Table 8.1

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

POLLUTANTS	Time Weighted Average	Concentration of Ambient Air			
		Industrial Area	Residential Rural and other area	Sensitive area	Method of Measurement
Sulphur Dioxide (SO_2)	Annual Average 24 hours	80μg/m^3 120μg/m^3	60μg/m^3 80μg/m^3	15μg/m^3 30μg/m^3	Improved west and Geake Method Ultraviolet fluorescence
Oxides of Nitrogen (NO_2)	Annual Average 24 hours	80μg/m^3 120μg/m^3	60μg/m^3 80μg/m^3	15μg/m^3 30μg/m^3	Jacob Hochheister modified (Na-Arsenite method Gas Phase Chemilumine scence
Suspended Particulate Matter (SPM)	Annual Average 24 hours	360μg/m^3 500μg/m^3	140μg/m^3 200μg/m^3	70μg/m^3 100μg/m^3	High Volume sampling (average flow rate not less than 1.1 m^3/minute)
Respirable Particulate Matter (size Less than 10μm) RPM	Annual Average 24 hours	120μg/m^3 150μg/m^3	60μg/m^3 100μg/m^3	50μg/m^3 75μg/m^3	Respirable particulate matter sampler
Lead as Pb	Annual Average 24 hours	1.0μg/m^3 1.5μg/m^3	0.75μg/m^3 1.0μg/m^3	0.50μg/m^3 0.75μg/m^3	AAS method after sampling using EPM 2000 or equivalent filter paper
Carbon Monoxide	8 hours 1 hour	5.0mg/m^3 10.0mg/m^3	2.0mg/m^3 4.0mg/m^3	1.0mg/m^3 2.0mg/m^3	Non dispersive infrared spectroscopy

Annual Average : Annual Arithmetic Mean of minimum 104 measurements in a year taken twice a week 24-hourly at uniform interval

24 Hours Average : 24-hourly/8-hourly values should be met 98% of the time in a year. However 2% of the time, it may exceeded but not two consecutive days.

1. The levels 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 shall be considered adequate, reason to institute regular/continous monitoring and further investigations.

Source :http ://www.dpcc.delhigovt.nic.in

Table 8.2

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

	RESIDENTIAL AREA (Concentration in $\mu g/m^3$)					INDUSTRIAL AREA (Concentration in $\mu g/m^3$)		
	Stations				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
2000	12	18	19	20	17	20	18	19
2001	8	14	17	17	14	13	14	13.5
2002	6.5	12	14	13.6	11.5	11.5	10	10.8
2003	6.3	8.9	11.5	11.9	9.6	11.4	7.1	9.33
2004	9.5	7.5	9.9	10.8	9.4	9.36	10.1	9.73
2005	7.7	8.4	10.6	9.6	9.1	9.1	8.0	8.55

Source: Department of Environment, Government of Delhi & Central pollution Control Board.
Avg. of Residential & Industrial Area for 2001(Jan –June) = 16$\mu g/m^3$
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 $\mu g/m^3$)						INDUSTRIAL AREA (Concentration in $\mu g/m^3$)		
	Stations					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
2001	20	22	37	36	28.8	23	36	29.55
2002	24.1	28.2	40	39.5	33	34.6	35	34.88
2003	32.3	31.7	43.8	43.3	37.8	32.7	39	35.88
2004	38.73	35.6	40.9	45.3	40.1	37.64	46.8	42.2
2005	48.17	35.08	48.25	44.83	44.08	36.17	45.58	40.88

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 $\mu g/m^3$)					INDUSTRIAL AREA (Concentration in $\mu g/m^3$)		
	Stations				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
2001	303	350	315	276	311	411	304.3	57.55
2002	411	383	437	351	395.5	490	499	494.55
2003	356.5	281.2	303.4	313	313.5	350.4	354.6	352.55
2004	314.7	344	331	335	331	332	336	334
2005	313.3	303	316.5	272.4	301.3	300.4	301	300.7

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

QUALITY OF DISCHARGES FROM MAJOR DRAINS FALLING INTO THE RIVER YAMUNA

Name of drain	BOD (mg/1)				
	Min.	Max.	Avg.	Avg. flow (m^3/s)	TON/day BODav/day
Nazafgarh	44	130	74.9	20.7	133.96
Magazine Road	65	260	192.7	0.1	1.66
Sweeper Colony	54	185	124.3	0.1	1.07
Khyber Pass	3	21	12.7	0.1	0.11
Metcalf House	16	105	51.7	0.1	0.45
ISBT	38	73.6	100	0.4	3.46
Tonga Stand	49	290	110.1	0.019	0.18
Civil Mill Drain	100	290	175.4	0.5	7.58
Power House	42	210	139.8	0.6	7.25
Sen Nursing Home	88	180	128.3	1.0	11.09
Nallah No. 12A	14	22	16.8	0.01	0.01
Nallah No. 14	3	84	20.5	0.4	0.71
Barapulla	35	124	57.3	1.3	6.44
Maharani Bagh	105	340	205	0.7	12.40
Kalka ji	16	27.1	47	0.01	0.04
Tughlakabad	23	252	65.2	0.3	1.69
Shahdara	45	350	106.3	7.1	65.21

Source: Water Quality Monitoring Programme conducted by Delhi Pollution Cntrol Committee.

