar, M/s Vishal Metal Industries, Jagadhri, Chanana Udyog etc. These units are exporting items like Sugar, Paper machinery parts, Cable jointing kits & Accessories, Spray paint equipment, Transmission jacks, Wooden cable Drums, Automobile Leaf springs, Paper & Paper Board, Aluminium cookware, Brass sheets etc. to the countries like Switzerland, China, U.S.A., France, Indonesia, Canada, U.K., Germany, France & Gulf countries. Export performance for the year 2004-05 was 7954.5 lacs. M/s Pragati Engineers, Khajuri Road, Yamuna Nagar won the Golden America 99 Award for quality and excellence in Madrid Spain. M/s Pragati Engineers is also a four time consecutive Export Award winner from the Government of India for excellence in the field of export. M/s Yamuna Gases and Chemical Ltd., Ambala Road, Jagadhri have also received National Productivity Council Award from Government of India during the year 1995-96. The export value of District Yamuna Nagar for the year 2019-20 is approximately 33124.3 Lac Rs.

The total number of small scale industries in existence are 3412. The main industries of Yamuna Nagar district are wood based and metal based. The total numbers of metal industries are 430, wood based 760, fabrication and engineering 150 units, Formaldehyde and chemical manufacturing 10 units, Gases manufacturing

2 units and other manufacturing/servicing and repairing units are 2060. These units are providing employment to over 25500 persons. Small Scale industries in Jagadhri are engaged in the manufacturing of Stainless Steel, Aluminium and Brass utensils in a big way and earned a good name for the State not only in National Market but also in International Market. The small scale units of Yamuna Nagar meets 60% of the demand of Aluminium Boxes of the Country's defense force. Sugar Mill of Yamuna Nagar is famous not only in India but also in foreign countries and sugar is exported in many countries. This district is also famous for Engineering goods in the state and Plywood, Ply-board product of the district are gaining popularity throughout the state of Haryana and all over the country. As a result of spectacular achievement made in the industrial development the district now has a prominent place in the industrial map of Haryana and Yamuna Nagar and Jagadhri are Important industrial centers.

There are 14 Large & Medium scale units in the district. Out of these, only one unit is in the Public Sector named M/s Railway Workshop, Jagadhri which is engaged in the repair of Railway carriage and wagons of Indian Railway. These units are engaged in the production of Paper, Sugar,Maize Starch, Sugar machinery, Hydraulic Press, Automobile Leaf Springs, Paper,Cement & chemical machinery, Mini Cement Plant, Plywood machinery, rectified spirit, periodical overhauling of coaches and wagons, Hydraulic jacks and Iron casting, Plywood, Blockboard, Calcium carbonate etc. These units are providing employment to over 13351 persons.

One Mega unit under the name and style of Sir Chhotu Ram Thermal Power Plant is working in the District which has capital investment of Rs. 2281.22 Crores and annual turnover of Rs.1342.42 Crores.

2.1: Introduction of Solid Waste

"Solid Waste" means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste.

Improper Municipal Solid Waste (MSW) disposal and management causes all types of pollution: air, soil, and water. Indiscriminate dumping of wastes contaminates surface and ground water supplies. In urban areas, MSW clogs drains, creating stagnant water for insect breeding and floods during rainy seasons. Uncontrolled burning of MSW and improper incineration contributes significantly to urban air pollution. Greenhouse gases are generated from the decomposition of organic wastes in landfills, and untreated leachate pollutes surrounding soil and water bodies. Health and safety issues also arise from improper Municipal Solid Waste Management (MSWM). Insect and rodent vectors are attracted to the waste and can spread diseases such as cholera and dengue fever. Using water polluted by MSW for bathing, food irrigation and drinking water can also expose individuals to disease organisms and other contaminants.

There are identified 22 human diseases that are linked to improper MSWM. Waste worker and pickers are directly impacted from improper MSWM. The co-disposal of hazardous and medical wastes with MSW poses serious health threat. Exhaust fumes from waste collection vehicles, dust stemming from disposal practices and the open burning of waste also contribute to overall health problems. There is specific danger of concentration of heavy metals in the food chain, a problem that illustrates the relationship between municipal solid wastes and liquid industrial effluents containing heavy metals discharged to a drainage/sewerage system and /or open dumping sites

of municipal solid wastes and the wastes discharged thereby maintains a vicious cycle including these some other types of problem are as follows:-

- Chemical poisoning through chemical Inhalation
- Uncollected waste can obstruct the storm water runoff resulting in flood
- Low birth weight
- Cancer
- Congenital malformations
- Neurological disease
- Nausea and vomiting
- Mercury toxicity from eating fish with high levels of mercury.
- Resulted in high algal population in rivers.
- Degrades water and soil quality

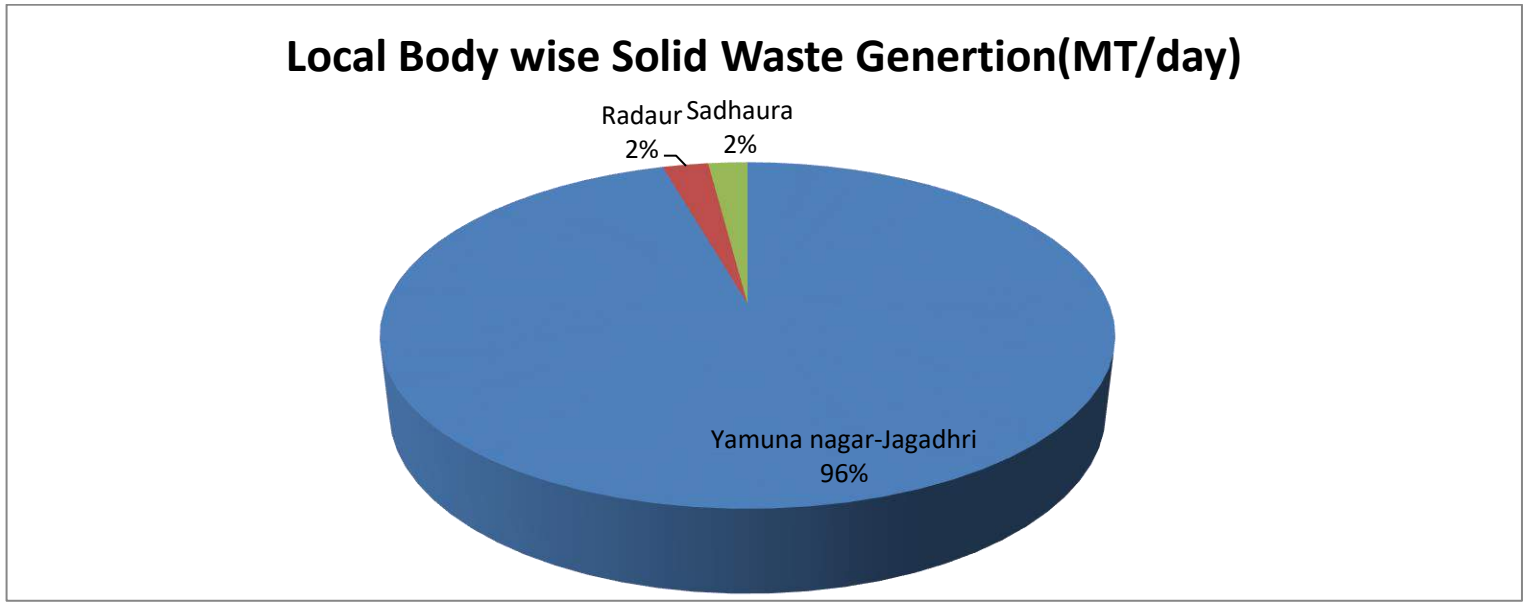
The decomposition of Municipal Solid Waste into constituent chemicals is a common source of local environmental pollution. A major environmental concern is gas release by decomposing garbage. Methane is a by-product of the anaerobic respiration of bacteria, and these bacteria thrive in landfills with high amounts of moisture. Methane concentrations can reach up to 50% of the composition of landfill gas at maximum anaerobic decomposition. A second problem with these gasses is their contribution to the enhanced greenhouse gas effect and climate change. Leachate generated from MSW land fill sites poses a threat to local surface and ground water systems.

The Solid Waste Management Rules, were notified by Ministry Of Environment, Forest And Climate Change, Govt. of India vide Notification dated 8th April, 2016. These rules applies to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbours, defense establishments, special economic zones, State and Central government organizations, places of pilgrims, religious and historical importance as notified by respective State government from time to time and to every domestic, institutional, commercial and any other non residential solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio medical wastes, e-waste, lead acid batteries and radio-active waste, that are covered under separate rules framed under the Environment (Protection) Act, 1986.

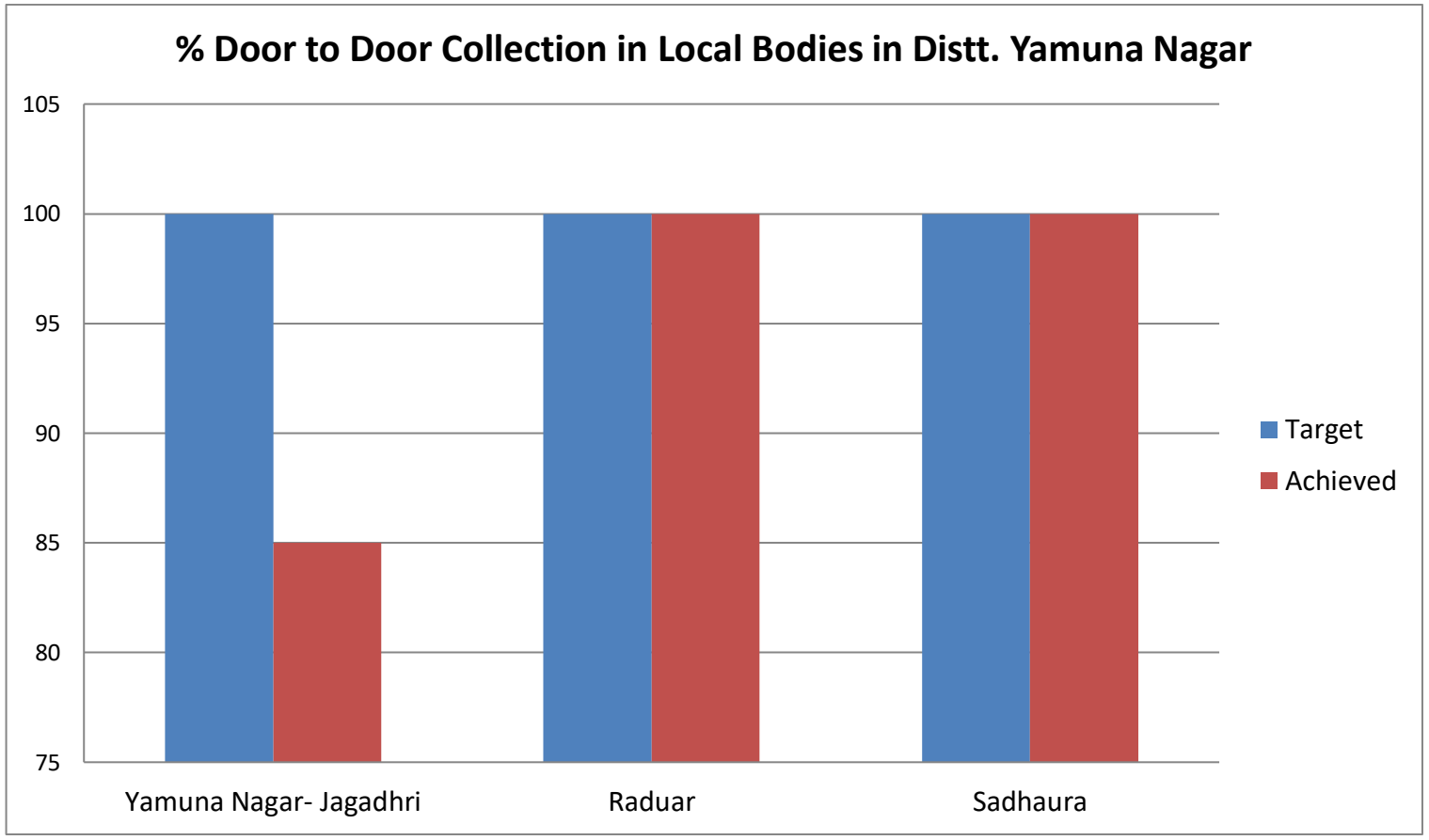
There are 3 ULB's under District Yamunanagar having a Total area of around 202.28 Sqkm. The Total population (as per census 2011) of all the 3 ULB's is around 511358. Around 291 TPD of Municipal Solid waste is being generated. There is around 1.21 Lakh MT of Legacy waste at Kail plant.

2.2: Status of Solid Waste in the District

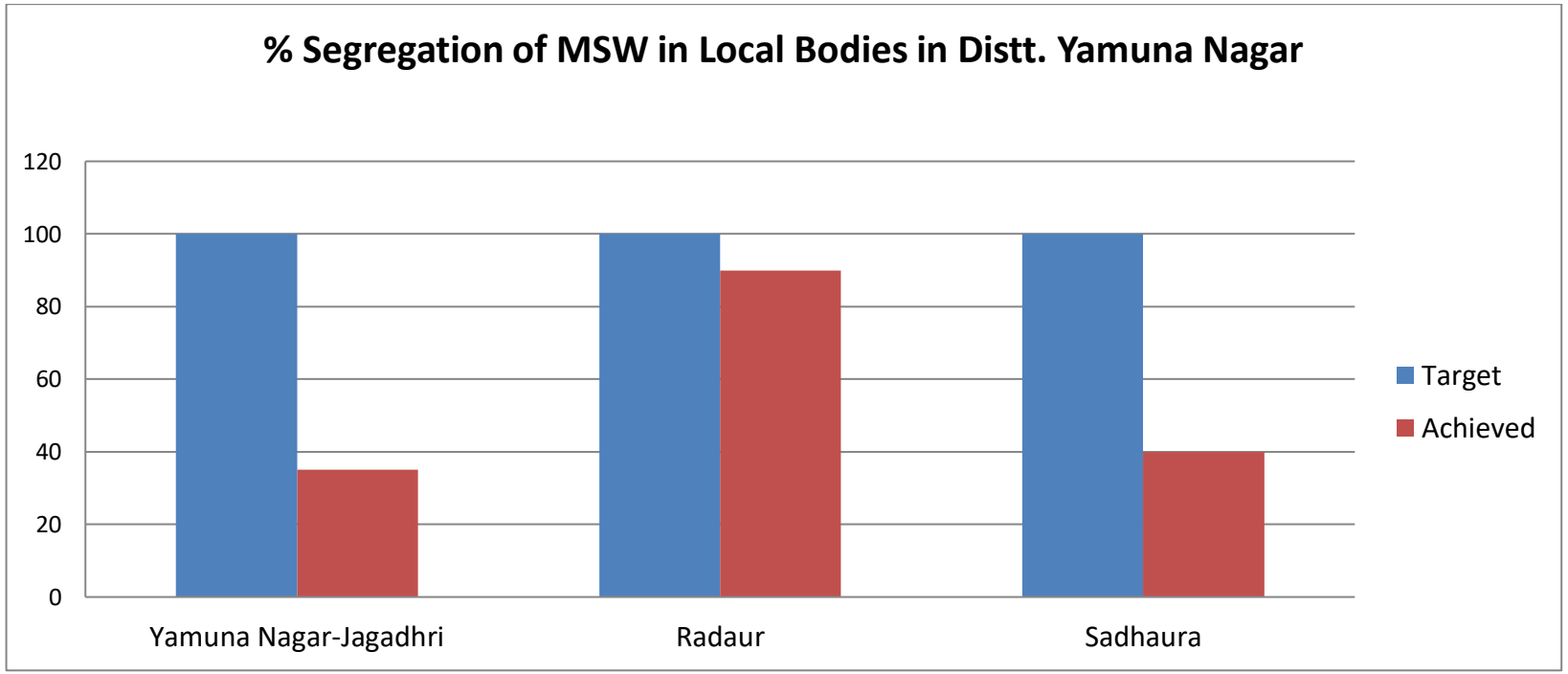
The district Yamuna Nagar is having 03 major towns namely twin city of Yamuna Nagar and Jagadhri, Radaur and Sadhaura. The twin city of Jagadhri and Yamuna Nagar is administered by Municipal Corporation and rest 02 town i.e. Radaur and Sadhaura are relatively small towns and administered by the Municipal Committees. The twin in city of Yamuna Nagar and Jagadhri is densely populated and it is old industrial city and hub for many small scale industries, commercial establishments and other bulk solid waste generators such as hotels, banquet halls, hospitals, educational institutes and office complexes. Approximately 278 MT of solid waste generated per day from the twin city of Jagadhri and Yamuna Nagar and approximate 13 Ton day solid waste generated from the remaining 02 Municipal Committees i.e. Sadhaura (6 MT/day) and Radaur (7 MT/day).



The major steps in scientific disposal of Municipal Solid Waste are collection, segregation, transportation, treatment and disposal. As for as collection and transportation of Municipal Solid Waste is concerned 100% door to door collection is being done in 02 local bodies i.e. Radaur and Sadhaura and presently 85% being done in the Municipal Corporation of Yamuna nagar and Jagadhri in district Yamuna Nagar.



As for as segregation of solid and wet waste concerned the Municipal Corporation, Yamuna Nagar is presently achieved 35% of the target and Municipal Committee Radaur is doing 90% and Municipal Committee is doing 40% segregation.



Presently in district Yamuna Nagar there is no operational scientific treatment & disposal facility for Municipal Solid Waste. The solid waste generated from the Municipal Corporation is being dumped at the land fill site at Village Kail, Ambala Road, Jagadhri. At this land fill site around 1.21 lakh MT of legacy waste presently lying. The Municipal Corporation, Yamuna Nagar has proposed to eliminate this legacy waste of 1.21 Lakh MT through Bio

Remediation process and for this they have already allotted the works to M/s BVG India and this bio remediation work will be completed by 31st July 2021. In district Yamuna Nagar integrated facility for waste to compost and Refused Derived Fuel (RDF) is already under planning by the State Government. There are 473 Panchayats in District Yamuna Nagar and out of these in 71 nos. Panchayats door to door collection of solid waste is done.

2.3: Strategies to Manage Municipal Solid Waste

SR. No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Collection, Segregation &Treatment of solid waste	• To carry out 100% door to door collection with segregation at source.	• Department of Urban Local Bodies.	• Within 03 months time.
		• Quantification of generation of solid wastes (Biodegradable, Non-biodegradable, inerts, etc.)	• Department of Urban Local Bodies.	• Within 03 months time.
		• Elimination of legacy waste	• Department of Urban Local Bodies	• Within 06 months time
		• Establishment of sufficient material recovery facilities (MRF) to segregate metals, plastics etc. from solid waste.	• Department of Urban Local Bodies	• Within 06 months time
		• Development of leachate collection and treatment facility at solid waste dumping site.	• Department of Urban Local Bodies	• Within 06 months time

		• Segregation at source in proper color coded bins.	• Department of Urban Local Bodies	• Within 06 months time
		• Prevention of solid waste entering into water bodies by removing old dumping sites along the water bodies and also providing/installing bar mesh in Nallah and Drains.	• Department of Urban Local Bodies • Irrigation Department. • PHED	• Within 06 months time
		• Providing sufficient nos. of litter bins and waste storage bins.	• Department of Urban Local Bodies	• Within 06 months time
		• GPS enabled vehicles for waste transportation and user friendly mobile app.	• Department of Urban Local Bodies	• Within 06 months time
		• Eliminate the practices of open garbage burning.	• Department of Urban Local Bodies	• Within 06 months time. • Regular action against the violators.
		• Individual compost Facilities in Public parks for disposal of their dry leaves and grass.	• Department of Urban Local Bodies • HSVP	• Within 06 months time.
		• Ensure compost facilities in school/colleges/ educational institutes/ banquet halls/hotels.	• Department of Urban Local Bodies • DEO • HSPCB	• Within 12 months time

		• To stop lead batteries going into grey market/ disposal through un-scientific manner/mixing with solid waste.	• Department of Urban Local Bodies • HSPCB	• Within 12 months time
		• Collection points for CFLs	• Department of Urban Local Bodies	• Within 06 months time
		• Installation of integrated scientific solid waste management facility by way of compost and RDF.	• Department of Urban Local Bodies	• Within 12 months time
2.	Issuance of Authorization under SWM Rules, 2016	Local bodies generating solid waste greater than 5 tons/day shall obtain Authorization as per SWM Rules, 2016 No. of Eligible ULBs to obtain Authorization as on date. No. of ULBs obtained Authorization as on date.	• HSPCB	• There are 03 local bodies in the district Yamuna Nagar requiring but none have scientific facility for treatment and disposal for which authorization is required as per MSWM Rules. • As well as the scientific facility provided by ULBs the authorization will be issued immediately.

3.	Creating Awareness to the public at all the districts through Special Task Force	• Special Task Force should be constituted for periodically review once in two weeks on the status of creating awareness and also on the prevention of dumping of solid waste and discharge of sewage in water bodies, action against open burning of solid wastes, etc • Awareness shall be carried out through Eco-clubs in Schools, NSS & NCC in colleges	• Directorate of Information, Public Relations and Languages Department • Department of School Education, Haryana • Department of Higher Education	• Regular activity.

2.4: Conclusion & Recommendations

Improper Municipal Solid Waste (MSW) disposal and management causes all types of pollution: air, soil, and water. Indiscriminate dumping of wastes contaminates surface and ground water supplies. In urban areas, MSW clogs drains, creating stagnant water for insect breeding and floods during rainy seasons. Uncontrolled burning of MSW and improper incineration contributes significantly to urban air pollution. Greenhouse gases are generated from the decomposition of organic wastes in landfills, and untreated leachate pollutes surrounding soil and water bodies. Health and safety issues also arise from improper Municipal Solid Waste Management (MSWM). Insect and rodent vectors are attracted to the waste and can spread diseases such as cholera and dengue fever. Using water polluted by MSW for bathing, food irrigation and drinking water can also expose individuals to disease organisms and other contaminants

Scientific disposal of solid waste through segregation, collection and treatment and disposal in an environmentally sound manner minimizes the adverse impact on the environment. The local authorities are responsible for the development of infrastructure for collection, storage, segregation, transportation, processing and disposal of Municipal Solid Waste.

The scientific management of the Municipal Solid Waste also changes the overall aesthetic view of any city /town and it also gives the pleasant feeling of living in any city. The neat and clean city protects its citizen from many diseases and also reduced the pressure on the Govt. health facilities. By proper managing the Municipal Solid Waste we not only protect the human being but also protects the animals, birds which by means eats the scattered solid waste caught by many diseases and even die from the repercussion. By managing the solid waste we protect our water bodies, the water from where is being either directly used by the human beings/animals/birds or the same enter in our food chain through the crops cultivated by using the water from these water bodies.

The major role in management of municipal solid waste lie with the Urban Local Body and so they have to ensure the proper collection, segregation, transportation, treatment and disposal of such municipal solid waste and also to ensure by all means the such solid waste not come in contact with any water body or its leachate spoil the underground water. By looking forward the Urban Local Body need to immediately eliminate the huge legacy waste lying unattended within prescribed time frame manner and further on urgent basis installed the scientific facility for disposal and treatment of municipal solid waste collected.

Chapter 3 Plastic Waste Management

3.1: Introduction of Plastic Waste

"Plastic" Means material which contains as an essential ingredient a high polymer such as polyethylene terephthalate, high density polyethylene, Vinyl, low density polyethylene, polypropylene, polystyrene resins, multi-materials like acrylonitrile butadiene styrene, polyphenylene oxide, polycarbonate, Polybutylene terephthalate.

