

**Action Plan**

**For**

**The Control of Air Pollution  
in  
Ghaziabad City**



**REGIONAL OFFICE  
UTTAR PRADESH POLLUTION CONTROL BOARD  
2-INS, SECTOR - 16, VASUNDHARA, POST-PRAHLAD GARHI  
GHAZIABAD**

## 1. INTRODUCTION

Ghaziabad is a city in the Indian state of Uttar Pradesh. It is sometimes referred to as the "Gateway of UP" because it is close to New Delhi, on the main route into Uttar Pradesh. It is a part of the National Capital Region of Delhi. It is a large and planned industrial city, with a population of 2,358,525. Well connected by roads and railways, and is the administrative headquarters of Ghaziabad District as well as being the primary commercial, industrial and educational centre of western Uttar Pradesh and a major rail junction for North India. Recent construction works have led to the city being described by a City Mayors Foundation survey as the second fastest-growing in the world. Situated in the Upper Gangetic Plains, the city has two major divisions separated by the Hindon River, namely: Trans-Hindon on the west and Cis-Hindon on the east side.

Although connected by railway since 1865, it was not until 1940 that the first modern industry appeared in Ghaziabad. However, it was in the post-independence period that industry really expanded, with a further 22 factories opening in the four years after 1947. This development can be attributed to the influx of people from the newly formed Pakistan and the relocation of businesses from what was now the Pakistani province of Punjab. Subsequently, the Mohan Meakin breweries were also set up in the year 1949. This period also saw the development of Ghaziabad as one of India's most famous centers of the Oil Engines industry.

The period (1967-1970) also saw the emergence of the Electronics industry, with the setting up of Bharat Electronics Limited and Central Electronics Limited. Over the years, planned industrial development saw participation from major industrial houses of the country including Mohans (Mohan Nagar Industrial Estate, 1949), Tatas (Tata Oil Mills), Modis (Modinagar, 1933; International Tobacco Co. 1967), Shri Rams (Shri Ram Pistons, 1964), Jaipurias etc. and also significant participation through foreign capital in concerns such as Danfoss India Ltd., Indo-Bulgar Food Ltd. and International Tobacco Company (estd. 1967).

Ghaziabad, the headquarters of the district of the same name that was established in 1976, lies on the Grand Trunk road about a mile east of the Hindon river in Lat. 28° 40' North and Long. 77° 25' East, 19 km. east of Delhi and 46 km. south-west of Meerut with which it is connected by a metalled road. Other roads lead west to Loni and Baghpat and east to Hapur and Garhmukteshwar. Buses run at frequent intervals from here to Delhi, Meerut, Aligarh, Bulandshahr, Moradabad, Lucknow and to other districts also. Bulandshahr and Gautambudh Nagar, on the south-west by Delhi and on the east by the newly formed district of Hapur. As its boundary is adjacent to Delhi, it acts as the main entrance to Uttar Pradesh and hence is also called the Gateway of Uttar Pradesh. The provisional data derived from the 2011 census shows that Ghaziabad urban agglomeration had a population of 2,358,525. Ghaziabad is a subcategory B1 district of category B i.e. having socioeconomic parameters below the national average.

Board has issued directions to Principal Secretary Urban Development, Principal Secretary Forests, Principal Secretary Transport, Principal Secretary Agriculture, Managing Director Central U.P. Gas Ltd., Managing Director Indraprastha Gas Ltd, and Managing Director Green Gas Ltd. under section 31 (A) of the Air (Prevention and Control of Pollution) Act, 1981 regarding prevention and control of air pollution in Ghaziabad city on dated 05.09.2016 in

compliance of directions issued by Central Pollution Control Board, Delhi under section 18(1) (b) of the Air (Prevention and Control of Pollution) Act, 1981.

Ambient Air is being monitored regularly by the Board. At source emission monitoring i.e. stack monitoring of industries is also being done regularly and action is being taken accordingly on the basis of analysis report. If any industry is found violating the standards firstly show-cause notice is issued to the industry followed by closure under Air (Prevention and Control of Pollution) Act, 1981.