Table 8.6

FLUORIDE CONTENT OF WATER IN DIFFERENT 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.

Table-8.7

WATER QUALITY STATUS OF RIVER YAMUNA IN 2004 & 2005

SN	Location	Date of Monitoring	pH	COD (mg/l)	BOD (mg/l)	DO (mg/l)
*		Standard	6.0-9.0		3 (Max)	4 (Min)
1	At Palla	Average (5.1.04 to 6.12.04)	8.1	14.5	3.2	7.7
		Average 6.1.05 to 6.12.05	7.9	21.9	3.5	7.3
2.	Surghat	Average(5.1.04 to 6.12.04)	7.8	38.88	11.3	4.9
		Average 6.1.05 to 6.12.05	7.52	28.75	4.6	5.0
3.	Khajoori Pantoon pul (down stream Najafgarh drain)	Average(5.1.04 to 6.12.04)	7.58	188.0	65.2	Nil
		Average 6.1.05 to 6.12.05	7.4	144	51	0.5
4.	Kudasia ghat	Average(5.1.04 to 6.12.04)	7.6	119.3	42.1	Nil
		Average 6.1.05 to 6.12.05	7.3	85.6	31	0.3
5.	ITO Bridge	Average(5.1.04 to 6.12.04)	7.6	114.3	39.5	Nil
		Average 6.1.05 to 6.12.05	7.3	83	31	0.4
6.	Nizamuddin Bridge	Average(5.1.04 to 6.12.04)	7.6	78.0	25.5	0.50
		Average 6.1.05 to 6.12.05	7.4	110	32	0.7
7.	Agra Canal	Average(5.1.04 to 6.12.04)	7.8	55.5	20.0	Nil
		Average 6.1.05 to 6.12.05	7.5	68	23	0.6
8.	River Yamuna after meeting Shahdra Drain(Down stream of the barrage)	Average(5.1.04 to 6.12.04)	7.7	140.9	40.8	1.0
		Average 6.1.05 to 6.12.05	7.5	123	38	0.4

Source: DPCC & Environment Department, Govt. of Delhi

Table-8.8

WATER QUALITY STANDARDS

S.No.	Parameter	Standards			
		Inland surface water	Public Sewer	Land for irrigation	Marine coastal areas
1.	2.	3.			
		(a)	(b)	(c)	(d)
1.	Colour and odour	See Note-1	---	See Note-1	See Note-1
2.	Suspended Solids, mg/l, Max	100	600	200	(a) For process waste water-100 (b) For cooling water effluent-10 per cent above total suspended matter of influent cooling water.
3.	Particle size of suspended solids	Shall pass 850 micron IS Sieve	---	---	(a) Floatable solids, Max 3 mm (b) Settleable solids Max 850 microns.
4.	Dissolved solids (inorganic), mg/a, mac	2100	2100	2100	---
5.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature °C, Max	Shall not exceed 40 in any section of the stream within 15 meters down stream from the effluent outlet	45 at the point of discharge	---	45 at the point of discharge

16.	Lead (as Pb), mg/l, Max.	0.1	1.0	---	1.0
17.	Cadmium (as Cd), mg/l, Max.	2.0	1.0	---	2.0
18.	Hexavalent chromium (as Cr+6) mg/l, Max.	0.1	2.0	---	1.0
19.	Total chromium as (Cr), mg/l, Max.	2.0	2.0	---	2.0
20.	Copper (as Cu), mg/l, Max.	3.0	3.0	---	3.0
21.	Zinc (as Zn), mg/l, Max.	5.0	15	---	15
22.	Selenium (as Se), mg/l, Max.	0.05	0.05	---	0.05
23.	Nickel (as Ni), mg/l, Max.	3.0	3.0	---	5.0
24.	Boron (as B), mg/l, Max.	2.0	2.0	2.0	---
25.	Percent Sodium, Max.	---	60	60	---
26.	Residual sodium carbonate, mg/l, Max.	---	---	5.0	---
27.	Cyanide (as CN), mg/l, Max.	0.2	2.0	0.2	0.2
28.	Chloride (as Cl), mg/l, Max.	1000	1000	600	(a)
29.	Fluoride (as F), mg/l, Max.	2.0	15	---	15
30.	Dissolved Phosphates (as P), mg/l, Max.	5.0	---	---	---
31.	Sulphate (as SO_4), mg/l, Max.	1000	1000	1000	---
32.	Sulphide (as S), mg/l, Max.	2.0	---	---	5.0
33.	Pesticides	Absent	Absent	Absent	Absent
34.	Phenolic compounds (as C_6H_5OH), mg/l, Max.	1.0	5.0	---	5.0
35.	Radioactive materials (a) Alpha emitters μc/ml, Max. (b) Beta emitters μc/ml, Max.	10^{-7} 10^{-6}	10^{-7} 10^{-6}	10^{-8} 10^{-7}	10^{-7} 10^{-6}

Note :-

1. **All efforts should be made to remove colour and unpleasant odour as far as practicable.**
2. **The standards mentioned in this notification shall apply to all the effluents discharged such as industrial mining and mineral processing activities municipal sewage etc.**

Source: http://www.dpcc.delhigovt.nic.in/