Plastics are made up of synthetic organic polymers which are widely used in different applications ranging from water bottles, clothing, food packaging, medical supplies, electronic goods, construction materials, etc. In the last six decades, plastics became an indispensable and versatile product with a wide range of properties, chemical composition and applications. Although, plastic was initially assumed to be harmless and inert, however, many years of plastic disposal into the environment has led to diverse associated problems. Environmental pollution by plastic wastes is now recognized widely to be a major environmental burden. In many instances, sheeting and packaging plastics are disposed of after usage, however, because of their durability, such plastics are located everywhere and persistent in the environment. In human occupational and residential environment, plastics made of petrol-based polymer are present in high quantity. At the end-of-life of these plastics, they are usually land-filled together with municipal solid waste. Plastics have several toxic constituents among which are phthalates, poly-fluorinated chemicals, bisphenol A (BPA), brominated flame retardants and antimony trioxide which can leach out to have adverse effects on environmental and public health. Plastics in electronic waste (e-waste) have become a serious global environmental and public health concern due to its large production volume.

Pollution by plastics and plastic products can damage and contaminate the terrestrial environment and can be subsequently transferred to the aquatic environment. Dumping of plastics on land or landfilling plastics

leads to abiotic and biotic degradation of the plastics, where plastic additives (e.g. stabilizers, harmful colorant moieties, plasticizers and heavy metals) can leach and eventually percolate into various aspects of the environment, thereby causing soil and water contamination. During this plastic degradation process, toxic chemicals like polystyrene and BPA can be released into the water causing water pollution. Chlorinated plastics are capable of leaching out toxic chemicals into the soil and subsequently seep into the underground water or surrounding aquatic system thereby polluting the ecosystem. Methane, a dangerous greenhouse gas, which significantly contributes to global warming, is released during microbial biodegradation of plastics.

Animals are exposed to plastic wastes majorly through ingestion and entanglement, however, ingestion is more frequent than entanglement. Ingestion of plastic wastes is capable of causing obstruction and physical damage to bird's digestive system, reduce the digestive ability of the system leading to starvation, malnutrition and eventually, death. Food supplies for human consumption can be adversely affected if animals are poisoned by toxic constituents from wastes of plastics and plastic products.

The chemicals used in the production of plastic are toxic and detrimental to the human body. Chemicals in plastic-like lead, cadmium and mercury directly can come in contact with the humans. These toxins can cause cancers, congenital disabilities, immune system problems and childhood development issues. The other toxins like BPA or health-bisphenol-A are found in plastic bottles and food packaging materials. When the polymer chains of BPA break down and enter the human body through contaminated water or fish, it could lead to some fatal damage to our body. Apart from these severe effects, humans can also develop some health conditions because of plastic. Here are some adverse health effects caused by plastic:-

- Asthma
- Pulmonary cancer due to inhalation of poisonous gases
- Liver damage

- Nerve and brain damage
- Kidney diseases

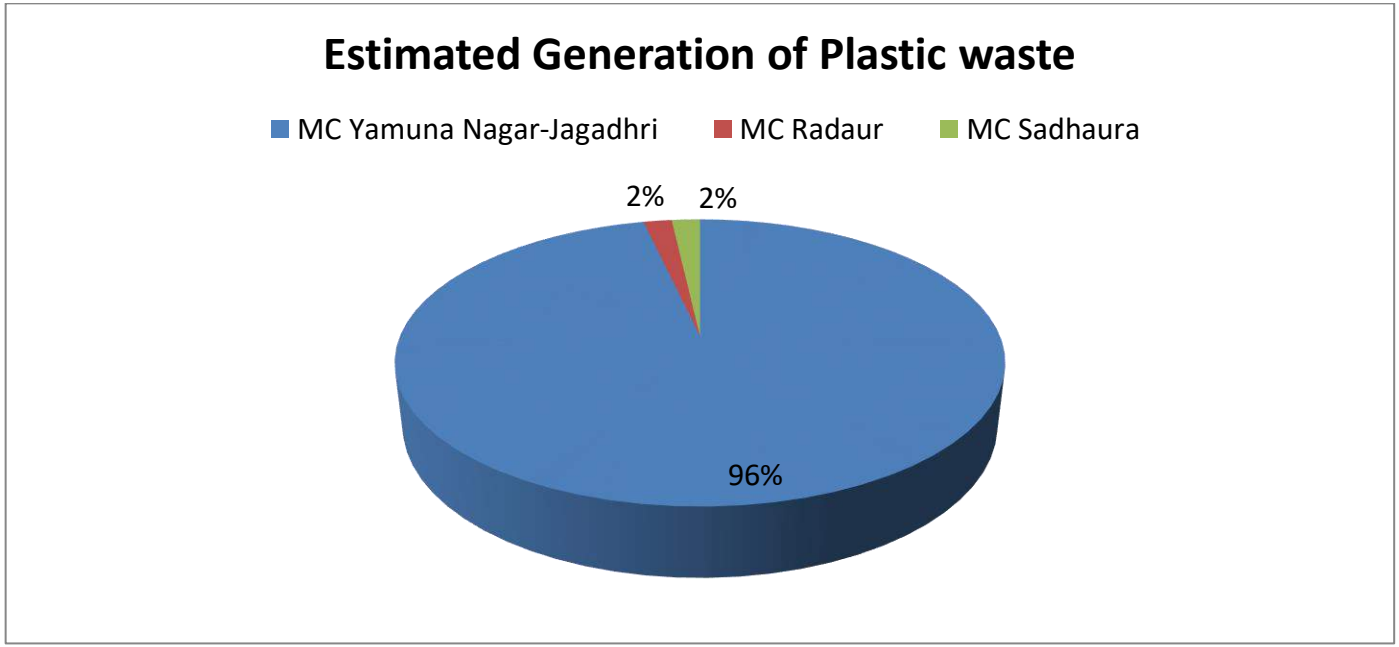
The common practice adopted for disposal of plastic waste products or plastic carry bags is land filling. As the estimated life of various plastics products is varying from 400 to 500 years and so plastic is consider non bio degradable and so land filling cause burden on the land as plastic waste not decomposed easily and also contaminate the land. An alternative to landfilling of plastic waste is incineration, but growing concerns exist about the potential atmospheric release of hazardous chemicals during the process. For instance, plastic waste fumes release halogenated additives and polyvinyl chloride, while furans, dioxins, and polychlorinated biphenyls (PCBs) are released from incineration of plastics into the environment. The disadvantage of combustion of plastics is the air pollution caused by the noxious fumes released into the atmospheres. Compounds of low molecular weight can vaporize directly into the air thereby polluting the air and based on their varieties, some may form a combustible mixture, while others may oxidize in solid form.

Reprocessing of recovered plastic scraps or wastes into usable products is called plastic recycling. Most plastics are non-biodegradable in nature; hence, the fundamental work is reduction of waste emissions, effective management and recycling of resulting wastes

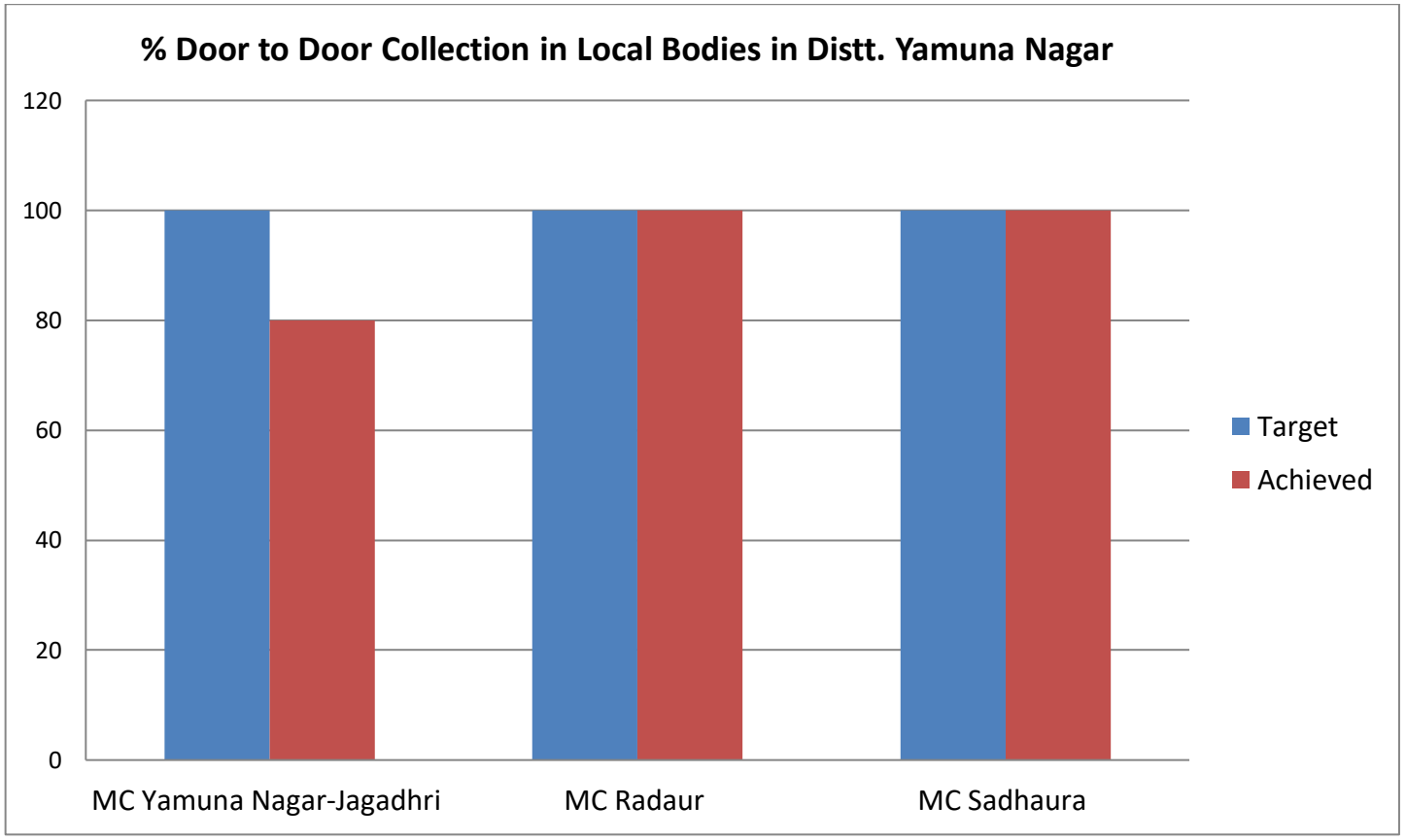
For management of the plastic waste, the Plastic Waste Management Rules, 2016 were notified by Ministry Of Environment, Forest and Climate Change, Govt. of India vide Notification dated 18th March, 2016. These rules apply to every waste generator, local body, Gram Panchayat, manufacturer, Importers and producer.

3.2: Status of Plastic Waste in the District

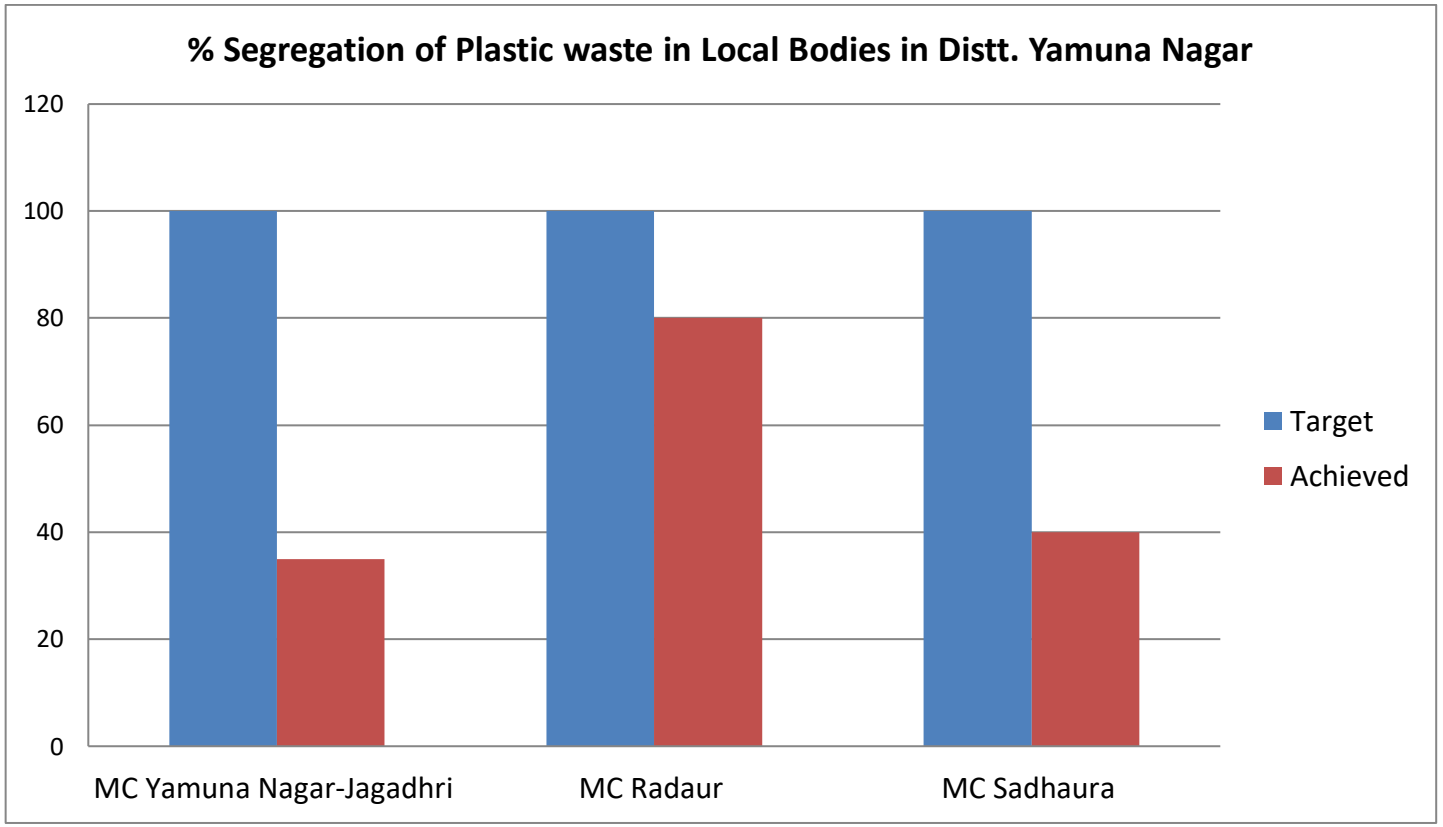
In the State of Haryana vide Haryana Urban Local Bodies Notification dated 20.08.2013, the single use plastic and poly carry bags have been banned for use, stock, sale and for manufacturing. Under the notification many Officers at district level have been empowered for challaning the violators. In the district Yamuna Nagar the major contributor in the plastic bags are poly carry bags and single use plastic generated from various households, commercial establishments, eateries, hotels, banquet halls etc. In the district Yamuna Nagar, around 2.8 TPD of Plastic waste is being generated, collected and transported to the dump site. The estimated quantity of generation of Plastic waste is Approx. 2.7 MT/Day in MC Yamuna Nagar-Jagadhri and Approx. 0.05 MT/ day each in MC Radaur & MC Sadhaura.



The major steps in scientific disposal of Plastic Waste are collection, segregation, transportation, treatment and disposal. As far as collection and transportation of Municipal Solid Waste is concerned 100% door to door collection is being done in 02 local bodies i.e. MC Radaur and MC Sadhaura and presently 80% is being done in the Municipal Corporation of Yamuna Nagar-Jagadhri in district Yamuna Nagar.



As far as segregation of plastic waste concerned the Municipal Corporation, Yamuna Nagar has presently achieved 35% of the target and Municipal Committee Radaur is doing 80% and Municipal Committee is doing 40% segregation.



The use of Single use plastic has been permanently banned in all the 3 ULB's of the district. There is no production unit of Plastic carry bags and single use plastic in district Yamunanagar. As per initiative of Chief Minister of Haryana, the use of plastic bottles in the Govt. offices and in Govt. functions have been discontinued.

The Urban Local Body, Yamuna Nagar has framed the Byelaws for use of Plastic wastes in the District in September 2019. These Bye-Laws are implemented strictly in the district and regular fines/challaning is being done against the Violators identified if any. The Minimum amount of fine is Rs 5000/- for littering of cutlery (including all Private/Govt. Offices) and Rs.10000/- for commercial establishment.

The plastic waste also creates hurdles in disposal of municipal solid waste which need to be segregated at source. Presently in the district there is no plastic waste recycler and disposal of plastic is in hands of un-organized sector.

3.3: Strategies to manage Plastic Waste

SR. No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Segregation and Quantification of Plastic Wastes	• Quantification of generation of plastic wastes	• ULB	• Within 03 months
		• Plastic waste segregation at source.	• ULB	• Within 03 months
		• Door to Door plastic waste collection in segregated form alongwith MSW	• ULB	• Within 03 months
		• Sufficient no. of material Recovery facilities to be established.	• ULB	• Within 03 months
		• Properly placing litter bins & waste storage bins.	• ULB	• Within 03 months
		• Engaging civil societies for management of plastic waste alongwith rag pickers	• ULB	• Within 03 months

		• Prohibiting the sale of plastic carry bags and single use plastic.	• ULB	• Within 06 months
		• Preventing plastic waste entering into water bodies- installation of bar mesh in Nallah and Drains.	• PHED • Irrigation • ULB	• Within 06 months
		• Prevention of open burning of plastic waste.	• ULB	• Within 06 months time. • Regular action against the violators.
		• Providing waste/used water bottle collection centers at public places.	• ULB	• Within 06 months
		• Submission of Annual Report to HSPCB.	• ULB	• Within 03 months
		• Installation of integrated scientific solid waste management facility by way of compost and RDF.	• ULB	• Within 12 months time
2.	Channelizing the collected waste plastics(T/M)	• Recycling of waste plastics • Mixed with bitumen for Road laying • Co-processing/co incineration in cement plants • Pyrolysis plants	• ULB • Rural Development • PWD • NHAI	• Within 12 months time

3.	Issuance of Registration as per PWM Rules, 2016	• No. of recycling units identified for Registration, and issued with Registration as on • No. of multi-layer plastic units identified for Registration and issued with Registration.	• HSPCB	• There is no multilayered plastic manufacturing unit in district Yamuna Nagar. • The authorization will be granted immediately if some one apply for recycling of plastic waste.
4.	Action regarding User &Throwaway Plastic ban	Zone wise surprise inspections will be carried out once in a month and if any banned use &throwaway plastic manufacturers found, Directions for Closure & disconnection of power supply will be effected	• HSPCB	• Regular action.
5	Awareness creation	Awareness shall be carried out through Eco- clubs in Schools, NSS & NCC in colleges	• Directorate of Information, Public Relations and Languages Department • Department of School Education, Haryana • Department of Higher Education • ULB • HSPCB	• Monthly

3.4: Conclusion & Recommendations

Pollution by plastics and plastic products can damage and contaminate the terrestrial environment and can be subsequently transferred to the aquatic environment. Dumping of plastics on land or land filling plastics leads to abiotic and biotic degradation of the plastics, where plastic additives (e.g. stabilizers, harmful colorant moieties, plasticizers and heavy metals) can leach and eventually percolate into various aspects of the environment, thereby causing soil and water contamination. During this plastic degradation process, toxic chemicals like polystyrene and BPA can be released into the water causing water pollution. Chlorinated plastics are capable of leaching out toxic chemicals into the soil and subsequently seep into the underground water or surrounding aquatic system thereby polluting the ecosystem. Methane, a dangerous greenhouse gas, which significantly contributes to global warming, is released during microbial biodegradation of plastics. Animals are exposed to plastic wastes majorly through ingestion and entanglement; however, ingestion is more frequent than entanglement. Ingestion of plastic wastes is capable of causing obstruction and physical damage to bird's digestive system, reduce the digestive ability of the system leading to starvation, malnutrition and eventually, death. Food supplies for human consumption can be adversely affected if animals are poisoned by toxic constituents from wastes of plastics and plastic products.

The scientific management of the plastic waste also changes the overall aesthetic view of any city /town and it also gives the pleasant feeling of living in any city. The neat and clean city protects its citizen from many diseases and also reduced the pressure on the Govt. health facilities. By proper managing the plastic waste we not only protect the human being but also protect the animals, birds which by means eat the scattered plastic waste caught by many diseases and even die from the repercussion. By managing the plastic waste we protect our water bodies, the water from where is being either directly used by the human beings/animals/birds or the same enter in our food chain through the crops cultivated by using the water from these water bodies.

The major role in management of plastic waste lie with the Urban Local Body and so they have to ensure the proper collection, segregation, transportation, treatment and disposal of such plastic waste and also to ensure by all means the such plastic waste not come in contact with any water body or its leachate spoil the underground water. By looking forward the Urban Local Body need to immediately eliminate the huge legacy waste lying unattended within prescribed time frame manner and further on urgent basis installed the scientific facility for disposal and treatment of municipal solid waste collected. The municipal corporation needs to ensure the segregation of plastic waste from municipal solid waste and penalize the violators involved in open plastic burning. Moreover, it need to ensure the no use of plastic carry bags and single use plastic in the territory of district Yamuna Nagar.

Chapter 4 Construction & Demolition (C & D) Waste

4.1: Introduction of Construction & Demolition Waste

"Construction and Demolition (C&D) Waste" means the waste comprising of building materials, debris and rubble resulting from construction, re-modeling, repair and demolition of any civil structure.

The C & D waste produced in the construction, preservation and discarding segments of a structure including waste from demolished structures, renovations and construction as well as repair of roads, flyovers, bridges, etc. is a composite waste stream and comprises of a varied range of constituents such as debris from the structures, bricks, concrete, soil, steel, timber (wood) and a mixture of site clearance materials that arises from several building activities. It also comprises occurrence of surplus consumptions in labour and energy used in various construction activities. In India, it is a day-to-day practice for large C & D projects to accumulate waste on the road sides leading to traffic congestion. C & D waste from separate houses are dumped into neighboring municipal bins or containers and waste storing yards creating the bulky municipal waste and lowering its value for actions like energy recovery, composting, etc.

The most common effects on environment from various construction activities and C&D waste generated are dust, noise, smoke and odor (fugitive discharge). In circumstance of C & D waste management, the fundamental factors affecting the environment are dust and noise. Earth movements, destruction and other building activities frequently includes the generation of spreading clouds of dirt with destructive impact on the

growing figures of people suffering from respiratory diseases, and undesirable impact on the degradation surfaces. The dust generation activities also comprise of various restoration activities and dusting of façades. The main source of urban pollution is found to be road dust from C & D Waste and making up major course PM10 and PM2.5 particles.