## 2. ACTION TAKEN BY THE BOARD

Board has issued directions to Principal Secretary Urban Development, Principal Secretary Forests, Principal Secretary Transport, Principal Secretary Agriculture, Managing Director Central U.P. Gas Ltd., Managing Director Indraprastha Gas Ltd, and Managing Director Green Gas Ltd. under section 31 (A) of the Air (Prevention and Control of Pollution) Act, 1981 regarding prevention and control of air pollution in Ghaziabad city on dated 05.09.2016 in compliance of directions issued by Central Pollution Control Board, Delhi under section 18(1) (b) of the Air (Prevention and Control of Pollution) Act, 1981. Board has also issued directions under section 31(A) of the Air (Prevention and Control of Pollution) Act, 1981 as amended regarding prevention and control of air pollution in Ghaziabad city on dated 14.11.2017.

Ambient Air is being monitored regularly by the Board. At source emission monitoring i.e. stack monitoring of industries is also being done regularly and action is being taken accordingly on the basis of analysis report. If any industry is found violating the standards firstly show-cause notice is issued to the industry followed by closure under Air (Prevention and Control of Pollution) Act, 1981.

## 3. ANNUAL AVERAGE DATA OF AMBIENT AIR QUALITY PM<sub>10</sub> (µg/m<sup>3</sup>) OF GHAZIABAD CITY (YEAR 2013-2018)

U.P. Pollution Control Board is monitoring ambient air quality of Ghaziabad city manually at 04 locations viz. Sahibabad, Bulandshahar Road, Khora Colony, and Lohia Nagar for PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> parameters. Annual Average data of Ambient Air Quality particularly PM<sub>10</sub> (Particulate Matter size less than 10 microns) were observed during the year 2013-18 are as given below.

S.No.	Name of Location	Category	2013	2014	2015	2016	2017	2018
1	Sahibabad	Commercial	257.1	269.3	269.2	249.9	254.81	260.94
2	Bulandshahar Road	Residential	235.8	247.7	247.8	221.6	224.64	236.11
3.	Khora Colony	Residential	-	-	-	-	-	239.87
4.	Vinoba Bhawe Park, Lohia Nagar	Residential	-	-	-	-	-	202.69
	STANDARD	60 µg/m <sup>3</sup>						

(annual average)
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#### 4. SOURCES OF POLLUTION IN GHAZIABAD

The main sources of air pollution in Ghaziabad city are Vehicular, Road dust, Construction & Demolition activities, Industries (Point source & Areas source), Garbage burning & Agriculture waste burning etc. Data obtained from Continuous Ambient Air Quality Monitoring System (2018) at Ghaziabad showed values of CO 1.80 (mg/m<sup>3</sup>); O<sub>3</sub> 42.1 (µg/m<sup>3</sup>); NO<sub>2</sub> 71.1(µg/m<sup>3</sup>); SO<sub>2</sub> 28.0 (µg/m<sup>3</sup>); PM<sub>2.5</sub> 127.0 (µg/m<sup>3</sup>); NH<sub>3</sub> 52.8 (µg/m<sup>3</sup>); and Benzene 0.74(µg/m<sup>3</sup>), Toluene 9.91(µg/m<sup>3</sup>), Xylene 1.08(µg/m<sup>3</sup>).

It is clear from the data that the pollution levels are increasing year by year and the air quality index is getting worst. If we do not take steps now, this can lead to severe consequences. In spite of all the effort to control air pollution by regulatory authorities the data summarized above suggest that the air pollution level in Ghaziabad is on higher side.

During 2001 to 2011 city recorded a growth of approximately 25 % population & 160% number of vehicles. High traffic densities and abnormal meteorological factors adversely influenced Ambient Air Quality of Ghaziabad in winter. Degraded Air Quality has adverse effect on buildings, materials, Human health, Plants, historical monuments and material surface get degraded and decolorize due to air pollutants. Clean air is a "matter of right" and the steps are urgently required to improve air quality and also the steps require a multi prolonged, sustained and integrated approach including close monitoring of implementation. Hence a short term and long term action plan is an urgent need to control air Pollution of Ghaziabad city.

#### 5. Short term & Long term Action Plan

##### (A) Vehicle emission control

##### (a) Long Term Action Plan: Reduce congestion

Sl. No	Action Points	Timeframe for implementation	Action Required to be Taken by Responsible Departments
i	Plying of electric buses for public transport including establishment of sufficient charging stations.	360 days	Transport Department
ii	Prepare plan for construction of expressways/bypasses to avoid congestion due to non-destined vehicles.	360 days	N.H.A.I. /PWD
iii	Construction of peripheral road around the city to avoid congestion.	360 days	N.H.A.I./PWD
iv	Arrangement of Multilevel Parking Facilities	360 days	Nagar Nigam/Development Authorities

