Table 8.1

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Pollutant	Time Weighted Average	Concentration in Ambient Air			Method of Measurement
		Industrial Area	Residential, rural and other Areas	Sensitive Area	
Sulphur Dioxide (SO_2)	Annual Average*	80µg/m^3	60µg/m^3	15µg/m^3	1. Improved West and Gaeke Method
	24 Hours Average **	120µg/m^3	80µg/m^3	30µg/m^3	2. Ultraviolet Fluorescence
Odixes of Nitrogen as NO_2	Annual Average*	80µg/m^3	60µg/m^3	15µg/m^3	1. Jacob & Hochheiser modified ($NaOH+NaAsO_2$)
	24 Hours Average **	120µg/m^3	80µg/m^3	30µg/m^3	2. Gas Phase Chemiluminiscence
Suspended Particulate Matter (SPM)	Annual Average*	360µg/m^3	140µg/m^3	70µg/m^3	High volume sampling (Average flowrate not less than 1.1 m^3/minute)
	24 Hours Average **	500µg/m^3	200µg/m^3	100µg/m^3	
Respirable Particulate Matter (Size less than 10µm) (RPM)	Annual Average*	120µg/m^3	60µg/m^3	50µg/m^3	Respirable Particulate Matter Sampler
	24 Hours Average **	150µg/m^3	100µg/m^3	75µg/m^3	
Lead (Pb)	Annual Average*	1.0µg/m^3	0.75µg/m^3	0.50µg/m^3	AAS Method after sampling using EPM 2000 or equivalent filter paper
	24 Hours Average **	1.5µg/m^3	1.0µg/m^3	0.75µg/m^3	
Carbon Monoxide (CO)	8 Hours Average*	5.0µg/m^3	2.0µg/m^3	1.0µg/m^3	Non dispersive Infrared Spectroscopy
	2 Hour Average **	10.0µg/m^3	4.0µg/m^3	2.0µg/m^3	
Ammonia (NH_3)	Annual Average*	0.1mg/m^3			
	24 Hours Average **	0.4mg/m^3			

Source : DUEIIP-2021

* Annual Arithmetic mean of minimum 104 measurements in a year twice a week 24 hourly at uniform interval.

** 24 hourly/8 hourly values should be met 98% of the time in a year. However, 2% of the time, it may exceed but not on two consecutive days.

Note:

1. National Ambient Air Quality Standards : The level of air quality necessary with an adequate margin of safety, to protect the public health, vegetation and property.

2. Whenever and wherever two consecutives values exceeds the limit specified above for the respective category, it would be considered adequate reason to institute regular/continous monitoring and further investigations.

3. The State Government /State Board shall notify the sensitive and other areas in the respective states within a period of six months from the date of notification of National Ambient Air Quality Standards.

Source : Central Pollution Control Board

Table 8.2

ANNUAL AVERAGE CONCENTRATIONS OF SULPHUR DIOXIDE (SO_2) IN DELHI.

	RESIDENTIAL AREA (Concentration in μg/m³)					INDUSTRIAL AREA (concentration in μg/m³)		
Stations / Years	Ashok Vihar	Siri-fort	Janak-puri	Nizam-uddin	Avg. (Resi.)	Shahdara	Shahzada Bagh	(Ind.) Avg.
1989	5.0	4.8	6.2	13	7.3	14	9.9	12
1990	6.6	8.7	6.5	7.4	7.3	25	6.6	16
1991	17	8.4	12	13	13	17	13	15
1992	18	13	16	17	16	17	30	24
1993	18	17	15	14	16	22	25	24
1994	21	13	16	16	17	21	30	26
1995	18	15	18	16	17	22	26	24
1996	16	15	17	17	16	19	22	21
1997	14	13	16	18	15	16	24	20
1998	15	16	17	16	16	18	22	20
1999	12	19	18	17	17	20	21	21
2000	12	18	19	20	17	20	18	19

Source: Department of Environment, Government of Delhi & Central pollution Control Board.
Avg. of Residential & Industrial Area for 2001(Jan –June) = 16μg/m³
Note:- Tav = 8 hrs from 1989 to 1993, while 24 hrs from 1994 onwards.

Table 8.3

ANNUAL AVERAGE CONCENTRATIONS OF NITROGEN DIOXIDE (NO_2) IN DELHI.