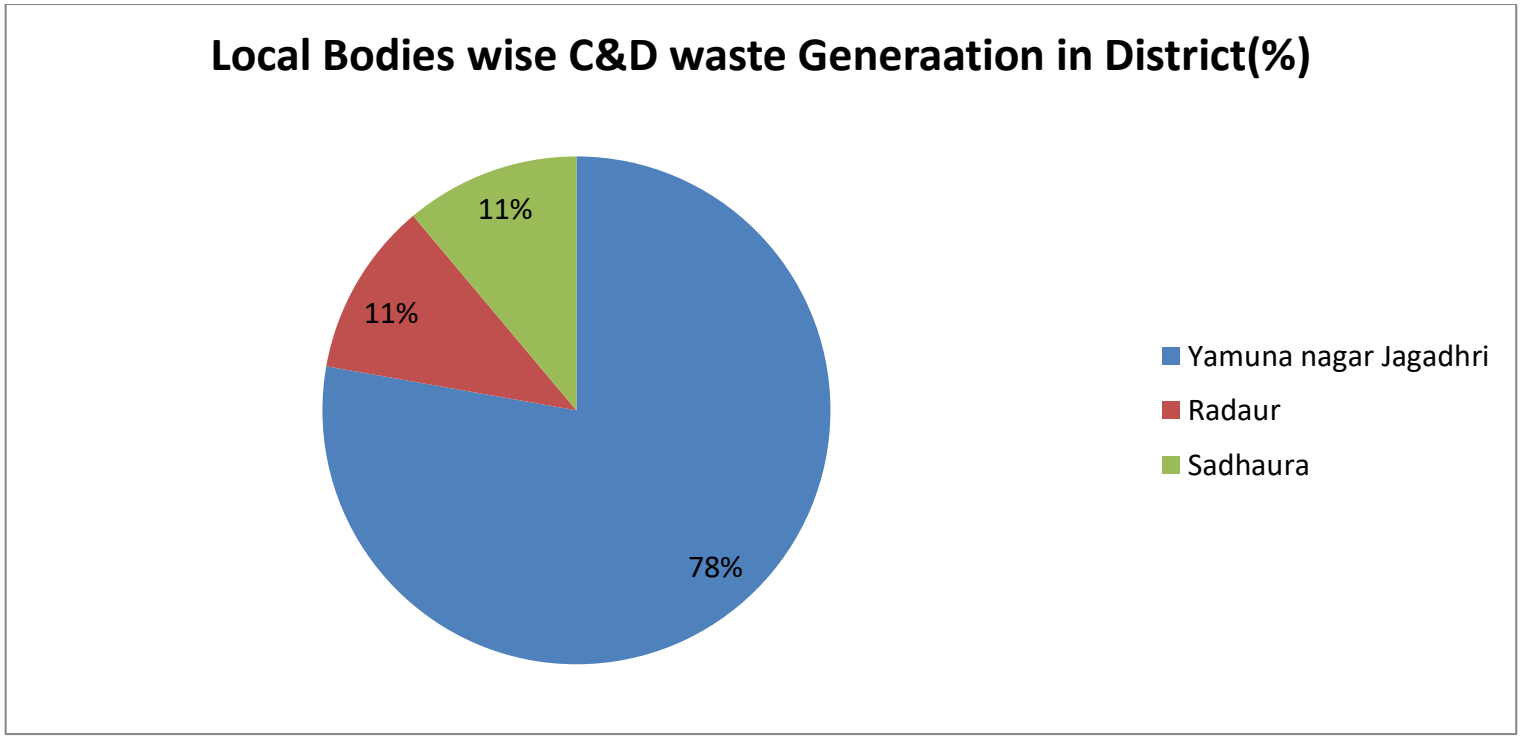
The common practices of C & D waste management include:

- Reuse of valuable materials (by informal sector dealers)
- Illegal open dumping: Debris consisting of concrete, brick and mortar. Excavated earth is dumped illegally on roadsides, low-lying areas and river beds. This causes the waste to pile up on roads causing inconvenience, choking surface drains, disrupting traffic and is an eyesore on the urban landscape.
- Use as filler materials in low-lying areas especially before new construction.
- Use in sub-base layer in roads.
- Dumped in ULB designated dump yards.

For the effective management of C&D waste, the Construction and Demolition Waste Management Rules, 2016 were notified by Ministry Of Environment, Forest And Climate Change, Govt. of India vide Notification dated 29th March, 2016. These rules apply to every waste resulting from construction, re-modeling, repair and demolition of any civil structure of individual or organization or authority who generates construction and demolition waste such as building materials, debris, rubbles.

4.2: Status of Construction & Demolition Waste in the District

Around 4.5 TPD of Construction & Demolition Waste is being generated in the municipal corporation area of Yamuna Nagar. The site for deposition of C&D waste has already been identified for all the 3 ULB's. Presently, the most of the waste generated from C&D is used for filling of low-lying areas of town and the rest is used as aggregates during construction activities. A dedicated Tractor and trolley have been appointed to collect and transport the C&D waste and the **helpline number (7082410824)** has been published in local newspapers for facilitating the disposal of C&D waste in the city.



4.3: Strategies to manage Construction & Demolition Waste

SR. No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Handling of construction and demolition waste	Identification & Establishment of of sufficient site for disposal and processing of Construction and Demolition.	• ULB	• Within 06 months time.
		Approval of waste management plan submitted by waste generators before construction starts.	• ULB	• Already implemented
		Proper collection, transportation, processing and disposal of C&D waste	• ULB	• Within 06 months time.
		Clearance of old dumping sites exist along the road side and water bodies	• ULB • PWD • NHAI • Irrigation	• Within 06 months time
2.	Issuance of Authorization	To grant authorization to C&D waste processing facility	• ULB • HSPCB	• Immediately once applied by ULB.

4.4: Conclusion & Recommendations

- Detailed waste management strategy should imitate the magnitude and complications involved with the project's waste issues.
- Environment-friendly technologies should be utilized for C & D waste management.
- Sustainable or green building practice must be adopted to reduce, re-use, and recycle the C & D waste. Advocating 'deconstruction' in place of 'demolition' and developing designs which aid 'deconstruction'.
- Waste recycling strategies should be promoted for C & D projects prior to the commencement of the construction activity.
- Statutory orders, action plans and voluntary agreements must be carried out.
- Clearance of old dumping sites exist along the road side and water bodies

5.1: Introduction of Bio-medical Waste Management

Biomedical Waste means any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps.

Improper segregation and disposal of biomedical waste has the potential to contaminate groundwater sources, which in turn may infect humans and animals alike. From a hospital's waste and storage receptacles to landfills, biomedical waste needs to be properly contained to keep it away from birds, rodents, and stray animals (as well as humans). If not properly contained, segregated, and incinerated through on-site or off-site incineration, environmental hazards associated with improper healthcare waste management can contaminate the air we breathe through dangerous airborne particles. Radioactive particles produced with diagnostic technologies have the potential to reach a landfill or other areas of the environment, especially air. Air pollutants disseminated over huge areas of inhabited land have the potential to trigger a number of illnesses. Needle stick injury and sharps injury incidents increase the risk to the health of employees on a daily basis. Risk of contamination by HIV, hepatitis B and C pathogens are of primary concern to healthcare workers inside healthcare facilities. The various health issue arises because of improper handling of bio medical waste, some are as under:-

- Lung infections
- Parasitic infections
- Skin infections

- The spread of viral illnesses such as HIV, Hepatitis B, and C.
- Bacteremia
- Cholera
- Tuberculosis

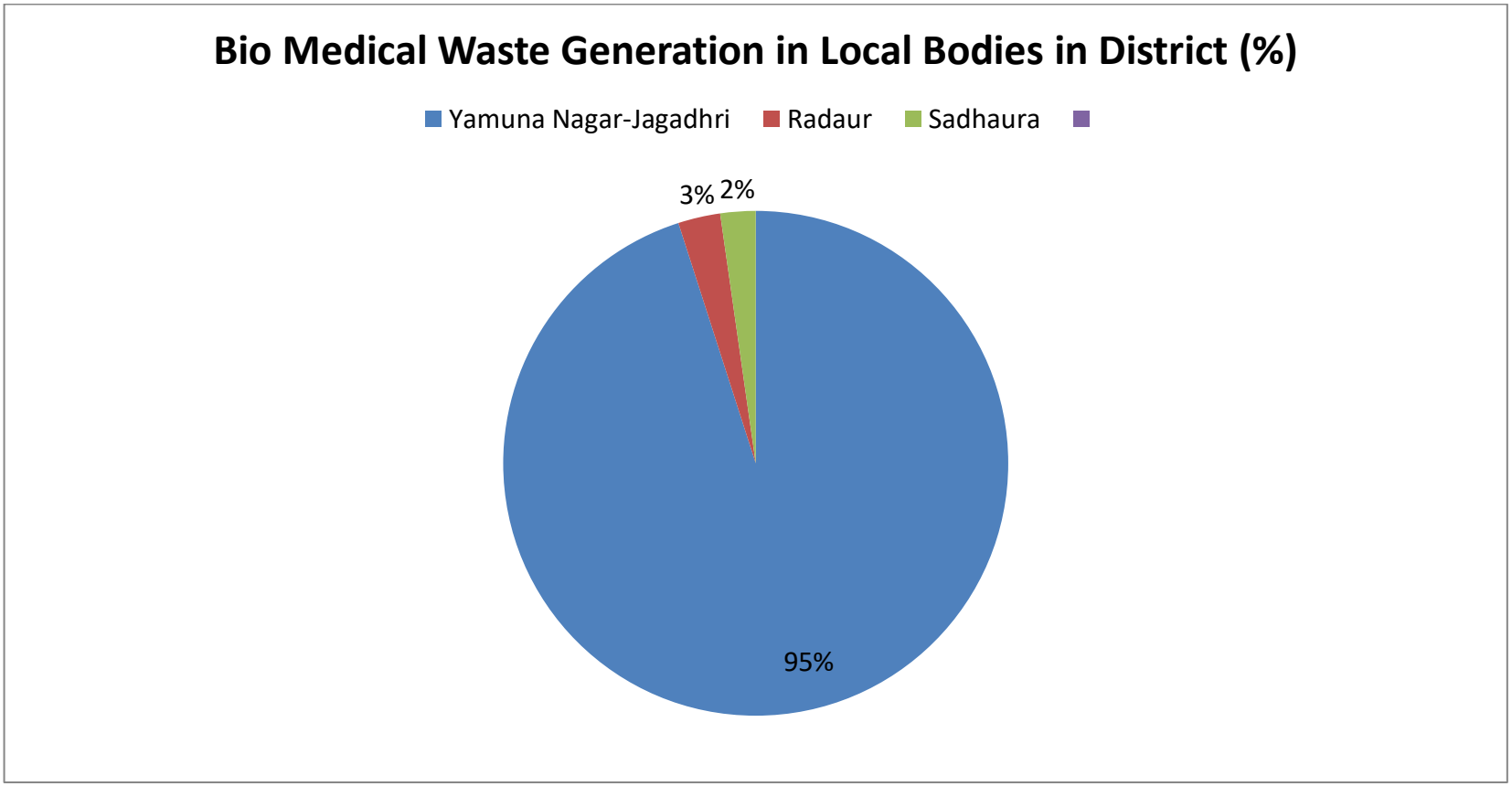
For the management of bio medical waste, the Bio-Medical Waste Management Rules, 2016 were notified by Ministry Of Environment, Forest And Climate Change, Govt. of India vide Notification dated 28th March, 2016. The various categories of the bio medical waste has been categorized as per Schedule-I of these rules. The bio medical waste management includes all steps required to ensure that bio- medical waste is managed in such a manner as to protect health and environment against any adverse effects due to handling of such waste. These Rules applies to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, aayush hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs. These rules prescribe and define the duties and responsibilities of the occupier, treatment facilities and governing authorities.

5.2: Status of Bio-medical Waste Management in the District

The State Level Advisory Committee has been constituted in the State for implementation of BMWM Rules, 2016. The District Level Monitoring Committee comprising Chief Medical Officer, RO HSPCB Yamuna Nagar, E.E Public Health, E.E Municipal Corporation, Yamuna Nagar, Representative of Indian Medical Association, Representative of common bio-medical waste treatment facility under the Chairmanship of Deputy Commissioner, Yamuna Nagar is working District Yamuna Nagar.

In District Yamuna Nagar, total 249 nos. Health Care Facilities (HCF's) are operational including bedded and non bedded facilities. From these HCF's total approx. 222 kg/day Bio Medical Waste is being generated. Also there are total 90 no. of Veterinary hospitals/dispensaries available to cater out the health need of total approximate cattle population of 232312 in the District. In the State total 11 nos. of Common Bio Medical Waste Treatment Facilities (CBMWTF) are operational to cater out the need of safe transportation, treatment and disposal of bio medical waste generated in the State.

The bio medical waste generated in District Yamuna Nagar is transported, treated and disposed of through the Common facility M/s Ess Kay Hygienic Services, Located at VPO Bagwala, Tehsil Barwala, District-Panchkula. The said facility have obtained the desired authorization under BMWM Rules and also obtained the desired Consent to Operate as per requirement of Water Act 1974 and Air Act 1981. The common facility is having the updated and required machinery i.e. Incinerator of 150 Kg per hour capacity, Autoclave of 25 Kg per batch and Shredder of 250 Kg per hour capacity for disposal of said bio medical waste generated.


Bio Medical Waste Generation in Local Bodies in District (%)
Yamuna Nagar-Jagadhri
Radaur
Sadhaura
3%
2%
95%

5.3: Strategies to manage Bio-medical Waste

The detailed Strategies to be followed in respect of Bio Medical Waste Management Rules, 2016 by the District Committee are given below:-

Sr. No	Responsibility of the District Committee / District Level Monitoring Committee	Plan of Action	Responsibilities	Timeline
1	Inventorization of Occupiers and data on bio-medical waste generation, treatment & disposal	• Number of bedded and non-bedded Government and Private Health Care Facilities in the Districts • Number of Blood Banks, Clinical labs in the Districts • List of Institutions under Indian Medicine attached/separate • Veterinary Institution & Animal Husbandry • List of Medical Institution • Forensic Labs & RD labs, etc.,	• Health Department • HSPCB • Animal Husbandry and Dairying,	• The Inventorization of HCFs already done. • on Going Process/activity. • Fresh process of Inventorization within 03 months.

2	Issuance of authorization under Bio Medical Waste Management Rules 2016 and issue of consent under Water (P &CP)Act, 1974 and under Air (P&CP) Act, 1981	• To ensure that all the HCF existing and operating in the district should obtained prior Authorization under BMW Rules 2016 and Consent to Establish and Consent to Operate under Water (P &CP)Act, 1974 and under Air (P&CP) Act, 1981 as per the coverage of the HCF in consent management policy of HSPCB. • Pre-treatment of the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site in the manner as prescribed by WHO or NACO. • Channelization and treatment of domestic effluent generating from HCF available within MC area at terminal treatment facility installed by PHED for achievement of effluent discharge standards laid down Environment Protection Rules, 1986	• Health Department • HSPCB • PHED	All the HCFs except Veterinary hospitals/dispensaries have obtained authorization under BMWM Rules. As per Rules non bedded facility not required the Consent to Operate. All the 90 no. of Veterinary hospitals/dispensaries will be covered under the ambit of authorization within 06 month time. The authorization for all the HCFs will be reviewed and granted within 06 month time. All the HCF requiring CTO will be covered under the ambit of Consent Management within 01 year. The PHED within the Municipal Corporation area is treating the domestic effluent alongwith disinfected bio

				medical waste effluent generated from various HCFs in there terminal treatment facility installed. The HCFs not connected with the facilities of Public sewer will install individual stand along effluent treatment plant within 01 year.
3	Monitoring of Compliance under Bio Medical Waste Management Rules, 2016	• To Verify the number of dedicated collection vehicles matching with the quantity of Bio Medical Waste quantity generation and duration of travel • To verify the operation of GPS in each of the dedicated vehicles and functioning of the tracking system in the respective CBMWTFs portal. • Ensuring Bar Coding system adopted for Yellow, red, White and Blue containers with quantification of waste. • Verification of Autoclave & incinerable waste generated by HCFs through individual HCFs Websites • To ensure all the HCFs of hospitals, nursing homes, clinics, dispensaries,	• Health Department • HSPCB • Animal Husbandry and Dairying,	The random monthly mandatory inspections of the HCFs as allotted centrally by the Head office of HSPCB are being carried out. The quarterly inspection of the CBMWTFs are being carried out. The service provider is using the dedicated collection vehicles equipped with GPS. The 177 nos. HCFs are using the bar coding for disposal of their bio medical waste and the 100% HCFs will be covered under the ambit of bar coding within 06

		veterinary institutions, animal houses, pathological laboratories, blood banks, ayush hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs are collecting and sending the Bio Medical waste to common facility unauthorized deep burial to be prevented. • Phase-out the use of chlorinated plastic bags • Provide training to all its health care workers and immunize all health workers regularly		month time. The use of chlorinated plastic bags will be phased out within 01 year. The training to health care workers is a on-going process and health camps on quarterly basis will be organized for training/sensitization and immunization will be carried out on quarterly basis.
4	In each district, promoting a full-fledged Common Bio Medical Waste Treatment Facilities within one Year	• Setting up of Common Bio Medical Waste Treatment Facilities (CBMWTFs) consisting of Incinerator having residence time of 2 seconds, shredder with autoclaving facility, sanitary landfills, ash pit etc.,	HSPCB. Health Department, Haryana.	As per plan approved by State Government and consideration of Central Pollution Control Board guidelines for setting up of CBMWTFs.

5.4: Conclusion & Recommendations

The management of bio medical waste in the State is governed through BMWM Rules, 2016 and guidelines issued by the Central Pollution Control Board from time to time. These rules also prescribes and define the duties and responsibilities of the HCFs and stakeholder departments. BMWM Rules have made the HCFs responsible towards collection, segregation, pretreatment, temporary storage and final transportation and disposal of bio medical waste through CBWTFs.

The review of authorization granted to various health care facilities will be reviewed in the time frame mentioned. Moreover, the veterinary hospitals will also be covered under the ambit of authorization as per BMWM Rules, 2016 as per the time frame prescribed. Also the remaining health care facility within time frame will be covered under the ambit of requirement of consent to operate as per the provisions of Water Act, 1974 and Air Act 1981. Similarly all the HCF within prescribed time limits will be governed by the bar coding for disposal of their bio medical waste. Moreover, the periodic meetings of District Monitoring Committee will be held for reviewing and implementation of provisions of BMWM Rules, 2016. Regular health camps, training programme and immunization programme shall be conducted for the health care workers dealing with bio medical waste management.

6.1: Introduction of Hazardous Waste

Hazardous waste means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances. The hazardous waste are generated from the various industrial processes such as industries involved in petroleum refining, production of pharmaceuticals, petroleum, paint, aluminium, copper, brass & steel products, electronic products, metal surface treatment, waste water treatment, ferrous and non ferrous waste metal recyclers, used oils etc.

The hazardous wastes can cause huge environmental and health hazard if left unattended.

The occurrence of adverse health effects is dependent on the way the hazardous material enters the body. Some hazardous materials absorb rapidly through the skin, while others don't at all. The toxicity of a hazardous waste also determines the effect on the body. There are many hazardous materials are toxic in very small amounts, whereas others can have large volumes of exposure before there is a reaction. Some potential health hazards in people of all ages include:

- Behavior abnormalities
- Cancer
- Physiological malfunctions (e.g., kidney failure, reproductive impairment)
- Genetic mutations
- Physical deformations
- Birth defects

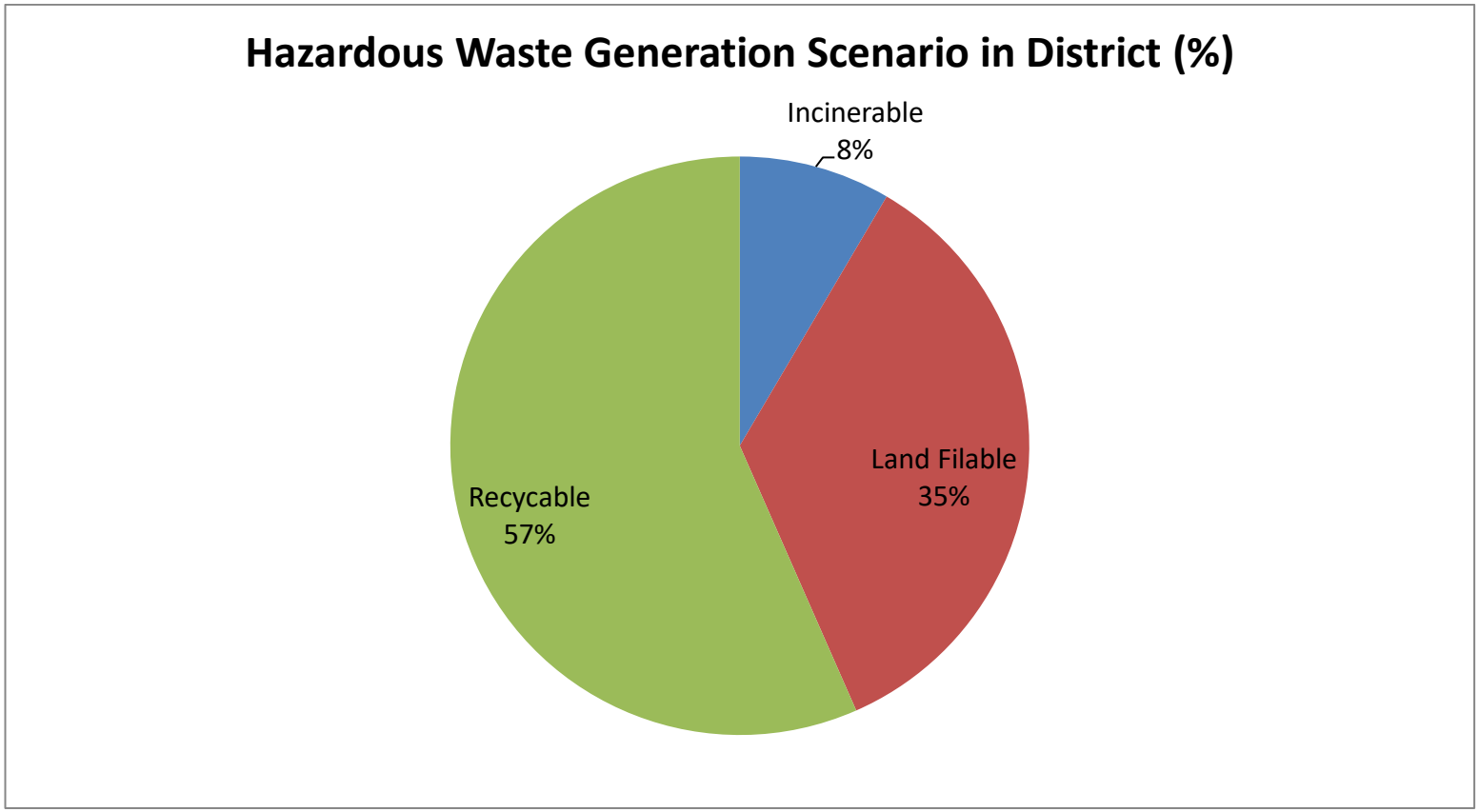
In addition to human risks, hazardous waste mismanagement is also very harmful for the environment. Pollution, contamination, and leachate are all negative impacts that hazardous waste can have on the environment if not handled properly.

The Generation, Handling, Storage, Utilization, Recycling, Transportation, Treatment and disposal of hazardous and other waste in the State is governed through, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified by Ministry Of Environment, Forest and Climate Change, Govt. of India vide Notification dated 4th April, 2016.

6.2: Status of Hazardous Waste in the District

Yamuna Nagar District at its Tehsil Jagadhri is known for its metal work and brass ware including utensils, production of brass ware, manufacture of aluminium and stainless steel products. There are approximate 3500 large/medium/small scale industries existing in District Yamuna Nagar and out of which 189 no. of industries are generating hazardous waste and engaged mainly in processes of acid pickling/scaling/electroplating for metal surface treatment and finishing or a recycler/utilizer/actual user of hazardous and other waste listed under Schedule-III & Schedule-IV of the rules and hence having potential of generation of hazardous waste as listed under Schedule-I of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. The ETP chemical sludge generated from 179 no. of individual/stand alone effluent treatment plant installed by the various industrial units is the potential hazardous waste in the District. Further there is approximate 629 MT/Annum generation of hazardous waste in the District. Apart from this the used oil is being generated from the various diesel generator sets (DGs) operating in various industries and other facilities such as hotels/hospitals/banquet hall/commercial buildings etc as alternate source of power. The used oil is categorized as

hazardous waste as per Schedule-I of the Rules. There are total 228 no. of authorized recyclers/utilizers existing and operating throughout the State through which the recyclable/ reprocessing hazardous waste and other waste generating from district Yamuna Nagar can be managed.