vi	Development/Strengthening of Bike zone/Cycle zone at metro/railways/bus stations from where travelers hire bicycle to reach the destination.	360 days	Nagar Nigam/Development Authorities
vii	Initiate steps for retrofitting of particulate filters in diesel vehicles, when BS-VI fuels are available	360 days	Vehicle Manufacturing Companies/Ministry of Road Transport & Highways (MoRTH)
viii	Use of Bio-Ethanol in the city/urban transport system/waste to energy.	360 days	Transport Department
<b>(b) Short Term Action Plan</b>			
<b>Sl. No</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i	Launch extensive drive against polluting vehicles for ensuring strict compliance	As regular activity	R.T.O/Traffic Police
ii	Launch public awareness campaign for air pollution control, vehicle maintenance, minimizing use of personal vehicles, lane discipline, etc.	As regular activity	R.T.O/ Traffic Police
iii	Prevent parking of vehicles in the non-designated areas	As regular activity	Traffic Police/ Nagar Nigam
iv	Prepare & implement action plan to check fuel adulteration and random monitoring of fuel quality data	30 days	District Supply Officer/Oil companies
v	Prepare & implement plan for widening of roads and improvement of infrastructure for decongestion of road	90 days	Nagar Nigam
vi	Steps for promoting battery operated vehicles including establishment of charging stations.	120 days	Transport Department/Nagar Nigam & Development Authorities
vii	Install weigh in motion bridges at the borders of cities/towns and States to prevent overloading of vehicles	180 days	Transport Department

viii	Synchronize traffic movements/Introduce intelligent traffic systems for lane-driving	180 days	Traffic Police
ix	Installation of remote sensor based PUC system	180 days	Traffic Police

**(B) Suspension of road dust and other fugitive emissions control**

**(a) Long Term Action Plan**

Sl. No	Action Points	Timeframe for implementation	Action Required to be Taken by Responsible Departments
i)	Implementation of maintaining at least 33% forest cover area in the city in master plan.	180 days	Nagar Nigam/GDA/Forest Department
ii)	All the canals/nullah's side roads should be brick lined. Proper plantation also carried out.	360 days	Irrigation Department/ Forest department

**(b) Short Term Action Plan**

Sl. No.	Action Points	Timeframe for implementation	Action Required to be Taken by Responsible Departments
i)	Prepare plan for creation of green buffers along the traffic corridors. Plantation of specific types of species of plants which are helpful in pollution control.	90 days	Forest Department/Nagar Nigam & Development Authorities
iii)	Maintain potholes free roads for free-flow of traffic	90 days & as regular activity afterwards.	Nagar Nigam/ Development Authorities
iv)	Introduce water fountains at major traffic intersection, wherever feasible	90 days	Nagar Nigam
v)	Greening of open areas, gardens, community places, schools and housing societies	90 days	Forest Department
vi)	Blacktopping of metalled road including pavement of road shoulders	180 days	Nagar Nigam
vii)	Use of treated effluent of STPs in Pollution	90 days	Nagar Nigam

	Control Measure such as watering of Plants, sprinkling for dust suppression purposes.		
<b>viii)</b>	Wall to Wall pavement for control of dust from road. Design the footpath pavement/tiles having capacity to grow grass in between.	180 days	Nagar Nigam

**(C) Control of emissions from biomass/crop residue/garbage/municipal solid waste burning**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
<b>i)</b>	Launch extensive drive against open burning of bio-mass, crop residue, garbage, leaves, etc.	90 days	Nagar Nigam
<b>ii)</b>	Regular check and control of burning of municipal solid wastes and use of fire extinguisher for control of fire in municipal solid waste and bio mass.		Nagar Nigam
<b>iii)</b>	Proper collection of horticulture waste (bio-mass) and its disposal following composting-cum-gardening approach		Nagar Nigam
<b>iv)</b>	Ensure ban on burning of agriculture waste and crop residues and its implementation	180 days	Agriculture Department & U.P. Pollution Control Board
<b>v)</b>	Door to Door collection of segregated waste by agency and then its disposal directly in plant without dumping it on land.	90 days	Nagar Nigam
<b>vi)</b>	Establishment of composting pits in Parks/ residential societies etc for management of biodegradable waste.	90 days	Nagar Nigam/GDA
<b>vii)</b>	No plot should be left open more than 02 years and planting of trees must be mandatory on vacant plots.	90 days	Nagar Nigam/GDA