	RESIDENTIAL AREA (Concentration in μg/m³)					INDUSTRIAL AREA (concentration in μg/m³)		
Stations / Years	Ashok Vihar	Sirifort	Janakpuri	Nizam-uddin	Avg. (Resi.)	Shahdara	Shahzada Bagh	(Ind.) Avg.
1989	23	15	18	18	19	16	21	19
1990	25	21	26	16	22	23	24	24
1991	31	24	33	25	28	25	25	25
1992	33	24	31	30	30	35	29	32
1993	31	32	38	30	33	35	33	34
1994	30	28	36	37	33	29	38	34
1995	29	29	37	37	33	28	45	37
1996	25	31	36	36	32	28	41	35
1997	23	29	35	37	31	29	45	37
1998	21	28	32	35	29	29	40	35
1999	20	24	30	32	27	25	43	34
2000	27	26	34	35	31	30	42	36

Source: Department of Environment, Government of Delhi & Central Pollution Control Board
Note:- Tav = 8 hrs from 1989 to 1993, while 24 hrs from 1994 onwards.

Table 8.4

ANNUAL AVERAGE CONCENTRATIONS OF SUSPENDED PARTICULATE MATTER (SPM) IN DELHI.

	RESIDENTIAL AREA (Concentration in μg/m³)					INDUSTRIAL AREA (concentration in μg/m³)		
Stations / Years	Ashok Vihar	Sirifort	Janakpuri	Nizam-uddin	Avg. (Resi.)	Shahdara	Shahzada Bagh	(Ind.) Avg.
1989	385	328	322	331	342	361	510	436
1990	339	317	317	294	317	314	447	381
1991	259	255	391	296	300	325	373	349
1992	321	351	372	358	351	364	498	431
1993	322	353	393	362	358	383	421	402
1994	340	331	426	443	385	350	373	362
1995	406	408	422	398	409	437	369	403
1996	361	348	352	413	369	446	393	420
1997	307	367	343	362	345	313	282	314
1998	313	384	340	342	345	371	354	363
1999	361	363	358	313	349	359	362	361
2000	420	315	355	388	370	391	475	433

Source : Department of Environment, Government of Delhi & Central Pollution Control Board
Note:- Tav= 8 hrs from 1989 to 1993, while 24 hrs from 1994 onwards.

Table 8.5

ANNUAL AVERAGE (ng/m^3) OF BENZO (A) PYRENE MEASURED IN DELHI.

S.No.	Locations	1997	1998	1999
1.	Ashok Vihar	2.9	1.8	2.1
2.	Siri Fort	1.4	1.1	1.2
3.	Nizamuddin	2.1	4.1	1.7
.	Janakpuri	1.1	3.8	3.2
5.	Shahdara	2.8	5.3	1.0
6.	Shahzada Bagh	3.2	4.9	2.2

Source : Department of Environment & Central Pollution Control Board.

Table 8.6

DISCHARGES AND BOD LEVELS IN STORM WATER DRAINS

Sl.No.	Description of Drain	Discharge (mld)	BOD (mg/l)
1.	Supplementary Drain	177	22
2.	Najafgarh Drain	1180	125
3.	Magazine Road Drain	4	190
4.	Sweepers Colony Drain	27	88
5.	Kheybar Pass Drain	23	65
6.	Metcalf House Drain	11	85
7.	Qudsia Bagh	24	155
8.	Mori Gate Drain	–	85
9.	Moat Drain	2	195
10.	Civil Mill Drain	55	180
11.	Rajghat/Delhi Gate Drain	43	190
12.	Sen-Nursing Home	100	280
13.	Drain No.14	153	320
14.	Bara Pula Drain	255	165
15.	Maharani Bagh Drain	54	370
16.	Kalkaji Drain	27	210
17.	Tehkand Drain	34	310
18.	Tuglakabad Drain	11	150
19.	Trans Yamuna	1471	240
	Total	3651	

Source : DJB Pre-feasibility study report on rehabilitation of Sewer System.

Table 8.7

FLUORIDE CONTENT OF WATER IN OTHER PARTS OF MEGA CITY OF DELHI

Sl.No.	Name of the Area	Water Fluroide Content mg/lit
1	Mohammadpur	2.50
2	Shahbad	7.36
3	J.J.Colony	6.67
4	Narela	4.87
5	Okhla Village	3.00
6	Rohini	4.35
7	Najafgarh	8.70
8	Suraj Park	4.23
9	Sabzi Mandi	1.30
10	Green Park	19.33
11	Hari Nagar (Ashram)	1.50
12	Jangpura	2.44
13	Lodhi Road	4.00
14	Srinivaspuri	1.38

Source : DUEIIP-2021.