6.3: Disposal of Hazardous Waste in the District

The State of Haryana is having an Integrated Common Hazardous Waste Treatment Storage and Disposal Facility (ICHWTSDF) located at Village Pali, District Faridabad. The facility includes the process of Solidification and Stabilization, secured landfill, Incineration, disposal and provide the scientific transport facility to all the industries in the State. The Haryana Environment Management Society (HEMS) is facilitating ICHWTSDF to aid its members with effective-management of industrial hazardous waste. This ICHWTSDF facility is operated by Gujarat Environment Protection & Infrastructure Ltd. (**GEPIL**), Haryana. The hazardous waste generated in the District is scientifically treated and disposed as per the provisions of Hazardous and Other Wastes (M&TBM) Rule 2016 at ICHWTSDF. The ICHWTSDF facility got into operation in the year 2008 in the State and have capacity to serve the State for 35 years. The hazardous and other waste generated as per Schedule-III & Schedule-IV of HoWM Rules, 2016, is being disposed of through 228 no. of recycler/utilization/actual user facilities authorized by HSPCB operating throughout the State having environmentally sound technology duly approved by CPCB.

As per provisions of HoWM Rules, 2016 all such industries which are generating, handling, transporting, utilizing, recycling the hazardous and other waste required prior authorization from HSPCB.

The detail of such Industries of District Yamuna Nagar generating Hazardous waste and having obtained authorization under the provisions of HoWM Rules, 2016 from HSPCB are as follows:-

Categories	**Numbers of Industries**
Red	137
Orange	50
Green	2
Total	189

All these 189 no. of units have made agreement either with the ICHWTSDF facility or with the authorized recycler/utilization/actual user facilities authorized by HSPCB operating throughout the State for transportation, treatment and disposal of hazardous and other waste generated. These industries are filling annual returns as per Form 3 & Form 4 of HoWM Rules, 2016 with HSPCB.

6.4: Strategies for Hazardous Waste Management

The action plan for regulation and monitoring of hazardous waste generating is given below:-

Sr. No	Responsibility ofthe District Committee	Plan of Action	Responsibilities	Timeline
1	Inventorization of quantum of hazardous waste generated and no. of industries engaged in handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, co-processing, utilization, offering for sale, transfer or disposal of the hazardous waste	• Number of units generating hazardous waste in the District • Safe storage and handling of hazardous waste generated • Channelization and safe transportation of hazardous waste to the disposal facility/recycler • Inventory of Common Hazardous Waste Treatment and Disposal facility and authorized recycler	• HSPCB • DIC	• The Inventorization of hazardous waste generating units already done and the same is on going Process/activity. The fresh process of Inventorization will be completed in next 03 months with the help of concerned stakeholders. • The inventory of all waste/used oil generators will be completed within 01 year.

2	Issuance of authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and issue of consent under Water (P &CP)Act, 1974 and under Air (P&CP) Act, 1981	• To ensure that all the industries generating hazardous waste existing and operating in the district should obtain prior Authorization under HoWM Rules 2016 and Consent to Establish and Consent to Operate under Water (P &CP)Act, 1974 and under Air (P&CP) Act, 1981 as per the coverage of the industry in consent management policy of HSPCB. • Execution of valid agreement with service provider for safe disposal of hazardous waste generated.	HSPCB	• The authorization for hazardous waste generating units will be reviewed and granted within 06 month time. • The status of CTO to hazardous waste generating units requiring CTO will be reviewed and covered under the ambit of Consent Management within 01 year. • The execution of agreement by the various hazardous waste unit with ICHWTSDF facility will be reviewed and compliance will be ensured within 01 year time.
3	Monitoring of Compliance under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016	• Periodic Inspection of Units generating Hazardous waste • Insurance of the Submission of annual returns in Form 3 & Form 4 by industries generating Haz. Waste.	HSPCB	• The random monthly mandatory inspections of the hazardous waste generating units as allotted centrally by the Head office of HSPCB are being carried out. • Insurance of the Submission of annual returns in Form 3 & Form 4 by industries generating Haz. Waste within 06 months time. • Verification of manifest supplied by ICHWTSDF facility and authorized recycler within 01 year.

6.5: Conclusion & Recommendations

The hazardous wastes can cause huge environmental and health hazard if left unattended. Unscientific disposal of hazardous and other waste through burning or incineration leads to emission of toxic fumes comprising of Dioxins & Furans, Mercury, heavy metals, causing air pollution and associated health-related problems. The Scientific disposal of hazardous waste through collection, storage, packaging, transportation and treatment, in an environmentally sound manner minimizes the adverse impact on human health and on the environment. The hazardous waste can be disposed at captive treatment facility installed by the individual waste generators or at Integrated Common Hazardous Waste Treatment Storage and Disposal Facility (ICHWTSDF). Hazardous waste such as lead acid battery scraps, used oil, waste oil, spent catalyst etc. and other waste such as waste tyres, paper waste, metal scrap etc. are used as raw material by the industries involved in recycling/reprocessing/utilization of such waste and as supplementary resource for material and energy recovery. Accordingly, it is always preferable to utilize such waste through recycling, or for resource recovery to avoid disposal through landfill or incineration which in turn decreases burden on the Common Hazardous Waste Treatment Storage and Disposal Facility (ICHWTSDF) and also increases the operating life span of such facility.

The review of authorization granted to various hazardous waste generating units will be reviewed in the time frame mentioned. Also the remaining hazardous waste generating units within time frame will be covered under the ambit of requirement of consent to operate as per the provisions of Water Act, 1974 and Air Act 1981. The execution of agreement by the various hazardous waste generating units with ICHWTSDF facility will be reviewed and compliance will be ensured within the time frame mentioned.

7.1: Introduction of E-Waste Management

'E-Waste' means electrical and electronic equipment**,** whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes. E-waste broadly covers waste from all electronic and electrical appliances and comprises of items such as computers, mobile phones, digital music recorders/players, refrigerators, washing machines, televisions (TVs) and many other household consumer items.

Electrical and Electronic Equipment (EEEs) are made of a multitude of components, some containing toxic substances that have an adverse impact on human health and the environment if not handled properly. Broadly, it consists of ferrous and non-ferrous metals, plastics, glass, wood and plywood, printed circuit boards, concrete and ceramics, rubber and other items. Iron and steel constitutes about 50% of the WEEE followed by plastics (21%), non-ferrous metals (13%) and other constituents. Non-ferrous metals consist of metals like copper, aluminium and precious metals, e.g. silver, gold, platinum, palladium, etc.

Waste electrical and electronic equipment (WEEE) is becoming major threat to the whole world. Rapid growth of technology, up- gradation of technical innovations and a high rate up-gradation by exchanging old electronic items have led to one of the fastest growing waste in the world. Its toxic emissions mixed with virgin soil and air and causing harmful effects to the entire biota either directly or indirectly. Direct impacts include release of acids, toxic compounds including heavy metals, carcinogenic chemicals and indirect effects such as bio magnification of heavy metals. Many private firms are involved in collecting, dismantling, separation and exporting e-wastes for recyclers.

The E-waste (Management) Rules, 2016 notified by Ministry Of Environment, Forest And Climate Change, Govt. of India vide Notification dated 23rd March, 2016 with objective to channelizing the e waste generating in the country towards authorized dismantlers and recyclers in order to formalize the e-waste recycling sector. These rules apply to every manufacturer, producer, consumer, bulk consumer, collection centers, dealers, e-retailer, refurbisher**,** dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment listed in Schedule-I of the rules. The E-waste rules also prescribed the extended producer responsibility.

7.2: Status of E-Waste Management in the District

In Yamuna Nagar District presently there is no manufacturer and producer of E-waste. The District is having bulk consumers of E-waste in terms of Govt. offices, banks, educational institutes and industries. The E-waste generated from households in the District is presently not channelized and may be disposed of through unauthorized and unknown sources. The historical E-waste as on the date of issuance of the E-waste Rules not available. Presently in the District there is no recycler or dismantler of the E-waste, however, there are 47 nos. authorized recyclers/dismantler/ refurbisher in the State through which the E-waste generated in the District may be disposed of. Moreover, inventorization of bulk consumers and dealers of electronic/electric instruments need to be done for implementation of E-waste Rules.

7.3: Strategies for E-Waste Management

SR No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Inventorization of E-waste generation	• List of electrical and electronic equipment manufacturers, dismantlers, refurbishers, recyclers shall be obtained from the District Industries Centre, Local Bodies. • Issue Press Release in News Papers for getting E- waste authorization and consent under Water & Air Acts by the manufacturers, dismantlers, refurbishers, recyclers.	• ULB • Electronics & Information Technology Department • HSPCB	• In the District presently there is no recyclers/ dismantlers/refurbishers of E-waste. • The inventorization of bulk consumers will be completed within 06 months time. • The inventorization of dealers of electronic/electric items will be completed within 01 year. • Press release for authorization by stakeholders as per E-waste Rules will be done immediately.
2.	Details of E- waste generation	• No. of manufacturers, dismantlers, refurbishers, recyclers identified and the quantity of e-waste managed by them.	• Electronics & Information Technology Department • HSPCB	• In the District presently there is no manufacturer/ producer/ recyclers/ dismantlers/refurbishers of E-waste. • The survey regarding any unauthorized manufacturer/ producer/ recyclers/ dismantlers/refurbishers of E-waste will be completed within 01 year time.

3.	Verification of EPR Authorization of producers, E-Waste mgt facilities of collection centres, dismantlers, recyclers	• Inspection of the infrastructure facilities and verification of records.	• HSPCB	• In the District presently there is no manufacturer/ producer/ recyclers/ dismantlers/refurbishers of E-waste.
4.	Checking of illegal E-waste mgt.	• To ensure e-waste reaches to authorized dismantlers, refurbishers, recyclers	• HSPCB	• The survey regarding any unauthorized manufacturer/ producer/ recyclers/ dismantlers/refurbishers of E-waste will be completed within 01 year time. • Regular checking of illegal E-waste management. • The inventorization of bulk consumers will be completed within 06 months time. • The inventorization of dealers of electronic/electric items will be completed within 01 year.
5.	Information, Education and Communication (IEC) plan for creating awareness to the public	• Issue of Press Release explaining E-waste rules and the responsibility of each stakeholders. • Conduct Awareness programmes to the school/college students and Public in co-ordination with Eco-Club, NCC, NSS, and EPR Authorized Producers.	• Directorate of Information, Public Relations and Languages Department • Department of School Education, Haryana • Department of Higher Education	• Press release regarding E-waste Rules and responsibility of stakeholders will be done immediately. • Awareness programmes for educational institutes and public will be carried out quarterly.

7.4: Conclusion & Recommendations

The production of electrical and electronic equipment (EEE) is one of the fastest growing global manufacturing activities. Rapid economic growth, coupled with urbanization and a growing demand for consumer goods, has increased both the consumption and the production of EEE. The Indian information technology (IT) industry has been one of the major drivers of change in the economy in the last decade and has contributed significantly to the digital revolution being experienced by the world. New electronic gadgets and appliances have infiltrated every aspect of our daily lives, providing our society with more comfort, health and security and with easy information acquisition and exchange. The knowledge society however is creating its own toxic footprints.

Often, these hazards arise due to the improper recycling and disposal processes used. It can have serious repercussions for those in proximity to places where e-waste is recycled or burnt. Collection mechanism based approach has to be adopted including collection centre, collection point, take back system etc for collection of e - waste by Producers under Extended Producer Responsibility (EPR). The inventorization of bulk consumers and dealers of electronic and electrical items need to be carried out within the time lines prescribed for channelization of E-waste to the authorized recyclers/dismantlers/ refurbishers. The awareness among the public which are the end user of electronic/electrical items need to be carried out regarding the health hazards of E-waste and importance of channelization of E-waste to authorized recyclers/dismantlers.

8.1: Introduction of Water Quality Management

The District Yamuna Nagar is rich District in terms of natural water resources. There is one major River Yamuna which enters in the District Yamuna Nagar of Haryana from State of Uttarakhand. There are some other rivers Somb, Pathrala, Nakti and Nallahs Rakshi, Chautang is also flowing in District Yamunanagar. The average rainfall in the District is 354.5 mm. Around 29% of rainfall is received during the months from July to September, and the remaining rainfall is received during the period from December to February.

On River Yamuna at Village Tajewala in District Yamuna Nagar Hathnikund Barrage was commissioned by the Central Water Commission. There are two main canals i.e. Western Jamuna Canal & Eastern Jamuna Canal for which the water distributed from this Barrage. The Western Jamuna Canal (WJC) is a main source of water which supplies abundant quantity of water to Haryana State and this system serves about 66% area of Haryana State for Irrigation as well as drinking water & also supplies drinking water to Delhi State. The WJC from Hathnikund Barrage after WJC Link Channel to Dadupur Headworks is called WJC Main Line Upper having a length of 22.000 Km. and a maximum designed discharge of 16000 cusecs. Hydel channel with capacity of 5500 Cs. runs along it up to Dadupur. River Somb and River Pathrala join at upstream of Dadupur Headworks. The Canal which off take from Dadupur head works is known as Western Jamuna Canal Main Line Lower (WJC MLL). This canal have a designed discharge of 19866 Cs. from RD 0 to 68220 and the same changes to 17530 Cs. from 68220 to 190950 i.e. Indri Headworks.

There are total no. of four power House situated at Hydel Channel which off takes from RD 900 mtr which are maintained by Hydel Power Generation limited situated at Villages Tajewala, Nainawali, Bhudkalan, Begampur having Capacity of 14.4 MW of Village Tajewala and rest are of 16 MW.

There are total 15 no. of Drains pertaining under this district including Ditch Drain in which polluted water of Industries falls.

List of Drains are as under:-

Sr. No.	Drains	Length of drain in ft.	Discharge in Cus.	Outfall RD
1.	Pinjora drain U/S Ambala-Jagadhri Road	60000	200	Chautang Nallah near RD 21200 villlage Sukhdaspur
2.	Dholra Drain	2100	60	Syphon RD 157000 MLL/R
3.	Potli Drain	9000	160	Khurdban Drain No.1 at RD 2400
4.	Khurdban Drain	8910	179.65	Dhanaura Escape at RD 8000
5.	Thaska Drain	8060	20	Dhanaura Escape at RD 13500
6.	Alahar Link Drain	21300	82.50	Open Panchayat land D/S near Syphon of Aug. Canal at Km 10.5
7.	Radaur Drain	18500	30	Open Fields village Nachron.
8.	Rakshi Nallah Ambala-Jagadhri road	90000	286	Chautang Nallah at RD 112284

9.	Chautang Nallah D/S Ambala-Jagadhri Road	136428	845	WJC Canal at RD 138000/R/MLL
10.	Chautang Nallah U/S Ambala-Jagadhri Road	64700	435	Jagadhri-Ambala Road
11.	Jaidhar-Harewa Drain	2100	10	WJC Canal D/S Dadupur
12.	Alahar Link Sub Drain	3250	18	Marketing Board Nallah
13.	Sadhaura Drain	2500	20	Marketing Board Nallah
14.	Ditch Drain	69670	60/148	Dhanaura Escape at RD 144895 of WJC MLL
15.	Bhukhri Drain	17197	300	

The Ditch Drain in the district was constructed in the year 2009 which is running parallel to WJC and carrying the treated discharge from the sewage treatment plant in the district, treated effluent from major 03 no. industries i.e. M/s Sugar Mill, M/s Paper Mill and M/s Blue Craft Agro also carry untreated domestic effluent of twin city of Yamuna Nagar and Jagadhri. The total capacity of the Ditch Drain is 150 MLD (60 Cusec). The discharge of the Ditch Drain via Dhanaura Escape falls in River Yamuna in district Karnal.

In the District there are total 695 no. of Ponds having area greater then 0.5 Acre and 90 Ponds having area less then 0.5 Acre which are planned for Next Ten Year. There was total 22 No. of Pond Clearance works had done by Irrigation department and 19 No. Ponds had done by Panchayati Department during Year 2020-21. There are target of 92 Pond work for the year i.e 2021-22. There are four No. Model Ponds are also in District Yamunanagar.

In the District there are total 37731 borewells (Shallow and Deep) are functioning. The 05 blocks of the district i.e. Chhachhrauli, Sarawati Nagar, Partap Nagar, Jagadhri, Radaur are under over exploited zone and 02 blocks i.e. Shadaura and Bilaspur are under semi critical zone.

8.2: Status of Water Quality Management in the District

The water quality monitoring of River Yamuna and WJC is being carried out by HSPCB at 05 points on monthly basis under National Water Management Programme (NWMP) and report regularly submitted to Central Pollution Control Board. The water quality at these points during year 2020 is as under:-

Sr. No.	Name of the Points	Month	BOD	COD	S.S.	Dissolved Oxygen	Ammonia-N	Total Dissolved Solids
1	WJC Tajewala, Dadupur Head (1886)	March-2020	2.8	9.2	BDL	8.1	BDL	360
		July-2020	3.8	12.8	8	7.4	BDL	102
		December-2020	2.8	12	11	8.2	BDL	210
2	WJC, 100 Meter Down Stream (1109)	March-2020	2.6	15.2	8	8	BDL	320
		July-2020	3.4	13.6	6	7.1	BDL	98
		December-2020	1.8	8	6	8.4	BDL	142
3	WJC at Damla (2056)	March-2020	----------Nil flow----------					
		July-2020	3.4	11.6	7	6.9	BDL	96
		December-2020	----------Nil flow----------					

4	Hathnikund Bairaj, Yamuna Nagar (1117)	March-2020	2.5	11.6	BDL	7.9	BDL	360
		July-2020	5.8	18.8	6	7.3	BDL	96
		December-2020	3.2	14	12	8.1	BDL	212
5	Yamuna at Kalanaur, Yamuna Nagar (1496)	March-2020	2.2	8.4	BDL	8.2	BDL	330
		July-2020	5.2	16.4	7	6.9	BDL	138
		December-2020	4.2	16	7	8	BDL	226

***BDL- Below Detectable Limits**

The water quality monitoring of Ground Water of District Yamuna Nagar is being carried out by HSPCB at 03 points on half yearly basis and report regularly submitted to Central Pollution Control Board. The water quality at these points during year 2020 is as under:-

Sr. No.	Name of the Points	Month	BOD	COD	Total Dissolved Solids	Total Suspended Solids	Total Hardness	Chloride	Calcium	Magnesium
1	Tubewell at MSW Site, Ambala Road, Jagadhri, Yamuna Nagar	April-2020	BDL(DL-1)	BDL(DL-5)	236	BDL	180	16	49.6	13.608
		Sep.-2020	ND	ND	ND	ND	170	8	48.8	11.664

2	Ground water sample Tubewell at Bus Stand, Yamuna Nagar	April-2020	BDL(DL-1)	BDL(DL-5)	560	BDL	286	44	77.6	22.356
		Sep.-2020	ND	ND	ND	ND	250	10	71.2	17.496
3	Ground water sample Handpump at Bus Stand, Jagahri	April-2020	BDL(DL-1)	BDL(DL-5)	790	BDL	306	76	86.4	21.87
		Sep.-2020	ND	ND	ND	ND	280	12	78.4	20.412

***BDL- Below Detectable Limits**

The water quality monitoring of Ditch Drain which carries Domestic treated and untreated discharge of twin city of Yamuna Nagar and Jagadhri, is being carried out by HSPCB on monthly basis and report regularly submitted to Central Pollution Control Board. The water quality of Ditch Drain during year 2020 is as under:-

Month	**pH**	**BOD**	**COD**	**TS.S.**	**O & G**	**Total Coliform**	**Fecal Coliform**	**Total Chromium**	**Iron**	**Zinc**	**Copper**	**Lead**	**Cadmium**	**Nitrate**	**Boron**
Feb.20	7.11	220	761.6	336	14	----	----	----	----	----	----	----	----	----	----
Mar-20	6.43	210	745.6	324	12.5	----	----	----	----	----	----	----	----	----	----
Apr-20	7.9	26	112.4	65	2.5	----	----	----	----	----	----	----	----	----	----
May-20	6.92	120	392.4	490	12	----	----	----	----	----	----	----	----	----	----
Jun-20	7.16	52	182.4	60	----	1410000	410000	BDL	0.37	BDL	BDL	BDL	BDL	0.61	BDL

Jul-20	7.09	52	179.2	147	9	1750000	270000	BDL	0.191	BDL	BDL	BDL	BDL	----	BDL
Aug.20	6.33	60	203.6	167	4.5	1410000	490000	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D
Oct-20	7.38	56	193.6	92	11.5	1200000	460000	N.D	N.D	N.D	N.D	N.D	N.D	0.48	N.D
Nov-20	7.94	46	176	328	N.D	278000	109000	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D

***BDL- Below Detectable Limits**

The domestic sewerage effluent of the district is treated through the 06 nos. Sewage Treatment Plant (STPs) installed and operated by the Public Health Engineering Dept. (PHED). The total installed capacity of the operational 06 no. STPs in District Yamuna Nagar is 85.5 MLD and 01 no. STP of 10 MLD capacity is under construction with having estimated date of commissioning 31.03.2021. These STP's are installed and maintained by Public Health Engineering Department (PHED) and details of these STP's is submitted as under:-

Sr. No.	**Capacity & Address of STP**	**Discharge Standards achieved (mg/ltr)**	**Remarks**
1	25 MLD STP, at Radaur Road, Yamuna Nagar	pH 5.5-9.0 BOD-10 COD-50 TSS- 20 Total Nitrogen -10	Operational and achieving the discharge standards.
2	20 MLD STP at Radaur Road, Yamuna Nagar.	---do--	---do--
3	24 MLD at Parwaloo, Jagadhari	---do--	---do--
4	3 MLD STP at Chhachhrauli	---do--	---do--
5	3.5 MLD STP at Radaur, Yamuna Nagar	---do--	---do--

6	10 MLD STP at Baddi Majra, Yamuna Nagar.	---do--	---do--
7	10 MLD STP, Unit-2, Badi Majra	Under construction	Estimated date of commissioning is 31.03.2021.

The average daily discharge approx. 66 MLD from these three sources i.e. 1. Radaur road Nallah passing Jammu colony 2. Nallah at Radaur Road near Jorian Gurudwara 3. Nallah at Hamida Head, falling into Ditch Drain which in turn reaching to River Yamuna thorugh Dhanaura Escape.

This 66 MLD discharge from 03 no. Nallah/Drain as mentioned yet to be diverted/treated/tapped by the concerned authorities i.e. Municipal Corporation, Yamuna Nagar.The 45 MLD treated discharge from STP's reaching to ditch drain for which the plan for utilization of this discharge need to be formulated by the Irrigation/Public Health Authorities.

Moreover, in the District the Haryana Govt. scheme "**Mera Pani Meri Virasat Scheme**" is under implementation for saving the water by converting transplanted paddy area to maize, bajra, direct seeded rice (DSR), Pulses. A subsidy of Rs. 7000/- per acre is provided to farmers to replace transplanted paddy and by doing this about 5000 liters of water is saved per kg. of transplanted rice. Also in the district subsidy is provided as per Govt. scheme for installation of Poly Houses which is having important role in saving water through drip and sprinkling system.