**(D) Control of industrial emissions**

**(a) Long Term Action Plan**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i)	Conversion of natural draft brick kilns to induced draft using zigzag technique in a phased manner.	360 days	U.P. Pollution Control Board
ii)	Installation of Electrostatic precipitators and appropriate air pollution control devices in factory units/industries.	180 days	U.P. Pollution Control Board
iii)	Development of mobile facility/van for continuous ambient air quality monitoring for different localities.	360 days	Nagar Nigam

**(b) Short Term Action Plan**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i)	Identification of brick kilns and their regular monitoring including use of designated fuel, and closure of unauthorized units	60 days	U.P. Pollution Control Board
ii)	Conversion of natural draft brick kilns to induced draft	120 days	U.P. Pollution Control Board
iii)	Monitoring of industrial emission including real time online monitoring through OCEMS (Online Continuous Emission Monitoring System) and live camera feed and to take action against non-complying industrial units	60 days, and thereafter, regular activity	U.P. Pollution Control Board
iv)	Bank guarantee should be taken for the compliance of conditions imposed in CTO/CTE for control of Environmental Pollution from industries. The bank guarantee shall be forfeited in case of any violation. Verification of these conditions to	60 days, and thereafter, regular activity	U.P. Pollution Control Board



	be carried out by UPPCB/selected Third Party Institutions/Quality control agencies etc.		
v)	Installation of web cams and OCEMS in Grossly Polluting Industries.	60 days	U.P. Pollution Control Board

**(E) Control of air pollution from constructions and demolition activities**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
i)	Enforcement of Construction & Demolition Rules 2016. Fine should be imposed on defaulting units.	15 days , and thereafter, continue as regular activity	Urban Development/Development Authorities
ii)	Control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains, barriers and dust suppression units;		Urban Development/Development Authorities
iii)	Ensure carriage of construction material in closed/covered vessels		Development authorities/ Regional Transport Department
iv)	Environmental aspects should be included during preparation of master plan for development of city.	Proposed Master Plan for Ghaziabad City 2021	Urban Development/Development Authorities
v)	Builders should leave 33% area for green belt in residential colonies. Plantation should be done as per Office order No. H16405/220/2018/02 dated 16.02.2018 available on website of the Board .i.e.,www.uppcb.com.	Within a reasonable timeframe	Urban Development/Development Authorities/ housing companies
vi)	All construction areas must be covered to avoid dispersion of particulate matter	30 days	Nagar Nigam/Development Authorities

**(F) Other Steps to control Air Pollution**

**(a) Long Term Action Plan**

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<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
<b>i)</b>	Dead Bodies of Animals should be disposed through proper treatment facility like rendering plant etc.	360 days	Nagar Nigam
<b>ii)</b>	Installation of CAAQMS by polluting units/institutions etc. under "Polluters Pay Principles".	360 days	U.P. Pollution Control Board

**(b) Short Term Action Plan**

<b>Sl. No.</b>	<b>Action Points</b>	<b>Timeframe for implementation</b>	<b>Action Required to be Taken by Responsible Departments</b>
<b>i)</b>	Air Quality Index to be calculated and disseminated to the people through website and other media (on maximum fortnightly basis for manually operated monitoring stations and real time basis for continuous monitoring stations)	15days, and thereafter, continue as regular activity	U.P. Pollution Control Board
<b>ii)</b>	Establish an Air Quality Management Division at SPCB/PCC Head Quarters to oversee air quality management activities in the State and interact with CPCB	30 days	U.P. Pollution Control Board
<b>iii)</b>	Set-up and publicize helpline in the city/town as well as SPCB/PCC HQ for complaints against reported non-compliance	30 days	U.P. Pollution Control Board
<b>iv)</b>	Engage with concerned authorities on continual basis for maximizing coverage of LPG/PNG for domestic and commercial cooking with target of 100% coverage	30 days	District Supply Officer
<b>v)</b>	Monitoring of DG sets and action against violations. Fine should be imposed on defaulters.	30 days	U.P. Pollution Control Board,

<b>vi)</b>	Street vendors are to be controlled strictly in respect of removing their wastes and debris before leaving the site of operation	30 days	Nagar Nigam /Development Authorities
<b>vii)</b>	Complete ban on littering of streets with municipal solid wastes (MSW). Segregation & source collection at source of MSW to be implemented.	30 days	Nagar Nigam/Develop ment Authorities
<b>viii)</b>	If Air Quality Index found severe or above grade, ensure availability of masks to public for protection.	90 days	Nagar Nigam