8.3: Strategies for Water Quality Management

SR. No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Inventory of Water Resources	Collection of Historical, Geographical and geological data for all the Water Bodies	• HARSAC • Irrigation & Water Resource Department, Haryana • Central Ground Water Board • Hydrologist • Pond Authority • HSPCB	01 Year
2.	Water Quality Management & Pollution Control	sewage disposal contamination data, industrial effluent disposal data, solid waste, open defecation near water bodies, access to surface water quality data, % of untreated sewage & industrial waste water	• ULB Department • Public Health Engineering Department • HSIIDC • Irrigation & Water Resource Department, Haryana • Hydrologist • Pond Authority • HSPCB	01 Year

8.4: Conclusion & Recommendations

District Yamuna is rich in Water resources in terms of River Stretches of River Yamuna and other Rivers such as Somb, Pathrala, Nakti and Nallahs Rakshi, Chautang. The average annual rain fall in the district is 354.5. In the District there are total 695 no. of Ponds having area greater than 0.5 Acre. The district Yamuna nagar is having generation of domestic as well as industrial effluent for which PHED has installed 06 no. STP's of capacity 85.5 MLD for domestic effluent treatment and 179 nos. effluent treatment plant has been installed by individual industries for treatment of industrial effluent. The treated domestic/industrial effluent and untreated effluent of the

district is disposed of through ditch drain which via Dhanaura Escape meets in River Yamuna in district Karnal.

The conservation and rejuvenation of water bodies i.e. ponds and river stretches in district Ymauna Nagar is major task to be executed within time frames. Further the water quality improvement of ditch drain to the standards of irrigation is another task and challenge to be executed. The installation of additional sewage treatment capacity to the extent of 70 MLD to treat the existing 66 MLD untreated discharge reaching to ditch drain alongwith the use of 85.5 MLD treated discharge coming from the STP's in the district, is the immediate need to improve the water quality in district Yamuna Nagar which is also in compliance of direction passed by Hon'ble NGT, New Delhi in the matter of OA No. 673 of 2018 "More river Stretches are now critically Polluted: CPCB".

Chapter 9 Domestic Sewage Management

9.1: Introduction of Domestic Sewage Management

Domestic sewage means human excrement, grey water (from home clothes washing, bathing, showers, dishwashing, and food preparation), other wastewater from household drains, and waterborne waste normally discharged from the sanitary conveniences of dwellings (including apartment houses and hotels), office buildings, retail and commercial establishments, factories, and institutions, that is free from industrial waste. The domestic sewerage also carry the non toxic effluent generated from hospitals and other health care facilities and commercial activities in the town. As per Census of 2011 the population of district Yamuna Nagar was 12,14,162.

The district Yamuna Nagar is having a major town as twin city of Yamuna Nagar and Jagadhri having population of 341965 as per census 2011 and estimated population of 427456 as on 2021. The other towns in the district are Radaur having estimated population of 17113 as on 2021 and Sadhaura having estimated population of 25693 as on 2021. There is 01 Municipal Corporation for twin city of Yamuna Nagar and Jagadhri and 02 Municipal Committee for town Radaur and Sadhaura. The estimated sewage generated from twin city of Yamuna Nagar and Jagadhri is 53 MLD and that from Radaur is 2.12 MLD and from Sadhaura it is 3 MLD. The twin city of Yamuna Nagar and Jagadhri is also an industrial city and many commercial establishment also. As per latest calculations additional 66 MLD mixed effluent is being discharged through 03 nos. Nallahs/Drains in city to Ditch Drain.

9.2: Status of Domestic Sewage Management in the District

The sewage management in the district is entrusted to Public Health Engineering Deptt. as on date PHED has installed and operating 06 no. STPs in District Yamuna Nagar having total installed capacity of 85.5 MLD and 01 no. STP of 10 MLD capacity is under construction with having estimated date of commissioning 31.03.2021. So the total sewage treatment capacity of the district by 1st April 2021 will be augmented to 95.5 MLD. These STP's are installed and maintained by Public Health Engineering Department (PHED) and details of these STP's is submitted as under:-

Sr. No.	**Capacity & Address of STP**	**Discharge Standards achieved (mg/ltr)**	**Remarks**
1	25 MLD STP, at Radaur Road, Yamuna Nagar	pH 5.5-9.0 BOD-10 COD-50 TSS- 20 Total Nitrogen -10	Operational and achieving the discharge standards.
2	20 MLD STP at Radaur Road, Yamuna Nagar.	---do--	---do--
3	24 MLD at Parwaloo, Jagadhari	---do--	---do--
4	3 MLD STP at Chhachhrauli	---do--	---do--
5	3.5 MLD STP at Radaur, Yamuna Nagar	---do--	---do--
6	10 MLD STP at Baddi Majra, Yamuna Nagar.	---do--	---do--
7	10 MLD STP, Unit-2, Badi Majra	Under construction	Estimated date of commissioning is 31.03.2021.

The 06 no. operational STP's are being inspected monthly by HSPCB and all the STP's are meeting the discharge standards. Moreover, all the 06 nos. STP's have installed the online monitoring devices linked with the website of CPCB and HSPCB from where continuous monitoring of discharge standards of these STP's is being done. The district is also having 37 nos. stand alone STP's installed by industrial establishment and total capacity of these STP's is 2.5 MLD. Further, the twin city of Yamuna Nagar and Jagadhri is also an industrial city and many commercial establishment also. As per latest calculations additional 66 MLD mixed effluent is being discharged through 03 nos. Nallahs/Drains i.e. 1. Radaur road Nallah passing Jammu colony 2. Nallah at Radaur Road near Jorian Gurudwara 3. Nallah at Hamida Head, falling into Ditch Drain which in turn reaching to River Yamuna thorugh Dhanaura Escape to Ditch Drain which via Dhanaura Escape reaches to River Yamuna. This 66 MLD discharge from 03 no. Nallah/Drain as mentioned yet to be diverted/treated/tapped by the concerned authorities i.e. Municipal Corporation, Yamuna Nagar.

The 45 MLD treated discharge from these STP's reaching to ditch drain for which the plan for utilization of this discharge need to be formulated by the Irrigation/Public Health Authorities.

9.3: Strategies for Domestic Sewage Management

SR No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Collection and treatment of sewage	• All the municipalities and Town Panchayat shall cover their entire jurisdiction area under UGDS scheme. • Sewage received in STP shall be treated to the Discharge standards.	• HSPCB • PHED • ULB • Panchayat Deptt.	• 01 year for ULB area. • 02 year for Panchayat area.
2.	Quality of treated sewage from STPs	• Periodic monitoring of treated sewage with preferably online monitoring for the (Parameters for analysis pH, BOD, TSS, TDS, COD, Total N, Fecal Coliform).	• HSPCB	• Online monitoring is being done for all the existing STP's. • Monthly site inspections are being carried out by HSPCB.
3.	Utilization of treated sewage	• Industries located near Common STP shall make MoU with the operator of STP so as to utilize treated sewage to meet their industrial requirement after proper tertiary treatment • Treated sewage from the Common STPs shall be utilized for industrial use, agriculture, ground water recharge and other non-domestic use.	• HSPCB • PHED • ULB • Panchayat Deptt. • Irrigation Deptt.	• 02 years

9.4: Conclusion & Recommendations

The 100 % domestic effluent generated in district Yamuna Nagar yet to be tapped and treated through sewage treatment plants. Additional capacity of 70 MLD STP is required to treat the 66 MLD untreated discharge reaching to Ditch Drain from the twin city of Yamuna Nagar and Jagadhri. The domestic effluent from Panchayat need to be treated through 3/5 pond system. Overall exercise is required from the stakeholder departments to ensure nil untreated sewage effluent reach to any water body. Moreover action plan is required for utilization of treated effluent discharged from the STP's which is presently discharged in Ditch Drain or other water bodies.

Chapter 10 Industrial Waste Water Management

10.1: Introduction of Industrial Waste Water Management

"Water Pollution" means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of acquatic organisms. The Water (Prevention And Control Of Pollution) Act, 1974 govern the industrial waste water and as per provisions of this section-25, no person shall, without the previous consent of the State Board,—

(*a*) establish or take any steps to establish any industry, operation or process, or any treatment and disposal system or any extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage); or

(*b*) bring into use any new or altered outlet for the discharge of sewage; or

(*c*) begin to make any new discharge of sewage:

Since the inception of Yamuna Nagar district it has made rapid stride in the sphere of development of industries. The District Yamuna Nagar has achieved a phenomenal growth in the field of small scale industries sector. The total number of large medium and small scale industries in existence are approx. 3500. The main

industries of Yamuna Nagar district are wood based and metal based. The total numbers of metal industries are approximately 600, wood based 760, and other manufacturing/servicing and repairing units are 2060. These units are providing employment to over 30000 persons. Small Scale industries in Jagadhri are engaged in the manufacturing of Stainless Steel, Aluminium and Brass utensils in a big way and earned a good name for the State not only in National Market but also in International Market. M/s Saraswati Sugar Mill of Yamuna Nagar is famous not only in India but also in foreign countries and sugar is exported in many countries and the district is said to be the sugar bowl of Haryana.

This district is also famous for Engineering goods in the state and Plywood, Ply-board product of the district are gaining popularity throughout the state of Haryana and all over the country. As a result of spectacular achievement made in the industrial development the district now has a prominent place in the industrial map of Haryana and Yamuna Nagar and Jagadhri are important industrial centers. The ample infrastructural facilities conductive to industrial growth are available in the district and a good number of industries are expected to be set up in the next 5 years.

There are 14 Large & Medium scale units in the district. Out of these, only one unit is in the Public Sector named M/s Railway Workshop, Jagadhri which is engaged in the repair of Railway carriage and wagons of Indian Railway. These units are engaged in the production of Paper, Sugar,Maize Starch, Sugar machinery, Hydraulic Press, Automobile Leaf Springs, Paper,Cement & chemical machinery, Mini Cement Plant, Plywood machinery, rectified spirit, periodical overhauling of coaches and wagons, Hydraulic jacks and Iron casting, Plywood, Block board, Calcium carbonate etc.

In this district total approximate 18 MLD of industrial effluent is being generated from various industrial activities.

10.2: Status of Industrial Waste Water Management in the District

The Department of Industries has developed an industrial area in the year 1950 at Yamuna Nagar. 149 plots were carved out in this industrial area and transferred to HSIIDC in 2012. HSIIDC has also developed an Industrial Estate at Yamuna Nagar. The Phase I was developed in the year 1973, in which 58 plots were carved out and Phase II was developed by the Corporation in the year 1975, in which 52 plots were carved out. The Phase III was developed by the Corporation in the year 2002, in which 10 plots were carved out. All the plots of Industrial Estate have been allotted to the entrepreneurs. In view of the demand of the Industrial Associations for the Industrial plots, Government of Haryana developed an Industrial Estate in Village Manakpur in Chhachhrauli block, which is about 5 km away from Jagadhri. Through Haryana State Industrial Development Corporation 135 Acres of Land acquired for this purpose. In the year 2000, HSIIDC carved out 232 plots in Phase – I and out of these 231 plots have been allotted to Industries. In the year 2016 Phase- II of HSIIDC Manakpur was developed on 258 acre land. 318 nos. of plots were carved out by HSIIDC out of which 24 plots stands allotted.

The most of the industries in district are operating out of the industrial area with the change of land use from the local bodies. There are total approximate 3500 no. of industries existing in District Yamuna Nagar. However, as per categorization of industries done by Central Pollution Control Board under the category of Red/Orange/Green, 1348 industries are taking Consent from the Haryana State Pollution Control Board under Water Act and Air Act. Out of these 1348 industries, 179 no. of industries engaged in such kind of industrial activities such as acid pickling/scaling/electroplating/ metal surface treatment/sugar mill/ paper mill, from where industrial effluent is being generated. Further there is a potential of generation of approx. 18 MLD of waste water from these industries. The waste water generated is scientifically treated through stand alone Effluent Treatment Plants (ETPs) installed by the individual industry. Further, 3 MLD Common Effluent Treatment Plant is under installation in the HSIIDC, Industrial Area, Manakpur, Jagadhri. Further, the installation of STP-cum-CETP for town of Jagadhri is under active consideration with Government.

The detail of such Industries generating industrial effluent and having obtained consent to operate under Water Act 1974 and Air Act 1981 from HSPCB is given as follows:-

Categories	Numbers of Industries
Red	127
Orange	50
Green	2
Total	179

10.3: Strategies for Industrial Waste Water Management

SR. No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Implementation and monitoring of treatment system for liquid effluent	• No of ETPs required in Industries(Red/Orange/17 category) • No of ETPs provided in Industries(Red/Orange/17 category) • No of STPs required for the local bodies. • No of STPs provided in the local bodies. • Functional status of ETPs/STPs. • Monitoring of treated effluent qualities of ETP"s/STPs.	• HSPCB • HSIIDC • DIC • ULB • PHED	• 01 year

10.4: Conclusion & Recommendations

District Yamuna Nagar being the old industrial town and having approximate 3500 industries including the industries which are engaged in various industrial processes from where industrial effluent is being generated. Such kind of industries are established within industrial area and outside the industrial area. The regular monitoring of such kind of industries is required to ascertain the proper operation and maintenance of stand alone ETP's installed individually by the industries. Such monitoring is also desired to catch the wrong practices if any adopted by the industries. Moreover, in the coming time the industry should be enforced to go far self monitoring by adopting the Continuous Online Monitoring System which are presently adopted by only large red category industries in the district. Moreover, industries to be shifted to industrial area from where the such industrial effluent can be treated commonly through the CETPs. Also the existing CETP under installation at Manakpur need to be expedited so that confidence of industrial unit can be boosted to shift to the industrial area. All efforts need to be enforced to save the water bodies from the contamination industrial effluent.

Chapter 11 Air Quality Management

11.1: Introduction of Air Quality Management

Air Pollutant means any solid, liquid or gaseous substance 2[(including noise)] present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment. The Air (Prevention And Control Of Pollution) Act, 1981 govern the industrial discharge of air emission and as per provisions of this section-21, no person shall, without the previous consent of the State Board, establish or operate any industrial plant in an air pollution control area.

The major source of air pollution in district Yamuna Nagar is Suspended Particulate Matter. Particulate Matter is a complex mixture that may contain soot, smoke, metals, nitrates, sulfates, dust, water and tire rubber. It can be directly emitted, as in smoke from a fire, or it can form in the atmosphere from reactions of gases such as nitrogen oxides. The size of particles is directly linked to their potential for causing health problems. Small particles (known as PM2.5 or fine particulate matter) pose the greatest problems because they bypass the body's natural defenses and can get deep into your lungs and potentially your bloodstream. Exposure to such particles can affect both your lungs and your heart.

Long-term exposure to particulate pollution can result in significant health problems including:

- Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing
- Decreased lung function

- Aggravated asthma
- Development of chronic respiratory disease in children
- Development of chronic bronchitis or chronic obstructive lung disease
- Irregular heartbeat
- Nonfatal heart attacks
- Premature death in people with heart or lung disease, including death from lung cancer

There are approximate 3500 of industrial establishments in district Yamuna Nagar out of which 1348 no. of industrial unit are covered under the category of Red/Orange/Green as per categorization prescribed by Central Pollution Control Board. Further, out of these 1348 no. of units, 846 no. of industries in the district are Air Polluting by mean of either they have installed Boiler/Furnace/Bhatti/Brick Kilns/Stone Crushers/HMP/Mining etc.

There are the major air pollution in the district Yamuna Nagar is because of the plywood industries and stone crushers. M/s Sarawati Sugar Mill, M/s Ballarpur Industries Limited, M/s Blue Craft Agro (P) Ltd. & Haryana Distillery Pvt. Ltd are some of the major industries in the district which are substantially contributing in the air pollution. The one of the major contributor of air pollution in the district is M/s Deen Bandhu Chhatu Ram Thermal Power Plant, which is major source of SPM and SO_x/NO_X pollution in the district. Additionally road dust, road sweeping, open garbage burning, vehicular emissions specially Auto Ricksha and transport vehicles, diesel generator sets (DGs) are also contributor in the air pollution. One of the another cause of air pollution in the area is stubble burning in crop harvesting season specially in Paddy and Wheat harvesting season. In the district the paddy is cultivated in the area of 82000 Hectare and wheat is cultivated in the area of 89000 Hectare.

11.2: Status of Industrial Air Quality Management in the District

In the district 846 no. of industries are air polluting which mainly includes the brick kilns, stone crusher, plywood industries, paper mill, sugar mill, thermal power plant, sand mining etc. All the units had installed the Air Pollution Control Devices such as Multicyclone/cyclone/Wet Scrubbers/ Separators. M/s Sarawati Sugar Mill, M/s Ballarpur Industries Limited, M/s Blue Craft Agro (P) Ltd. & Haryana Distillery Pvt. Ltd are some of the major industries in the district which are substantially contributing in the air pollution in the district and have provided Electrostatic Precipitators (ESPs) which is effective device to control the air pollution from major sources of air pollution. M/s Deen Bandhu Chhatu Ram Thermal Power Plant, which is major source of SPM and SO_x/NO_X pollution in the district, have also installed the Electrostatic Precipitators (ESPs) and under process of installation of Flue-gas desulfurization (FGD) to control the emission of SO_x and under process of installation of Low NOx burner to control NOx emissions.

The detail of such Industries emitting air pollutants, having obtained consent to operate under Air Act 1981 from HSPCB is given as follows:-

Categories	Numbers of Industries
Red	85
Orange	758
Green	3
Total	846

As one of the major contributor of air pollution in the district is stubble burning in crop harvesting season specially in Paddy and Wheat harvesting season. In the district the paddy is cultivated in the area of 82000 Hectare and wheat is cultivated in the area of 89000 Hectare. Stubble burning is a common practice done by farmer during Kharif & Rabi season after harvesting paddy, wheat & other crops. In the district during the year 2020 special emphasis on making farmer aware about harmful effects of stubble on crops, soil health, human beings in long & short term by organizing 600 awareness camps, gram sabha at village, block & district level was given. For the last two year Govt. has promoted special implements on subsidy for preventing stubble burning through customer hiring centers. Farmers can purchase bailer, ray hake, DSR machine, super seeder, zero drill machine, mulcher, laser land leveler etc through department on subsidy.

The road dust, road sweeping, open garbage burning, vehicular emissions specially Auto Ricksha and transport vehicles, diesel generator sets (DGs) are other contributors of air pollution in the district.

The one no. Continuous Ambient Air Quality Monitoring System (CAAQMS) has been installed in the district at Panchayat Bhawan which gives the Real Time data of the Air Quality of the district. The general air quality of the district is remain in the category of “Average” except the winters during Crop Harvesting season when the air quality of the district drops to “Poor” and “Very Poor” category.

11.3: Strategies for Air Quality Management

SR. No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Availability of Air Quality monitoring Network in District	• Establishment of Manual Air Quality Monitoring Station • Establishment of Automatic Air Quality Monitoring station	• HSPCB	• 01 no. automatic air quality monitoring system is already installed in the district. • Further strengthening of monitoring devices automatic/manual will be done as per the State action plan.
2.	Inventorization of Air pollution sources	• Identification of prominent air polluting sources and Non- attainment cities	• HSPCB • HRSAC • ULB • PWD	• District is not covered under the list of 102 no. non-attainment cities as per CPCB. • Air pollution sources non recorded or non identified will be inventoried/identified within 06 months time.
3.	Control of Air Pollution	• Number of Industry meeting standards • Control of open stubble burring, waste, forest fires, vehicle pollution	• HSPCB • Dept. of Agriculture • Dept. Of Transport • Dept. of forest & wildlife • Police	• The random monthly mandatory inspections of the air polluting units as allotted centrally by the Head office of HSPCB are being carried out. • Inspection and action against the industries wherein complaint of air pollution received is being carried out by HSPCB. • Open stubble burning in the district to be eliminated within 02 years by implementation of

				Govt. incentive policies and awareness programme. • Fire line has been created to protect the forests. Maintenance and clearance of fire lines is taken up every year during the month of Feb. & March. A required no. of fire watchers are also being deployed during the forest fire season i.e. March to June/July (Pre-monsoon period) • Police department will carried out regular inspection of vehicles to check the PUC Certificate. • Transport department will carried out the regular inspection of PUC check centers and will eradicate the mal practices at PUC check centers within 06 month time.

11.4: Conclusion & Recommendations

District Yamuna Nagar being the old industrial town and having approximate 3500 industries including the industries which are engaged in various industrial processes from where industrial air emissions are generated. There are 846 nos. of such identified and registered air polluting industries in the district. Such kind of air polluting industries are established within industrial area and outside the industrial area. The regular monitoring of such kind of industries is required to ascertain the proper operation and maintenance of Air Pollution Control Devices installed individually by the industries. Such monitoring is also desired to catch the wrong practices if any adopted by the industries. Moreover, in the coming time the industry should be enforced to go far self monitoring by adopting the Continuous Online Monitoring System which are presently adopted by only large red category industries in the district. The installation of FGD and Low NOx burner in M/s Deen Bandhu Chhotu Ram Thermal Power Plant need to be expedited in time frame manner to improve the air quality of district in terms of SOx and NOx.

In the district the paddy is cultivated in the area of 82000 Hectare and wheat is cultivated in the area of 89000 Hectare. As one of the major contributor of air pollution in the district is stubble burning in crop harvesting season specially in Paddy and Wheat harvesting season. Stubble burning is a common practice done by farmer during Kharif & Rabi season after harvesting paddy, wheat & other crops. As the various incentives and subsides are provided by the Govt. in the district to curve the mal practice of stubble burning which causes huge air pollution specially in winter season when the air quality of the district drops to “Poor” and “Very Poor” category. Extensive awareness campaign among the farmers is desired to educate about the ill effects of stubble burning on human health and deterioration of soil quality and many fire accidents happen because of this. Moreover farmers need to be educated about the subsidies and incentives provided by the Govt. to the farmers which abstain from stubble burning. Moreover, parallel penal action is required to be initiated against the defaulting farmers engaged in the practice of stubble burning.

In district Yamuna nagar there are 22 nos. operational sand boulder gravel mining. Further, approximate 188 no. of Crushers and 296 no. of screening plants established and operational depending upon these mines operating in district Yamuna Nagar. So the district Yamuna Nagar becomes the hub of supplying construction raw material to whole of the State and nearby areas of adjacent State. So heavy transport vehicles such as dumper, trucks and tractor trolleys are engaged in transportation of this construction material which is not only causing the dust pollution but also creating the vehicular pollution. So the regular checking of PUC certificates from vehicles is required by the Police Deptt. Moreover checking regarding proper coverage of construction material while transporting to be ensured by police deptt. to curb the dust emission of such transportation.

The transport deptt. also need to carry out the frequent inspections of the PUC check centers to curb the mal practices at PUC check centers. The Municipal Corporation and Committee in the district and Panchayats need to take strict action against the violators of open garbage burning. The Municipal Corporation and Committee will switch to mechanized road sweeping and also construct paved shoulders along the roads to minimize the road dust emissions.

The consolidation of Continuous Ambient Air Quality Devices is required in the district by increasing the such installation in the district which is presently only 01 no. installed Panchayat Bhawan Yamuna Nagar.

Chapter 12 Mining Activity Management

12.1: Introduction of Mining Activity Management

There is one of the major Rivers of the Country, River Yamuna enters in the District Yamuna Nagar of Haryana from State of Uttarakhand and a stretch of approx. 60 K.m falls in district Yamuna Nagar before entering into neighboring district of Karnal. The flood plains and river beds of River in district Yamuna Nagar are rich with gravel, boulders and sand. There are some other rivers Somb, Pathrala, Nakti and Nallahs Rakshi, Chautang is also flowing in District Yamunanagar. In the district Yamunanagar total 33 mining blocks were carved out/ selected for the grant of mineral concession by the Department. Out of these the Govt. of Haryana auctioned 22 mining sites in the district which are operational as on date. All these mines have obtained the mandatory Environmental Clearance as per the provisions of the EIA Notification 14.09.2006 (as amemded from time to time) and other mandatory permissions from then concerned authority. The details of the 22 mines are as under:

Sr No	Name of Mining Unit/Block	Lease Area (in Hect.)	Total Lease Tern (Years)	Date of LOI	Date of EC	Date of Start of Mining
1	Bailgarh-South Block / YNR B2	28.00	9	19.06.2015	27.06.2016	09.12.2016
2	Mandoli Ghaggar East Block/ YNR B3	20.18	10	19.06.2015	21.12.2016	18.06.2017

3	Mandoli Ghaggar West Block / YNR B4	25.56	7	19.06.2015	21.12.2016	18.06.2017
4	Pobari Block /YNR B11	23.05	9	19.06.2015	22.06.2016	09.12.2016
5	Devdhar Block /YNR B24	31.87	8	19.06.2015	27.06.2016	11.08.2016
6	Kohliwala Block /YNR B21 & 22	13.59	8	19.06.2015	27.06.2016	11.08.2016
7	Malikpur Khadar Block/YNR B28	23.20	8	14.09.2015	13.10.2016	15.06.2017
8	Pipli Majra Block/YNR 29, 30 & 31	18.20	7	14.09.2015	13.10.2016	15.06.2017
9	Gumthala South Block /YNR B 17	49.67	9	30.11.2015	09.03.2017	26.04.2017
10	Galori Block/ YNR B 39	24.00	8	20.10.2016	25.05.2017	08.08.2017
11	M T Karhera Block / YNR B13	67.79	7	20.10.2016	09.04.2018	24.04.2018
12	Nagli Block/ YNR B 15	77.25	10	20.10.2016	09.04.2018	26.04.2018
13	Bhood Kalan Block/ YNR B19	12.62	7	19.06.2015	12.04.2016	16.06.2016
14	Bhood Majra Block/ YNR B20	9.95	7	19.06.2015	22.06.2016	12.08.2016
15	Nagla Rangraan Block /YNR B14 .	89.48	9	16.06.2017	12.03.2019	16.04.2019
16	Kanalsi Block/YNR B 5	44.14	9	30.11.2015	15.09.2016	27.01.2017

17	Dhanura Block/ YNR B 18	18.18	10	28.12.2017	19.06.2018	16.09.2018
18	Jaidhari Block/ YNR B33	48.60	8	30.11.2015	15.09.2016	27.01.2017
19	YNR Unit -2	495.5	8	03.01.2014	21.12.2015	19.10.2016
20	Gumthala North Block /YNR B16	44.62	7	19.06.2015	27.06.2016	26.12.2016
21	Beer Tapu Block / YNR B7	14.45	7	19.06.2015	27.06.2016	18.03.2017
22	Jathlana Block/YNR B12	101.27	10	30.11.2015	17.03.2017	28.04.2017

Further, approximate 188 no. of Crushers and 296 no. of screening plants established and operational in the district depending upon these mines operating in district Yamuna Nagar. So the district Yamuna Nagar becomes the hub of supplying construction raw material to whole of the State and nearby areas of adjacent State

12.2: Status of Industrial Mining Activity Management in the District

The operational 22 no. mines in the district have obtained the desired Consent to Establish and Operate from HSPCB as per requirement of Water Act 1974 and Air Act 1981. The annual Air Ambient Air Quality Monitoring of these mines is being carried out by HSPCB. Moreover all these mines submitting the six monthly compliance report of various conditions of Environmental Clearance granted to MoEF, SEIAA and HSPCB. All these

mines have approved mining plan from the mining deptt. and compliance of which entrusted with district mining office. In the district of Yamuna Nagar, District Level Monitoring Committee (DLMC) is constituted for checking the compliance of various conditions of Environment Clearance granted to these mines.

Further, the State Government to check and control illegal mining in the State has constituted District Level Task Forces under the Chairmanship of the Deputy Commissioner. The Superintendent of Police, Divisional Forest Officer, District Transport Officer, Regional Officer Haryana State Pollution Control Board and Mining Officer of the concerned districts has been included as members in the District Level Task Force. The DLTF Members jointly or individually inspect the areas to curb illegal mining and take effective measures in this behalf. Further the powers of seizing the vehicles involved in illegal mining has been also granted to the Sub- Divisional Officer/s of the Irrigation Department by the State Government vide Notification dated 09 July 1998. Hence, the SDO's of the Irrigation Department are also taking effective measure to curb illegal mining in their respective areas/ juridisction respectively. Apart from this qua DLTF committee, the State Government, considering need of dedicated police personnel for checking of illegal mining and or transportation of illegally mined minerals, have constituted two composite Special Enforcement Teams each headed by a Deputy Superintendent of Police and have police officials as member of team, with the staff of Mines and Geology Department.

Additionally to curb the illegal and overloaded transportation of mineral in raw or processed form in the district, e-Billing has been made mandatory. All stake holders - mining contractors/lessee, stockists, crushing/ screening plant owners have been registered on e-Rawaana web portal developed by the Department of Mining with the help of IT agency. Now all have to generate bill through e-rawaana portal of the Department. This has stopped the illegally mined mineral to enter the market and checked the overloading practices.

12.3: Strategies for Mining Activity Management

SR. No.	Responsibility	Plan of Action	Department responsible	Timeline
1	Preventing illegal river sand mining	• Identification of river stretches where there are chances for illegal sand mining. • Frequent surprise checks in those river stretches by the Taluk Level Task Force and submit reports to District Level Task Force fortnightly. • District Level Task Force shall meet once in a month to discuss the illegal mining/transporting/damage caused to the environment and send report to State Level Task force.	• Mining Department	• Identification of river stretches where there are chances of illegal sand mining will be done within 06 month time. • Forth night inspection of river stretches. • Monthly meeting of DLTF.

12.4: Conclusion & Recommendations

The mining activities in the district are not only the major source of income for the State but also the major source of employment in the district and also major source of construction material supply to whole of the State. The sustainable mining in the district is the major objective of the District Administration to curb practices of illegal mining in the area where auction has not been done by the govt. and also stop the practices of overloading, the State Govt. has constituted the enforcement team in the district which is regularly checking the various

activities of mining and overloaded vehicles and transport vehicles running without e-rawaana/e-bill. The DLTF constituted in the district also ensuring the various development work entrusted on the mine lease holders in the vicinity of mines and for the general public. In the district from the period of August 2019 to March 2021 total of 930 vehciles in illegal mining/ illegal transportation of minerals have been caught and out of which in compliance with the Hon'ble NGT orders, in the district a total fine of Rs.14,54,82,522/- has been recovered from the 486 nos. of vehicle.

The sustainable mining in the district should be the prime objective of the stakeholders deptts. and the mal practices of illegal sand mining and overloading of the transport vehicles should be nullified in the time frame manner. The development work entrusted on the mine lease holders as per requirement of Environment Clearance, CSR responsibilities and auction conditions, to be ensured in the district in the vicinity of mine lease.

Chapter 13 Noise Pollution Management

13.1: Introduction of Noise Pollution Management

The increasing ambient noise levels in public places from various sources, inter-alia, industrial activity, construction activity, fire crackers, sound producing instruments, generator sets, loud speakers, public address systems, music systems, vehicular horns and other mechanical devices have deleterious effects on human health and the psychological well being of the people; it is considered necessary to regulate and control noise producing and generating sources with the objective of maintaining the ambient air quality standards in respect of noise;Noise pollution, also known as environmental noise or sound pollution, is the propagation of noise with ranging impacts on the activity of human or animal life, most of them harmful to a degree. The source of outdoor noise worldwide is mainly caused by machines, transport, generator sets and propagation systems.

Exposure to loud noise can also cause high blood pressure, heart disease, sleep disturbances, and stress. These health problems can affect all age groups, especially children and old age people. In severe cases, loud sounds can directly cause hearing impairment. Some forms of noise-induced hearing impairment include:

- Abnormal loudness perception
- Tinnitus, which causes a persistent high-pitched ringing in the ears
- Paracusis, or distorted hearing

To control the noise pollution the Ministry of Environment Forest & Climate Change (MoEF&CC) notified the Noise Pollution (Regulation and Control) Rules, 2000; where in the various noise level/limits have been prescribed for industrial, commercial, residential, religious and silence zone. The Rules also prescribes the Authorities for implementation of the Rules.

Environment Department, Government of Haryana vide order dated 5th September, 2003 vide no. S.O. 109/N.P. (R.and C.) R.2000/R.2/2003– "In exercise of the powers conferred by clause (c) of rule 2 of the Noise Pollution (Regulation and control) Rules, 2000, and all other powers enabling him in this behalf and in suppression of Haryana Government, Environment Department, Notification no. S.O. 75 / N.P. (R. and C) R 2000/R 2/2001, dated the 21st May 2001, the Governor of Haryana designates Sub Divisional Magistrate, Deputy Superintendent of Police and Regional Officer, Haryana State Pollution Control board in their respective area of jurisdiction as shown below to be authorities for the purpose of said clause:-

1. Sub – Divisional Magistrate - Residential Area and religious places.
2. Deputy Superintendent of Police - Noise by automobiles.
3. Regional Officer, Haryana State Pollution Control Board - Noise by Industrial units

13.2: Status of Noise Pollution Management in the District

The district Yamuna Nagar have one major town i.e. twin city of Yamuna Nagar and Jagadhri which is densely populated and very old industrial town and hub of major industrial activities such as steel/aluminium/brass utensils manufacturing, plywood industries and many small scale industries. Moreover, due to various authorized mining activities in the flood plains/river bed of River Yamuna there is movement of heavy transport vehicles in the district, which are also source of vehicular noise pollution. Also there are many hotels and

banquet halls in the town which are organizing regular marriage ceremonies/ parties/other functions, which are one of the major source of noise pollution. Additionally the small scale industries and other industries setup have many industrial activities which are source of noise pollution and all these industries have also backup source of power as generator set which is another source of air pollution. The noise pollution due to blowing of horns/pressure horns by the vehicles is also substantial source of noise pollution in the district.

The HSPCB is receiving many complaints of noise pollution due to industrial activity in the residential area and action as per the Noise Rules, 2000 is being taken against the defaulting units. Moreover, the Sub Divisional Magistrate in the district is entrusted to take action against the Religious and other domestic activities causing noise pollution under CRPC-133 & as per Noise Rules, 2000. The police department is entrusted to maintain the time lines fixed as per the rules for marriage functions/parties and DJ operation. The Police Deptt. also entrusted to maintain the compliance in the silence zone.

13.3: Strategies for Noise Pollution Management

SR No.	Responsibility	Plan of Action	Department responsible	Timeline
1.	Check on the usage of pressure horns & loudspeakers in silent zone & residential areas	Issue of Challan/fines for violators.	• Transport Department • Police Department	• Regular checking.
2	Industrial Noise Pollution	Penal action as per provisions of Rules	• HSPCB	• Regular checking.

3	Noise Pollution due to Commercial/domestic activities in residential area.	Issue of Challan/fines	• ULB • SDM	• Regular checking.

13.4: Conclusion & Recommendations

The continuous or severe noise exposure can cause serious impact on the health of the human beings and various health issues such as high blood pressure, heart disease, sleep disturbances, and stress can arise. These health problems can affect all age groups, especially children and old age people. In severe cases, loud sounds can directly cause hearing impairment.

So the regular checking of industrial, commercial establishment, DG Set operation, Vehicular noise pollution and other religious functions and various ceremonial functions need to be done by the concerned Authorities w.r.t. noise pollution limits and timings as prescribed by the Rules. The Police Deptt. should install the noise measuring devices at the traffic congestion points and penalize the violators. The local bodies such as Municipal Corporation, PWD, NHAI should install the proper signages to earmarked the silence zone, no horn zone and noise limits in the city.

Chapter 14 Conclusion

Protection of the environment and keeping ecological balance unaffected is a task which not only the government but also every individual, association and corporation must undertake. It is a social obligation and fundamental duty enshrined in Article 51 A (g) of the Constitution of India.

From ancient environmental rules including Buddhism and Jainism to medieval and then from British era to afterwards including the post 1972 (Stockholm's) and the coming of modern legislations on environmental laws in India, a great sense of concern has been shown by the legislature and even the Indian judiciary shown a great concern regarding the environment with its landmark judgments. The India Constitution adopted in 1950 did not deal with the subject of environment or prevention and control of pollution as such. It was the Stockholm Declaration of 1972 which turned the attention of the Indian Government to the boarder perspective of environmental protection. National Council for Environmental Policy and Planning was set up in 1972 which was later evolved into Ministry of Environment and Forests (MoEF) in 1985. Comprehensive (special) environmental laws were enacted by the Central Government in India such as:-

- The Wildlife (Protection) Act, 1972, aimed at rational and modern wild life management.
- The Water (Prevention and Control of Pollution) Act, 1974, provides for the establishment of pollution control boards at Centre and States to act as watchdogs for prevention and control of pollution.
- The Forest (Conservation) Act, 1980 aimed to check deforestation, diversion of forest land for non-forestry purposes, and to promote social forestry.
- The Air (Prevention and Control of Pollution) Act, 1981, aimed at checking air pollution via pollution

control boards.

•The Environment (Protection) Act, 1986 is a legislation which provides for single focus in the country for protection of environment and aims at plugging the loopholes in existing legislation.

• The Public Liability Insurance Act, 1991, provides for mandatory insurance for the purpose of providing immediate relief to person affected by accidents occurring while handling any hazardous substance.

Apart from these Environmental Legislations, several notifications and rules have also been made, some of which include the Hazardous Wastes (Management and Handling) Rules in 1989, the Biomedical Wastes (Management and Handling) Rules in 1998, Recycled Plastics (Manufacture and Usage) Rules 1999, Environment (Silting for Industrial Projects) Rules 1999 and the Municipal Solid Wastes (Management and Handling) Rules in 2000.In addition to these eco-specific legislations, realizing that there is no comprehensive legislation dealing with biodiversity in India, and to fulfill its international obligation under the Convention on Bio-Diversity, the Government of India has enacted the Biological Diversity Act, 2002.

A lot of work has been done on enactment of environmental legislations to protect the environment and conserve it for the future generations. Recently the waste management rules for effective implementation have been freshly framed as Solid Waste Management Rules, 2016, Plastic Waste Management Rules, 2016, E-waste (Management) Rules, 2016, Bio-Medical Waste Management Rules,2016, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and Construction and Demolition Waste Management Rules, 2016.

The Hon'ble Supreme Court of India has also adjudged that the clean environment is the fundamental right of life as provided by the Constitution of India to every citizen of India under Article-21.

The various time lines provided for implementations of the various provisions of the waste rules have been lapsed and a lot of time has already lapsed since the fresh notification of the waste rules in 2016. Especially a lot of work needs to be done in the field of Solid Waste Management and Plastic Waste Management. The management of solid waste and plastic waste is responsible for the overall aesthetic look of a city and general health of its citizen alongwith livability index of a city. The conservation of water resources with its optimum utilization and to give the pollution free air to the citizen is the major challenge in the recent times alongwith sustainable development.

The implementation of the environmental laws an environmental protection in true sense is not possible without the proper coordination of the various stakeholder departments and involvement of the general public. So the implementation of District Environment Plan.

So preparation of the district environment plan not only necessitated but also the obligatory as per direction of Hon'ble NGT.

The mere preparation of the present district environment plan is just not the end of the process but the real work starts from here w.r.t. its implementation on ground.

Action Plan as per CPCB Template for 7 thematic areas

1.0 Waste Management Plan

(i) Solid Waste Management Plan (for each ULB)

No.	Action Areas	Details of Data Requirement	Units of Measurable Outcome	Please enter Measurable Outcome for District
	Name of Urban Local Body (ULB)		[name of ULB]	Yamunanagar - Jagadhari
	No of ULBs in the District		3	
	Population		[Nos as per 2011 census]	481032
SW1	Report on inventory of total solid waste Generation			
SW1a		Total solid waste Generation	[in MT/Day] or [Not estimated]	278
SW1b		Qty. of Dry Waste segregated	[in MT/Day] or [Collection Not initiated]	88
SW1c		Qty. of Wet Waste segregated	[in MT/Day] or [Collection Not initiated]	150
SW1d		Qty. of C&D Waste segregated	[in MT/Day] or [Collection Not initiated]	3.5
SW1e		Qty. of Street Sweeping	[in MT/Day] or [Not estimated]	56
SW1f		Qty. of Drain Silt	[in MT/Day] or [Not estimated]	32
SW1g		Qty. of Domestic Hazardous Waste(DHW) collected	[in MT/Day] or [No Facility]	No Facility
SW1h		Qty. of Other Waste (Horticulture, sanitary waste, etc.)	[in MT/Day] or [Qty not estimated]	26
SW1i		No of Old dump sites	[Nos] or [None]	None

SW1j		Qty stored in dumpsites	[MT] or [Not estimated]	1.21 lakh MT
SW1k		No of Sanitary landfills	[Nos] or [None]	None
SW1l		No of wards	[nos]	22
SW2	Compliance by Bulk Waste Generators			
SW2a		No of BW Generators	[numbers] or [inventory not done]	106
SW2b		No of on-site facilities for Wet Waste	[numbers] or [No data]	7
SW3	Compliance in segregated waste Collection SW Collection			
SW3a		Total generation	[Automatic] from SW1a	278
SW3b		Wet Waste	[in MT/Day] or [Collection Not initiated]	150
SW3c		Dry Waste	[in MT/Day] or [Collection Not initiated]	88
SW3d		C&D Waste	[in MT/Day] or [Collection Not initiated]	3.5
SW4	Waste Management Operations			
SW4a		Door to Door Collection	[100%] / [partial %] / [not initiated]	80% - 85%
SW4b		Mechanical Road Sweeping	[100%] / [partial%] / [not initiated]	Not initiated
SW4c		Manual Sweeping	[100%] / [partial%]	100%
SW4d		Segregated Waste Transport	[100%] / [partial %] / [not initiated]	35%
SW4e		Digesters (Bio-methanation)	[% of WW] / [not initiated]	Not initiated

SW4f		Composting operation	[% of WW] / [not initiated]	Not initiated
SW4g		MRF Operation	[MRF used] / [not installed]	1
SW4h		Use of Saniatry Landfill	[% of SW collected] / [no SLF]	No SLF
SW4i		Reclamation of old dumpsites	[initiated] / [not initiated]	NA
SW4j		Linkage with Waste to Energy Boilers / Cement Plants	[initiated] / [not initiated]	Not initiated
SW4k		Linkage with Recyclers	[initiated] / [not initiated]	Not initiated
SW4l		Authorization of waste pickers	[initiated] / [not initiated]	Initiated
SW4m		Linkage with TSDF / CBMWTF	[initiated] / [not initiated]	Not initiated
SW4n		Involvement of NGOs	[initiated] / [not initiated]	Initiated
SW4o		Linkage with Producers / Brand Owners	[initiated] / [not initiated]	Not initiated
SW4p		Authorisation of Waste Pickers		173
SW4q		Issuance of ID Cards	[initiated] / [not initiated]	Initiated
SW5	Adequacy of of Infrastructure			
SW5a		Waste Collection Trolleys	[Nos. Required] / [Nos. Available]	47/06
SW5b		Mini Collection Trucks	[Nos. Required] / [Nos. Available]	110/60
SW5c		Segregated Transport	[yes] / [no] / [% area covered]	yes/35%

SW5d		Bulk Waste Trucks	[Nos. Required] / [Nos. Available]	20/6.
SW5e		Waste Transfer points	[Nos. Required] / [Nos. Available] /[Not available]	50/01
SW5f		Bio-methanation units	[Nos. Required] / [Nos. Available]	1/0
SW5h		Composting units	[Nos. Required] / [Nos. Available]	785/472
SW5i		Material Recovery Facilities	[used or installed] / [not available]	1
SW5k		Waste to Energy (if applicable)	[Required] / [Nos. Available]	1/0
SW5l		Waste to RDF	[Required] / [Nos. Available]	1/0
SW5m		Sanitary Land fills	[Nos] / [Nos. Available]	0
SW5n		Capacity of sanitary landfills	[MT] / / [Nos. Available]	0
SW5o		Waste Deposit Centers (DHW)	[Nos] / [Nos. Available]	0
SW5p		Other facilities	[give or select from list]	0
SW6	Notification and Implementation of By-Laws			
SW6a		Notification of By-laws	[done] / [in progress] / [not initiated]	Done
SW6b		Implementation of by-laws	[done] / [in progress] / [not initiated]	Done
SW7	Adequacy of Financial Status of ULB			
SW7a		CAPEX Required	[INR] / [Not required]	3.64 Crore
SW7b		OPEX	[INR per Year] / [% of requirement]	36.72 Crore
SW7c		Adequacy of OPEX	[Yes] / [No]	No

(ii) Plastic Waste Management (for each ULB)

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
	Name of ULB		[name of ULB]	Yamunanagar - Jagadhari
	Population		[Nos as per 2011 census]	481032
PW1	Inventory of plastic waste generation			
PW1a		Estimated Quantity of plastic waste generated in District	[MT/day] / [Not Estimated]	2.7
PW2	Implementation of Collection			
PW2a		Door to Door collection	[100%] / [partial %] / [not initiated]	80% -85%
PW2b		Segregated Waste collection	[100%] / [partial %]	35%
PW2c		Plastic waste collection at Material Recovery Facility	[MRF used] / [not installed]	0.007
PW2d		Authorization of PW pickers	[Nos] / [not initiated]	0
PW2e		PW collection Centers	[Nos] / [not established]	1
PW3	Establishment of linkage with Stakeholders			
PW3a		Established linkage with PROs of Producers	[Nos] / [not established]	0
PW3b		Established linkage with NGOs	[Nos] / [not established]	0

PW4	Availability of facilities for Recycling or utilization of PW			
PW4a		No. of PW recyclers	[Nos]	0
PW4b		No Manufacturers	[Nos]	0
PW4c		No of pyrolysis oil plants	[Nos]	0
PW4d		Plastic pyrolysis	[Quantity in MT sent per Month]	0
PW4e		Use in road making	[Quantity MT used per Month]	0
PW4f		Co-processing in Cement Kiln	[Quantity in MT sent per Month]	0
W5	Implementation of PW Management Rules, 2016			
W5a		Sealing of units producing < 50-micron plastic	[All sealed] / [Partial] / [no action]	Not Applicable
PW5b		Prohibiting sale of carry bags < 50 micron	[Prohibited] / [Partial] / [no action]	Prohibited
PW5c		Ban on Carry bags and other single use plastics as notified by State Government	[Implemented] / [Partial] / [no action] / [No Ban]	Implemented
PW6	Implementation of Extended Producers Responsibility (EPR) through Producers/Brand-owners			
PW6a		No of Producers associated with ULBs	[Nos] / [None]	0

PW6b		Financial support by Producers / Brand owners to ULBs	[Nos] / [None]	0
PW6c		Amount of PRO Support	[Rs…]	0
PW6d		Infrastructure support by Producers / Brand owners to ULBs	[Nos of Producers] / [None]	0
PW6e		No of collection centers established by Producers / Brand owners to ULBs	[Nos] / [None]	0

(iii) C&D Waste Management

No.	**Action Areas**	**Details of Data Requirement**	**Measurable Outcome**	**Please enter Measurable Outcome for District**
	Name of ULB		[name of ULB]	Yamunanagar - Jagadhari
	Population		[Nos as per 2011 census]	481032
CD1	Inventory of C&D waste generation		[MTon]	0
CD1a		Estimated Quantity	[Kg/Day] / [Not estimated]	3.5 TPD
CD2	Implement scheme for permitting bulk waste generators			
CD2a		Issuance of Permissions by ULBs	[Initiated] / [Not initiated]	Not initiated
CD3	Establishment of C&D Waste Deposition centers			

CD3a		Establishment of Deposition Points	[Yes] / [No]	Yes at Darwa
CD3b		C&D Deposition point identified	[Yes] / [No]	Yes at Darwa
CD4	Implementation of By-Laws for CD Waste Management			
CD4a		Implementation of By-laws	[notified] / [not notified]	Notified
CD4b		Collection of Deposition / disposal Charges	[Initiated] / [Not initiated]	Not initiated
CD5	Establishment of C&D Waste recycling plant or linkage with such facility			
CD5a		Establishment CD Waste Recycling Plant	[Established] / [Sent to shared Facility] / [No facility exists]	No facility exists
CD5b		Capacity of CD Waste Recycling Plant	[MT/Day] / [Not available]	Not available

(iv) Biomedical Waste Management (for each ULB)

No.	**Action Areas**	**Details of Data Requirement**	**Measurable Outcome**	**Please enter Measurable Outcome for District**
	Name of ULB		Municipal Corporation Yamuna Nagar-Jagadhri, MC Radaur, MC Sadaura	Yamunanagar - Jagadhari
	Population		[Nos as per 2011 census]	
BMW1	Inventory of Biomedical Waste Generation			

BMW1a		Total no. of Bedded Hospitals	[Nos] / [No inventory]	124
BMW1b		Total no. of non-bedded HCF	[Nos] / [No inventory]	104
BMW1c		Total no. Clinics	[Nos] / [No inventory]	51
BMW1d		No of Veterinary Hospitals	[Nos] / [No inventory]	12
BMW1e		Pathlabs	[Nos] / [No inventory]	25
BMW1f		Dental Clinics	[Nos] / [No inventory]	10
BMW1g		Blood Banks	[Nos] / [No inventory]	6
BMW1h		Animal Houses	[Nos] / [No inventory]	0
BMW1i		Bio-research Labs	[Nos] / [No inventory]	0
BMW1j		Others	[Nos] / [No inventory]	0
BMW2	Authorization of HCFs by SPCBs / PCCs			
BMW2a		Bedded HCFs	[Nos Authorized]	124
BMW2b		Non-bedded HCFs	[Nos Authorized]	104
BMW3a	Biomedical Waste Treatment and Disposal Facilities (CBMWTFs)			
BMW3a		No of CBMWTFs	[Nos] / None	None
BMW3b		Linkage with CBMWTFs	[Yes] / [no linkage]	Yes

BMW3c		Capacity of CBMWTFs	[Adequate] / [Not adequate]	Adequate
BMW3d		Requirements of CBMWTFs	[Require] / [not required]	Required
BMW3e		Captive Disposal Facilities of HCFs	[Nos] / [None]	None
BMW4	Compliance by CBMWTFs			
BMW4a		Compliance to standards	[Meeting] / [Not meeting] / [NA]	NA
BMW4b		Barcode tracking by HCFs / CBMWTFs	[100%] / [Partly %] / [None]	Partily
BMW4c		Daily BMW lifting by CBMWTFs	[Kg / day]	211
BMW5	Status of Compliance by Healthcare Facilities			
BMW5a		Pre-segregation	[100%] / [partly %] / [None]	Partily
BMW5b		Linkage with CBMWTFs	[100%] / [partly %] / [None]	100%

(v) Hazardous Waste Management

No.	**Action Areas**	**Details of Data Requirement**	**Measurable Outcome [MT/Annum]**	**Please enter Measurable Outcome for District**
HW1	Inventory of Hazardous Waste			
HW1a		No of HW Generating Industry	[Nos.]	189
HW1b		Quantity of HW	[MT/Annum]	628.2
HW1c		Quantity of Incinierable HW	[MT/Annum]	53.22
HW1d		Quantity of land-fillable HW	[MT/Annum]	219.48

HW1e		Quantity of Recyclable / utilizable HW	[MT/Annum]	355.5
HW2	Contaminated Sites and illegal industrial hazardous waste dumpsites			
HW2a		No of HW dumpsites	[Nos] / [None]	No
HW2c		Probable Contaminated Sites	[Nos] (provide list)	0
HW3	Authorization by SPCBs/PCCs			
HW3a		No of industries authorized	[Nos]	189
HW3b		Display Board of HW Generation in front of Gate	[Nos]	189
HW3	Availability of Common Hazardous Waste TSDF			
HW3a		Common TSDF	[Exists] / [No] / [Sent to Other District within State]	Sent to other District within State
HW3b		Industries linkage with TSDF	[Nos.]	179
HW4	Linkage of ULBs in District with Common TSDF			
HW4a		ULBs linked to Common TSDFs for Domestic Hazardous Waste	[Yes] / [No]	No

(vi) E-Waste Waste Management

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
EW1	Status of facilitating authorized collection of E-Waste			
EW1a		Does the citizen are able to deposit or provide E-Waste through Toll-free Numbers in the District	[Yes] / [No]	No
EW1c		Collection centers established by ULB in District	[Nos] / [None]	None
EW1d		Collection centers established by Producers or their PROs in the District	[Nos] / [None]	None
EW1e		Does the district has linkage with authorized E-Waste recyclers / Dismantler	[Yes] / [No]	Yes
EW1f		No authorized E-Waste recyclers / Dismantler	[Nos] / [None]	None
EW2	Status of Collection of E-Waste			
EW2a		Authorizing E-Waste collectors	[Authorized] / [None]	None
EW2b		Involvement of NGOs	[Yes] / [No] / [Nos]	No

EW2c		Does Producers have approached NGOs/ Informal Sector for setting up Collection Centers.	[Yes] / [No] /[Nos]	No
EW2d		Does ULBs have linkage with authorized Recyclers / Dismantlers	[Yes] / [No]	Yes
EW4	Control E-Waste related pollution			
EW4a		Does informal trading, dismantling, and recycling of e-waste exists in District	[Yes] / [No]	No
EW4b		Does the administration closed illegal E-Waste recycling in the District	[Yes] / [No] / [Nos]	No
EW4c		No of actions taken to close illegal trading or processing of E-Waste	[Nos]	0
EW5	Creation of Awareness on E-Waste handling and disposal			
EW5a		Does PROs / Producers conducted any District level Awareness Campaigns	[Yes] / [No] / [Nos]	No

EW5c		Does District Administration conducted any District level Awareness Campaigns	[Yes] / [No] / [Nos]	Yes

2.0 Water Quality Management Plan

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
WQ1	Inventory of water resources in District			
WQ1a		Rivers	[Nos] and [Length in Km]	3 rivers namely Yamuna (70 KM), Somb (42KM), Pathala (39 KM)
WQ1b		Length of Coastline	[in Km]	0
WQ1c		Nalas/Drains meeting Rivers	[Nos]	Ditch Drain
WQ1d		Lakes / Ponds	[Nos] and [Area in Hectares]	22 Nos. lakes/22 Hactare area
WQ1e		Total Quantity of sewage and industrial discharge in District	[Automatic] (SW1a+IW1b)	Trade Effluent:- 17.3 MLD Domestic Effluent:- 114 MLD
	Control of Groundwater Water Quality			
WQ2a		Estimated number of bore-wells	[Nos]	37731
WQ2b		No of permissions given for extraction of groundwater	[Nos]	0
WQ2c		Number of groundwater polluted areas	[Nos]	0

WQ2d		Groundwater Availability	[adequate] / [not adequate]	Adequate
WQ3	Availability of Water Quality Data			
WQ3a		Creation of monitoring cell	[Yes] / [No]	No
WQ3b		Access to Surface water and groundwater quality data at DM office	[Available] or [Not available]	No
WQ4	Control of River side Activities			
WQ4a	Control of River side Activities	River Side open defecation	[Fully Controlled] / [Partly controlled] /[no Measures taken]	Fully Controlled
WQ4b		Dumping of SW on river banks	[Fully Controlled] / [Partly controlled] /[no Measures taken]	Partly Controlled
WQ4c		Control measures for idol immersion	[Measures taken] / [Measures taken post immersion] / [No Measures taken]	No Measures taken
WQ5	Control of Water Pollution in Rivers			
WQ5a		Percentage of untreated sewage	[%] (automatic SM1g/SM1a)	56.66%
WQ5b		Monitoring of Action Plans for Rejuvenation of Rivers	[Monitored] / [Not monitored] [not applicable]	Monitored

WQ5c		No of directions given to industries for Discharge of Untreated industrial wastewater in last 12 months	[Nos]	5
WQ6	Awareness Activities			
WQ6a		District level campaigns on protection of water quality	[Nos in previous year]	6
WQ6b	Oil Spill Disaster Contingency Plan			
WQ6a		Creation of District Oil Spill Crisis Management Group	[Created] / [Not Created]	Not Created
WQ6b		Preparation District Oil Spill Disaster Contingency Plan	[Prepared] / [Not Prepared]	Not Prepared
WQ7	Protection of Flood plains			
WQ7a		Encroachment of flood plains is regulated.	[Yes] / [No]	Yes
	Rainwater Harvesting			
WQ8a		Action plan for Rain water harvesting	[Implemented] / [Not implemented]	Not implemented

3.0 Domestic Sewage Management Plan

No.	**Action Areas**	**Details of Data Requirement**	**Measurable Outcome**	**Please enter Measurable Outcome for District**
SM1	Inventory of Sewage Management			

SM1a		Total Quantity of Sewage generated in District from Class II cities and above	[MLD]	127 MLD
SM1b		No of Class-II towns and above	[Nos]	6 Nos. Towns (Yamuna Nagar, Jagadhri, Radaur, Bilaspur, Sadhaura and Chhachhrauli)
SM1c		No of Class-I towns and above	[Nos]	0
SM1d		No of Towns needing STPs	[Nos]	6
SM1e		No of Towns STPs installed	[Nos]	4
SM1f		Quantity of treated sewage flowing into Rivers (directly or indirectly)	[MLD]	52 MLD
SM1g		Quantity of untreated or partially treated sewage (directly or indirectly)	[Automatic]	70 MLD
SM1h		Quantity of sewage flowing into lakes	[MLD]	0
SM1i		No of industrial townships	[Nos]	2
SW2	Adequacy of Available Infrastructure for Sewage Treatment			
SM2a		% sewage treated in STPs	[Automatic]	44.88%

SM2b		Total available Treatment Capacity	[MLD]	95.5 MLD Details as under:- 1) 3MLD STP Chhachhrauli 2) 3.5MLD STP Radaur 3) 20MLD STP at Radaur Road, Yamuna Nagar 4) 25MLD STP at Radaur Road, Yamuna Nagar 5) 24MLD STP, Parwalon, Jagadhri 6) 10+10 (20MLD STP) at Badi Majra, Yamuna Nagar
SM2c		Additional treatment capacity required	[MLD]	70 MLD Details as under:- Municipal Corporation, Yamuna Nagar-Jagadhri = 66 MLD Sadhaura = 2MLD Bilaspur = 2MLD
SM3	Adequacy of Sewerage Network			
SM3a		No of ULBs having partial underground sewerage network	[Nos]	3
SM3b		No of towns not having sewerage network	[Nos]	0
SM3c		% population covered under sewerage network	[Automatic]	100%

4.0 Industrial Wastewater Management Plan

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
IWW1	Inventory of industrial wastewater Generation in District			
IWW1a		No of Industries discharging wastewater	[Nos]	179 Nos.
IWW1b		Total Quantity of industrial wastewater generated	[MLD]	17.304 MLD
IWW1c		Quantity of treated IWW discharged into Nalas / Rivers	[MLD]	17.304 MLD
IWW1d		Quantity of un-treated or partially treated IWW discharged into lakes	[MLD]	0
IWW1e		Prominent Type of Industries	[Agro based] / [Chemical – Dye etc.] / [Metallurgical] / [Pharma] / [Pesticide] / [Power Plants] / [Mining] / [Automobile] : Multiple selection based on size of operation and number	Plywood Industries:-408 Metal Industries:151 Mining:21 Stone Crusher:183 Screening Plant:332 Sugar Industry:01 Distillery:01 Power Plant: 01
IWW1f		Common Effluent Treatment Facilities	[Nos] / [No CETPs]	No CETPs
IWW2	Status of compliance by Industries in treating wastewater			

IWW2a		No of Industries meeting Standards	[Nos]	179
IWW2b		No of Industries not meeting discharge Standards	[Automatic]	0
IWW2c		No of complaints received or number of recurring complaints against industrial pollution in last 3 months	[Nos]	15
AWW4	Status of Action taken for not meeting discharge standards			
IWW4a		No industries closed for exceeding standards in last 3 months	[Nos]	0
IWW4b		No of industries where Environmental Compensation was imposed By SPCBs	[Nos]	02 Nos.

5.0 Air Quality Management Plan

No.	**Action Areas**	**Details of Data Requirement**	**Measurable Outcome**	**Please enter Measurable Outcome for District**
AQ1	Availability of Air Quality Monitoring Network in District			
AQ1a		Manual Air Quality monitoring stations of SPCBs /CPCB	[Nos] / [None]	None

AQ1c		Automatic monitoring stations Operated by SPCBs / CPCB	[Nos] / [None]	1
AQ2	Inventory of Air Pollution Sources			
AQ2a		Identification of prominent air polluting sources	[Large Industry] / [Small Industry] / [Unpaved Roads] / [Burning of Waste Stubble] / [Brick Kiln] / [Industrial Estate] / [Others] (Multiple selection)	Large Industry:24 Small Industry:1190 Brick Kiln:84 Industrial Estate:02 Stubble Burning:268
AQ2b		No of Non-Attainment Cities	[Nos / [None]	None
AQ2c		Action Plans for non-attainment cities	[Prepared] / [Not yet prepared]	None
AQ3	Availability of Air Quality Monitoring Data at DMs Office			
AQ3a		Access to air quality data from SPCBs & CPCB through Dashboard	[Available] / [Not yet Available]	Available
AQ4	Control of Industrial Air Pollution			
AQ4a		No of Industries meeting Standards	[Nos]	817
AQ4b		No of Industries not meeting discharge Standards	[Nos]	2
AQ5	Control of Non-industrial Air Pollution sources			

AQ5a		Control open burning of Stubble –during winter	[Nos of fire incidents]	268
AQ5b		Control Open burning of Waste – Nos of actions Taken	[Nos]	0
AQ5c		Control of forest fires	[SOP available] / [No SoP]	SOP available
AQ5d		Vehicle pollution check centers	[% ULBs covered]	100%
AQ5e		Dust Suppression Vehicles	[% ULBs covered]	0
AQ6	Development of Air Pollution complaint redressal system			
AQ6a		Mobile App / Online based air pollution complaint redressing system of SPCBs.	[Available] / [Not available]	Available

6.0 Mining Activity Management plan

No.	**Action Areas**	**Details of Data Requirement**	**Measurable Outcome**	**Please enter Measurable Outcome for District**
MI1a	Inventory of Mining in District			
MI1a		Type of Mining Activity	[Sand Mining] / [Iron Ore] / [Bauxite] / [Coal] / Other [specify]	Sand Mining
			Multiple selection in order of magnitude of operations	
MI1b		No of Mining licenses given in the District	[Nos]	24

MI1c		Area covered under mining	[Sq Km]	13.5495
MI1d		Area of District	[Sq Km]	1756
MI1e		Sand Mining	[Yes] / [No]	Yes
MI1f		Area of sand Mining	[River bed] / [Estuary] / [Non -river deposit]	River bed (7.7906 Sq Km)
MI2	Compliance to Environmental Conditions			
MI2a		No of Mining areas meeting Environmental Clearance Conditions	[Nos]	21
MI2b		No of Mining areas meeting Consent Conditions of SPCBs / PCCs	[Nos]	21
MI3a	Mining related environmental Complaints			
MI3b		No of pollution related complaints against Mining Operations in last 1 year	[Nos]	0
MI4	Action against non-complying mining activity			
MI4a		No of Mining operations suspended for violations to environmental norms	[Nos]	0

MI4b		No od directions issued by SPCBs	[Nos]	0

7.0 Noise Pollution Management Plan

No.	Action Areas	Details of Data Requirement	Measurable Outcome	Please enter Measurable Outcome for District
NP1	Availability Monitoring equipment			
NP1a		No. of noise measuring devices with district administration	[Nos] / [None]	1
NP1b		No. of noise measuring devices with SPCBs	[Nos] / [None]	1
NP2	Capability to conduct noise level monitoring by State agency / District authorities			
NP2a		capability to conduct noise level monitoring by State agency / District authorities	[Available] / [Not available]	Available
NP2	Management of Noise related complaints			
NP2a		No of complaints received on noise pollution in last 1 year	[Nos]	2
NP2b		No of complaints redressed	[Nos]	2
NP3	Compliance to ambient noise standards			

NP3a		Implementation of Ambient noise standards in residential and silent zones	[Regular Activity] / [Occasional] / [Never]	Never
NP3b		Noise monitoring study in district	[carried out] / [not carried out]	Not carried out
NP3c		Sign boards in towns and cities in silent zones	[Installed] / [Partial] / [Not Installed]	Partial

Item No. 01 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 360/2018
M.A. No. 823/2018) (SLP (Civil) No. 2959/2014)

(With report dated 22.02.2019)

Shree Nath Sharma Applicant(s)

Versus

Union of India & Ors. Respondent(s)

Date of hearing: 26.09.2019

CORAM: **HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON**
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s): Mr. S.K. Bhattacharya, Advocate with Shree Nath Sharma, in person

For Respondent(s): Mr. Gautam Singh, Advocate for State of Rajsthan

ORDER

1. The issue for consideration is the steps for remedial action for enforcement of environmental norms at Bharatpur, Rajasthan.

2. The matter was initiated by way of writ petition before the Rajasthan High Court with reference to pollution of Sujanganga river which is surrounded by a historical Fort. The High Court transferred the writ petition to this Tribunal which order was affirmed by the Hon'ble Supreme Court.

3. Vide order dated 31.07.2018, the Tribunal referred to the order of the High Court dated 14.11.2011 in *C.W.P. No. 065/96* directing removal of encroachments. The High Court noted that out of 860 encroachments, 760 had been removed. It was directed that hospital waste be segregated, traffic plan prepared and air and water quality tests conducted. The direction also required the steps for restoration for the Bharatpur canal.

4. The Tribunal directed the Collector and the District Magistrate, Bharatpur to take further remedial action.

5. Accordingly, an affidavit of compliance has been filed by the Commissioner, Municipal Corporation, Bharatpur annexing a status report from the Collector/District Magistrate dated 22.02.2019. The report deals with the compliance of direction for segregation of hospital waste, traffic action plan to check vehicular pollution, noise control plan, pollution control system for control of pollution of Sujanganga river, conservation and restoration of Fort and repair of Moatwall, installation of incinerator, sewerage system and monitoring mechanism, including holding of monthly meetings.

6. In view of above, steps having been taken, the immediate problem may appear to have been addressed. However, enforcement of environmental norms is a continuous requirement. The District Magistrate, CPCB and the SPCB may consider further necessary action which may be coordinated by the SPCB. First meeting for the purpose may be held within one month from today and the matter be finalized within two months. This Tribunal in *O.A. No. 606/2018*, while dealing with the compliance of Municipal Solid Waste Management Rules, 2016 also flagged other issues and required

monitoring at the level of the Chief Secretaries and the District Magistrates. The Chief Secretaries of all the States/UTs have appeared before this Tribunal, including the Chief Secretary of State of Rajasthan and directions have been issued for continuous monitoring and filing of further reports.

7. Vide order dated 12.09.2019, while fixing a schedule for further appearance of the Chief Secretaries of all the States/UTs, direction has been issued to compile information with reference to the following specific thematic areas viz.:

- Compliance to Solid Waste Rules including Legacy Waste.
- Compliance to Bio-medical Waste Rules.
- Compliance to Construction & Demolition Waste.
- Compliance to Hazardous Waste Rules.
- Compliance to E-waste Rules.
- 351 Polluter Stretches in the country.
- 122 Non-attainment cities.
- 100 industrial clusters.
- Status of STPs and re-use of treated water.
- Status of CETPs/ETPs including performance.
- Ground water extraction/contamination and re-charge.
- Air pollution including noise pollution.
- Illegal sand mining.
- Rejuvenation of water bodies.

8. Such information is to be furnished to the CPCB by the Chief Secretaries of all the States/UTs indicating:

- Current status

- Desirable level of compliance in terms of statutes.
- Gap between current status and desired levels.
- Proposal of attending the gap with time lines.
- Name and designation of designated officer for ensuring compliance to provisions under statute.

9. Since CPCB is to file updated report by 15.11.2019, the Chief Secretaries of all the States/UTs may furnish such information by 31.10.2019.

10. We may also refer to order dated 15.07.2019 in *O.A. No. 710/2017, Shailesh Singh vs. Sheela Hospital & Trauma Centre, Shahjahanpur & Ors.* directing as follows:

> *"We find it necessary to add that in view of Constitutional provisions under Articles 243 G, 243 W, 243 ZD read with Schedules 11 and 12 and Rule 15 of the Solid Waste Management Rules, 2016, it is necessary to have a District Environment Plan to be operated by a District Committee (as a part of District Planning Committee under Article 243 ZD) with representatives from Panchayats, Local Bodies, Regional Officers, State PCB and a suitable officer representing the administration, which may in turn be chaired and monitored by the District Magistrate. Such District Environment Plans and Constitution of District Committee may be placed on the website of Districts concerned. The monthly report of monitoring by the District Magistrate may be furnished to the Chief Secretary and may be placed on the website of the District and kept on such websites for a period of one year. This may be made operative from 1.08.2019. Compliance of this direction may also be seen by the Chief Secretaries of the States/UTs. This may not only comply with mandate of law but provide an institutional mechanism for effective monitoring of environment norms."*

11. To facilitate preparation of such District Environment Plan, it will be appropriate that CPCB prepares a Model/Models and places the same on its website which may be adopted with suitable changes as per local requirements for all Districts in the country and monitored by the Chief Secretaries with reports to the Tribunal in *O.A. No. 606/2018*.

12. The Department of Environment of all States and Union Territories may collect such District Environment Plans of their respective States and finalize the 'State Environment Plan' covering the specific thematic areas referred in Para-7 including information as contained in Para-8 and template of Model/Models District Environment Plan provided by the CPCB. The action for preparation of State's Environment Plan shall be monitored by the respective Chief Secretaries of States and Administration of UTs. Let this action be completed by 15.12.2019 and compliance be reported to the Tribunal by 31.12.2019.

13. Based on States and UTs Environment Plans, MoEF&CC and CPCB shall prepare country's Environment Plan accordingly. Let the Secretary, MoEF&CC and Chairman, CPCB steer the preparation of country's Environment Plan. Let their action be completed by 31.01.2020 and compliance be reported to the Tribunal by 15.02.2020.

Let the copy of this order be sent to the Secretary, MoEF&CC, Chairman, CPCB, All Chief Secretaries of States and Administrators of all the Union Territories by e-mail for compliance.

The application is disposed of except for further monitoring of the matter in *O.A. No. 606/2018*.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

September 26, 2019
Original Application No. 360/2018
DV

Item Nos.01 to 04 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No.710/2017
WITH
Original Application No.711/2017
WITH
Original Application No.712/2017
WITH
Original Application No.713/2017

Shailesh Singh Applicant(s)

Versus

Sheela Hospital & Trauma Centre,
Shahjahanpur &Ors. Respondent(s)

WITH

Shailesh Singh Applicant(s)

Versus

Kailash Hospital and Heart Institute&Ors. Respondent(s)

WITH

Shailesh Singh Applicant(s)

Versus

Shri Ganga Charan Hospital (P) Ltd.,Bareilly &Ors. Respondent(s)

WITH

Shailesh Singh Applicant(s)

Versus

Katiyar Nursing Home, Hardoi&Ors. Respondent(s)

Date of hearing: 15.07.2019

CORAM: **HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON**
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

For Applicant(s):	Ms. Preeti Singh and Ms. Swati Jindal, Advocate
For Respondent (s):	Mr. Balendu Shekhar, Advocate for MoEF&CC Ms. Pinky Anand, ASG, Mr. G.G. Gorge, Mr. Hemant Arya, Advocates for State of U.P Mr. Anant Agarwal, Ms. Sweta Rani, Advocates for Respondent No. 3&5 in O.A No. 712/2019. Mr. TVS Raghavendra Sreyas, Advocate for APPCB Mr. Pradeep Misra, Advocate for UPPCB Mr. Rahul Verma, Addl. A.G for State of Uttarakhand Mr. Rajat Navet, Advocate for R-9 Ms. Sakshi Popli, Advocate for DPCC Mukesh Verma, Advocate for State PCB Mr. Sharmistha, Advocate for APPCB Ms. Soumyajit Pani, Advocate for State of Odisha Mr. Suyash Singh, Advocate for Sheela Nursing Home, Chandigarh and Katiyar Mr. LeishangthemRoshmanikh, Advocate for State of Manipur Mr. Rahul Khurana, Advocate for State of Haryana and HSPCB Mr. K.V Jagdishraman G. Indira, Adovocate for UT of Andaman &Nicomabr Mr. H.S.K EnatoliSema, Advocate for State of Nagaland & NPCB Mr. Shubham Bhalla, Advocate for UT, Chandigarh.

ORDER

1. The issue raised in these applications is non - compliance of the provisions of Bio-medical Waste Management Rules, 2016 (BMW Rules) by the States and UTs.

2. The matter was reviewed vide order dated 12.03.2019. It was noted that unscientific disposal of bio-medical waste had potential of serious diseases such as Gastrointestinal infection, Respiratory infection, Eye infection, Genital infection, Skin infection, Anthrax, Meningitis, AIDS, Haemorrhagic fevers, Septicaemia, Viral Hepatitis type A, Viral Hepatitis type B and C, etc. Such unscientific disposal

also causes environmental pollution leading to unpleasant smell, growth and multiplication of vectors like insects, rodents and worms and may lead to the transmission of diseases like typhoid, cholera, hepatitis and AIDS through injuries from syringes and needles contaminated with various communicable diseases. The Tribunal referred to the news article published in "Dainik Jagran" dated 06.10.2017 stating as follows:-

> *"That the Gautam Buddha Nagar is the only district where a survey of 66 hospitals was conducted in October 2017 where 23 were found doing the management of Biomedical waste. 18 hospitals of which have been issued notices by the Regional Officer, UPPCB, GuatamBudh Nagar."*

3. Reference was also made to the report of the CAG placed on its website in May, 2017 as follows:

> *"Inadequate facility of bio-medical waste (BMW) treatment. As per the report paragraph 2.1.9.5 there were 8,366 Health Care Establishments (HCEs) out of which 3,362 HCEs were operating without authorization. Total BMW generated in the State was 37,498 kg/day out of which only 35,816 kg/day was treated and disposed of. BMW of 1,682 kg/day was being disposed of untreated due to inadequate treatment facility. But UPPCB failed to monitor unauthorised operation and untreated disposal of BMW and did not take any action against the defaulters."*

4. It was also noted that on 06.02.2019, this Tribunal had required the State of Uttar Pradesh to furnish performance guarantee in the sum of Rs. 10 Crores. We are informed that vide order dated 03.05.2019,the said direction stands stayed by the Hon'ble Supreme Courtin *Civil Appeal No(s). 4287-4290/2019, State of Uttar Pradesh &Ors. Etc. v. Shailesh Singh &Ors. Etc.*

5. The Tribunal noted that the steps taken in the State of Uttar Pradesh for compliance of theBMW Ruleswere inadequate.The regulatory regime was required to be stern in view of impact on public health by unscientific disposal of bio-medical waste. Such unscientific disposal must result in prosecution andrecovery of deterrent compensation so that non-compliance is not profitable. The Tribunal noted that not a single person was shown to have been convicted in spite of large violation, nor any compensation was shown to have been recovered. No scale of compensation had been laiddown, no action plan had been prepared. The unsatisfactory state of affairs was not confined to the State of Uttar Pradesh, Punjab, Haryana and Uttarakhand who were before the Tribunal but also to the other States. The BMW Rules provide for furnishing of annual reports by the States to the CPCB and by the CPCB to the MoEF&CCand also being made available on the website of the concerned State.The Tribunal directed all the States and UTs to furnish such reports by 30.04.2019, for the period such reports were due before 30.04.2019, failing which the defaulting States will be required to pay compensation at the rate of Rs. 1 Crore per month after 01.05.2019. The States were also required to prepare

their respective action plans within one month. The Tribunal also directed the CPCB to furnish its comments on the action plans and to undertake study and prepare a scale of compensation to be recovered from the violators of BMW Rules without prejudice to the State PCBs taking steps for recovery of compensation from the polluters or laying down their own scales which should not be less than the scale of the CPCB.

6. Accordingly, a report has been filed by the CPCB certain extracts from the report are as follows:

"

2.3.1Inventory of HCFs and Biomedical Waste Generation*: Incomplete inventory on biomedical waste generation is an evident from the fact that biomedical waste generation reported by SPCBs is not proportional to the population in States/UTs. Generation of biomedical waste across States is reported as Bihar (6 %), Delhi (4.4 %), Gujarat (5.21 %), Karnataka (12 %), Kerala (7.35 %), Maharashtra (11.10 %), Rajasthan (4.03 %), Tamil Nadu (8.39 %), Uttar Pradesh (7.81 %) & West Bengal (5.34 %) which is not proportional to population States. Therefore, SPCBs/PCCs should complete inventory of all HCFs (both bedded and non-bedded) to assess quantity of biomedical waste generation as well as to ensure effective treatment and disposal of biomedical waste generated by them.*

As per annual information, out of 559 tonnes, about 518 tonnes of biomedical waste generated per day is treated and disposed through 198 no. of common facilities and 9,841 captive treatment facility installed by Healthcare facilities. However, quantity of biomedical waste

reported is not reliable or accurate since inventory of healthcare facilities and biomedical waste generation in not yet completed by all States.

States initiated Inventory studies: Lakshadweep, Andaman Nicobar, Tripura, Daman & Diu, Delhi, Chandigarh, Telangana, Kerala, Gujarat, Haryana, Punjab, Mizoram, Maharashtra, Puducherry, Rajasthan, Tamil Nadu, Jharkhand, Uttar Pradesh, Himachal Pradesh, Andhra Pradesh, MP and Meghalaya.

States not reported status of inventory study: Jammu & Kashmir, Sikkim, Arunachal Pradesh, West Bengal, Assam and Odisha.

2.3.2 Operation of Healthcare Facilities without Authorization:*As per BMWM Rules, 2016, Healthcare Facilities are required to obtain authorization under said Rules, irrespective of quantity of biomedical waste generation. Annual information indicates that out of 2,38,259 of HCFs, only 97,099 (40%) no. of HCFs have applied for authorization and 84,805 {35%) HCFs are granted authorization under BMWM Rules, 2016. This indicates that about 25 % of the identified HCFs are not yet authorized by SPCBs and biomedical waste management by such facilities could not be monitored.*

States namely Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh & West Bengal permitted use of deep burial pits for the disposal of biomedical waste despite having Common Disposal Facilities.

2.3.5 States without Common Treatment & Disposal Facilities: *States like Arunachal Pradesh, Andaman & Nicobar, Goa, Lakshadweep, Mizoram, and Nagaland &Sikkim are not having CBWTF for the treatment & disposal of biomedical waste.*

States namely Andaman Nicobar, Arunachal Pradesh, Assam, J & K, Lakshadweep, Mizoram, Orissa, Puducherry, Sikkim, Uttar Pradesh and West Bengal have not submitted any information on implementation of Barcode system.

2.3.11 Constitution of State Level Advisory Committees: States namely Jammu & Kashmir, Lakshadweep and Sikkim have not yet constituted the said Committees as required under BMWM Rules, 2016.

3.0 Submission of Action Plans by State Governments: States namely Assam, Bihar, Chhattisgarh, Daman &Diu and Dadra & Nagar Haveli, Goa, Jharkhand, Karnataka, Lakshadweep, Manipur, Meghalaya, Punjab, Tamilnadu, Telangana, Uttarakhand and West Bengal have not submitted Action pans within due date for submission, that is one month from order of Hon'ble Tribunal dated 12/03/2019.

3.1 Performance Guarantee by Government of Uttar Pradesh State: In this regard, Uttar Pradesh State has not submitted Performance Guarantee to CPCB on compliance to Action Plan submitted by them.

3.2 Key Performance Indicators: CPCB has identified the following Key Performance Indicators for assessing treatment and .disposal of biomedical waste, and effectiveness in implementation of BMWM Rules, 2016;

(1) *Inventory of all Healthcare Facilities and biomedical waste generation.*

(2) *Authorization to all Healthcare Facilities including non-bedded HCFs.*

(3) *Facilitate setting-up adequate number of Common Biomedical Waste Treatment Facilities (CBWTFs) to cover entire State or all HCFs.*

(4) *Constitution of State Advisory Monitoring Committee and District Level Monitoring Committee.*

(5) *Implementation status of Barcode system.*

(6) *Monitoring of Healthcare Facilities other than hospitals/clinics such as Veterinary Hospitals, Animal Houses, AYUSH Hospitals etc.*

Review of Action Plans:

Table 3: Scoring of States/ UTs for effectiveness of Action Plans

S.No	***Name of State***	***Action plan received S.No Name of State fromSPCB/PCCs & Score Health Department***	***Score***
1	*Sikkim*	*Health Department*	*1*
2	*Arunachal Pradesh*	*SPCB*	*1*
3	*Lakshadweep*	*Health Department*	*2.5*
4	*J&K*	*Health Department*	*3*
5	*Mizoram*	*Health Department*	*3*
6	*Manipur*	*Health Department*	*3*
7	*Uttarr Pradesh*	*Health Department*	*3.5*
8	*Nagaland*	*Health Department*	*3.5*

A score of 7 and above is indicated as an adequate action plan, score between 4-6.5 considered as satisfactory action plan whereas a score of less than 4 is considered not satisfactory.

2.0 Environmental Compensation for Healthcare Facilities (HCFs):

Environmental Compensation for HCFs = HR x T x S x R x N

Where;

HR – Health Risk factor

T- Type of Healthcare Facility

S – Size of Health Care Facility

R – Environmental Compensation factor

N – Number of days of Violation

HR Health Risk (HR) is a number from 0 to 100 and increasing HR value denotes the increasing degree of health risk due to improper handling of BMW in healthcare facility.

Further, in any case minimum Environmental Compensation in respect to Healthcare Facility shall not be less than Rs.1200/- per day.

2.1 Deterrent Factor for Healthcare Facilities:

Incremental effect on Environmental compensation charges are given below:

Scenario	***Applicable ECC***
Up to 15 days from target date	*Original ECC*
Between 15 to 30 days beyond target date	*Two times*
Fails to comply in 2 nd	*Two times*

inspections including new violations if any	
Between 30 to 45 days beyond target date	*Four times*
Fails to comply in 3rd inspections including new violations if any	*Four times*
Beyond 60 days from target date	*Closure of HCF*
Fails to comply in 4th consecutive inspection	*Closure of HCF*

3.0 Environmental Compensation for Common Biomedical Waste Treatment Facility (CBWTF):

Environmental Compensation for CBWTFs = PI x S x R x N

Environmental Compensation

Where;

PI– Pollution Index

S – Size of Operation

R – Environmental Compensation factor

N – Number of days of Violation

Further, in any case minimum Environmental Compensation in respect to Common Biomedical Waste Treatment Facility shall not be less than Rs. 3,000/- per day.

3.1 Deterrent Factor for Common Biomedical Waste Treatment Facilities:

Incremental effect on Environmental compensation charges are given below:

Scenario	***Applicable ECC***
Up to 30 days from target date	*Original ECC*
Between 30 to 60 days beyond target date	*Two times*

Fails to comply in 2nd inspection including new violations if any	*Two times*
Between 60 to 90 days beyond target date	*Four times*
Beyond 90 days	*Closure of CBWTF*
Fails to comply in 3 rd consecutive inspection	*Closure of CBWTF*

"

7. We have heard learned counsel for the parties available before this Tribunal. We do not see any objection to the recommendations of the CPCB. No meaningful objection has been raised by any of the parties. Accordingly, the report of the CPCB is accepted.The same may be placed on the website of the CPCB for three months. All the States/UTs may take action according to the said report.

8. The States/UTs may furnish complete inventory of HCFs and BMW generation within two months and where the inventories are incomplete, the same may be completed. We place on record our disapproval of the inaction of States in furnishing the inventory studies as well as for incomplete inventories. It is regretful to note that 25% of identified HCFs have not even taken authorization from the concerned State PCBs in absence of which, monitoring of waste management is not taking place. The States which have not set up common treatment and disposal facility must do so within two months as per Rules. The States who have not furnished the information on the barcode system may also furnish such information at the earliest but not beyond two months. The States

which have not yet constituted State Level Advisory Committee may also do so within two months. The action plans and their execution must be carried out having regard to the key performance indicators. The States which have inadequate action plans, not satisfactory action plans, needing further actions must also do the needful within two months realizing their responsibility to the environment and public health which ought to be monitored directly by the Chief Secretaries in terms of order of this Tribunal dated 16.01.2019 in *O.A. No. 606/2018* and further orders in the said matter.By the furtherorder in the said matter in the case of all the States, directions were issued that Chief Secretaries may personally monitor compliance of environmental norms (including BMW Rules) with the District Magistrate once every month. The District Magistrates may conduct such monitoring twice every month. We find it necessary to add that in view of Constitutional provisions under Articles 243 G, 243 W, 243 ZD read with Schedules 11 and 12 and Rule 15 of the Solid Waste Management Rules, 2016, it is necessary to have a District Environment Plan to be operated by a District Committee (as a part of District Planning Committee under Article 243 ZD) with representatives from Panchayats, Local Bodies, Regional Officers, State PCB and a suitable officer representing the administration, which may in turn be chaired and monitored by the District Magistrate. Such District Environment Plans and Constitution of District Committee may be placed on the website of Districts concerned. The monthly report of monitoring by the District Magistrate may be furnished to the Chief Secretary and may be

placed on the website of the District and kept on such websites for a period of one year. This may be made operative from 1.08.2019. Compliance of this direction may also be seen by the Chief Secretaries of the States/UTs. This may not only comply with mandate of law but provide an institutional mechanism for effective monitoring of environment norms. Needless to say that right to clean environment being part of right to life, such effective monitoring is a must. Such monitoring must include issues specified in the order of this Tribunal dated 16.01.2019, O.A No. 606/2018, Para 40 which is as follows:-

"a. Status of compliance of SWM Rule, 2016, Plastic Waste Management Rules, 2016 and Bio-Medical Waste Management Rules, 2016 in their respective areas.

b. Status of functioning of Committees constituted by this order.

c. Status of the Action Plan in compliance vide order dated 20.09.2018 in the News Item published in "The Hindu" authored 25 by Shri Jacob Koshy Titled "More river stretches are now critically polluted: CPCB (Original Application No. 673/2018).

d. Status of functioning of Committees constituted in News Item Published in "The Times of India' Authored by Shri Vishwa Mohan Titled "NCAP with Multiple timelines to Clear Air in 102 Cities to be released around August 15" dated 08.10.2018

e. Status of Action Plan with regard to identification of polluted industrial clusters in O.A. No. 1038/2018, News item published in "The Asian Age" Authored by Sanjay Kaw Titled "CPCB to rank industrial units on pollution levels" dated 13.12.2018.

f. Status of the work in compliance of the directions passed in O.A. No. 173 of 2018, Sudarsan Das v. State of West Bengal &Ors. Order dated 04.09.2018.

g. Total amount collected from erring industries on the basis of 'Polluter Pays' principle, 'Precautionary principle' and details of utilization of funds collected.

h. Status of the identification and development of Model Cities and Towns in the State in the first phase which can be replicated later for other cities and towns of the State."

9. Further important issues flagged for monitoring include training programs for the officers concerned with enforcement of environment norms at the ground level, reuse of treated water, recharge of ground water, conservation of water bodies.[1]It has been brought to our notice that State PCBs our facing certain handicaps in performing their functions for want of adequate staff and infrastructure. While this is a matter to be reviewed by concerned Chief Secretaries, the State PCBs/PCCs are free to prepare and execute appropriate plans for utilizing the environment restoration fund with the approval of CPCB. The expenditure may include hiring of experts and consultants, expanding air and water quality monitoring network, procurement of scientific equipment, undertaking restitution remediation and specialized studies on contaminated sites so that there is effective oversight for enforcement of law. Under no circumstances these funds be spent on salaries, logistics etc.

10. The compensation regime suggested by the CPCB may be adopted. It will be open to the State PCBs/PCCs to adopt a higher scale of compensation, having regard to the problems faced in such States/UTs.

11. It is made clear that if even after two months the States/UTs are found to be non-compliant, the compensation will be liable to be recovered from the said States/UTs at the rate of Rs. 1 Croreper month till the non-compliance continues.

[1]See order dated 17.05.2019, O.A. No 606/2018, Para No. 27 (vi, vii, viii)

12. The CPCB may file further progress report in the matter after coordination through the concerned authorities of the States, including the State Boards/other Health Departments.

13. The Chief Secretaries may furnish their respective compliance reportsas per orders passed in *O.A No. 606/2018, Compliance of Municipal Solid Waste Management Rules, 2016.*

Copies of this order be sent to all the Chief Secretaries, CPCB and MoEF& CC by e-mail for compliance.

List for further consideration on 18.11.2019.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

July 15, 2019
Original Application No.710/2017and other connected matters
AK

ORDER

Whereas Hon'ble National Green Tribunal in order dated 26.09.2019 in O.A. No. 360/2018, M.A. No. 823/2018[SLP (Civil) No. 2959/2014] titled as Shree Nath Sharma Vs Union of India & Ors ordered regarding preparation of District Environment Plan. The Hon'ble NGT in *O.A. No. 606/2018*, while dealing with the compliance of Municipal Solid Waste Management Rules, 2016 also flagged other issues and required monitoring at the level of the Chief Secretaries and the District Magistrates.

In the above said order dated 26.09.2019, it is stated that among others

> *"12. The Department of Environment of all States and Union Territories may collect such District Environment Plans of their respective States and finalize the 'State Environment Plan' covering the specific thematic areas referred in Para-7 including information as contained in Para-8 and template of Model/Models District Environment Plan provided by the CPCB. The action for preparation of State's Environment Plan shall be monitored by the respective Chief Secretaries of States and Administration of UTs. Let this action be completed by 15.12.2019 and compliance be reported to the Tribunal by 31.12.2019.*
>
> *13. Based on States and UTs Environment Plans, MoEF&CC and CPCB shall prepare country's Environment Plan accordingly. Let the Secretary, MoEF&CC and Chairman, CPCB steer the preparation of country's Environment Plan. Let their action be completed by 31.01.2020 and compliance be reported to the Tribunal by 15.02.2020."*

Hon'ble NGT, New Delhi also referred to order dated 15.07.2019 in *O.A. No. 710/2017, Shailesh Singh vs. Sheela Hospital & Trauma Centre, Shahjahanpur & Ors.* directing as follows:

"We find it necessary to add that in view of Constitutional provisions under Articles 243 G, 243 W, 243 ZD read with Schedules 11 and 12 and Rule 15 of the Solid Waste Management Rules, 2016, it is necessary to have a District Environment Plan to be operated by a District Committee (as a part of District Planning Committee under Article 243 ZD) with representatives from Panchayats, Local Bodies, Regional Officers, State PCB and a suitable officer representing the administration, which may in turn be chaired and monitored by the District Magistrate. Such District Environment Plans and Constitution of District Committee may be placed on the website of Districts concerned. The monthly report of monitoring by the District Magistrate may be furnished to the Chief Secretary and may be placed on the website of the District and kept on such websites for a period of one year. This may be made operative from 1.08.2019. Compliance of this direction may also be seen by the Chief Secretaries of the States/UTs. This may not only comply with mandate of law but provide an institutional mechanism for effective monitoring of environment norms."

The District Environmental plans shall cover the following environmental issues:

- Municipal Solid Waste Management
- Plastic Waste Management
- Construction and Demolition Waste (C&D)
- Biomedical Waste Management
- Hazardous Waste Management
- E-Waste Management
- Water Quality Management Plan
- Domestic Sewage Management Plan including Status of STPs and their performance & Utilization of treated effluent
- Industrial Wastewater Treatment and its Utilization and Management Plan including Status of CETPs/ETPs
- Air Quality Management Plan
- Fire Management Plan, Forest Department
- Prevention of illegal Sand Mining Management plan
- Noise Pollution Management Plan
- Rejuvenation of Polluted River Stretches
- Conservation of Water bodies

In compliance of Hon'ble NGT orders dated 26.09.2019 in the above matter, a committee of following officers is hereby constituted for evolving and execution of District Environmental Plan of District Yamuna Nagar:-

1.	Deputy Commissioner, Yamuna Nagar District	Chairman
2.	Commissioner, Municipal Corporation, Yamuna Nagar Jagadhri	Member
3.	Sub Divisional Magistrate, Yamuna Nagar - Jagadhri	Member
4.	Sub Divisional Magistrate, Radaur, District Yamuna Nagar	Member
5.	Sub Divisional Magistrate, Bilaspur, District Yamuna Nagar	Member
6.	District Development Panchayat Officer, Yamuna Nagar	Member
7.	Chief Medical Officer, Health Department, Yamuna Nagar	Member
8.	Superintending Engineer, PHED, District Yamuna Nagar	Member
9.	Superintending Engineer, Water Supply & Irrigation, District Yamuna Nagar	Member
10.	District Forest Officer, Yamuna Nagar	Member
11.	District Revenue Officer, Yamuna Nagar	Member
12.	Joint Director, DIC, Yamuna Nagar	Member
13.	Deputy Director, Animal Husbandry, Yamuna Nagar	Member
14.	Executive Engineer, PWD & BR, Yamuna Nagar	Member

15.	Mining Officer, Mines & Geology Department, Yamuna Nagar	Member
16.	Deputy Director, Agriculture Department, Yamuna Nagar	Member
17.	Secretary, Municipal Committee, Radaur	Member
18.	Secretary, Municipal Committee, Sadhaura	Member
19.	Regional Officer, HSPCB, Yamuna Nagar	Member Convener

Mukul Kumar
Deputy Commissioner,
Yamuna Nagar 3/8/2021

Endst. No. 275 / LFA **Dated**: 03../02/2021

A copy of above is forwarded to the following officers for compliance and to submit their individual comprehensive Action Plan by 27.02.2021 in relation to the environmental issues mentioned above for preparation and finalization of District Environment Plan to this office and a copy to RO HSPCB, Yamuna Nagar :-

1. The Commissioner, Municipal Corporation, Yamuna Nagar Jagadhri.
2. District Revenue Officer, Yamuna Nagar
3. Sub Divisional Magistrate, Yamuna Nagar – Jagadhri
4. Sub Divisional Magistrate, Radaur, District Yamuna Nagar
5. Sub Divisional Magistrate, Bilaspur, District Yamuna Nagar
6. District Development Panchayat Officer, Yamuna Nagar
7. Chief Medical Officer, Health Department, Yamuna Nagar.
8. Superintending Engineer, PHED, District Yamuna Nagar
9. Superintending Engineer, Water Supply & Irrigation, District Yamuna Nagar
10. District Forest Officer, Yamuna Nagar.
11. Joint Director, DIC, Yamuna Nagar
12. Deputy Director, Animal Husbandry, Yamuna Nagar
13. Executive Engineer, PWD & BR, Yamuna Nagar
14. Mining Officer, Mines & Geology Department, Yamuna Nagar
15. Deputy Director, Agriculture Department, Yamuna Nagar
16. Secretary, Municipal Committee, Radaur
17. Secretary, Municipal Committee, Sadhaura
18. Regional Officer, HSPCB, Yamuna Nagar
19. PA to Deputy Commissioner, Yamuna Nagar

Mukul Kumar
Deputy Commissioner,
Yamuna Nagar 3/8/2021