

Table 8.2

ANNUAL AVERAGE CONCENTRATIONS OF SULPHUR DIOXIDE (SO₂) IN DELHI.

Years	RESIDENTIAL AREA (Concentration in µg/m ³)				INDUSTRIAL AREA (Concentration in µg/m ³)			
	Stations				Stations			
	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
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	9.3

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 (NO₂) IN DELHI.

Years	RESIDENTIAL AREA (Concentration in µg/m ³)				INDUSTRIAL AREA (Concentration in µg/m ³)			
	Stations				Stations			
	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	29.5
2002	24.1	28.2	40	39.5	33	34.6	35	34.8
2003	32.3	31.7	43.8	43.3	37.8	32.7	39	35.8

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.

Years	RESIDENTIAL AREA (Concentration in $\mu\text{g}/\text{m}^3$)				INDUSTRIAL AREA (Concentration in $\mu\text{g}/\text{m}^3$)			
	Stations				Stations			
	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	357.5
2002	411	383	437	351	395.5	490	499	494.5
2003	356.5	281.2	303.4	313	313.5	350.4	354.6	352.5

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/l Date of measurement					BOD-load Kg BOD _{av} / day
	26.3.02	16.4.02	6.5.02	23.5.02	11.6.02	
Nazafgarh	40	90	100	50	50	134800
Magazine Road	400	450	440	420	530	2030
Sweeper Colony	100	380	450	410	90	2600
Khyber Pass	--	60	280	140	100	1435
Metcalf House	50	60	110	70	130	480
Morigate & Qudsia	400	530	30	50	90	13450
Tonga Stand	50	60	350	90	100	885
Civil Mill Drain	--	230	120	40	150	8500
Delhi Gate	120	150	110	30	30	13325
Sen Nursing Home	60	90	90	60	70	6280
Nallah No. 12A	70	50	100	470	110	2500
Nallah No. 14	250	280	160	180	50	20225
Barapulla	150	90	100	40	80	14600
Maharani Bagh	100	100	160	120	120	2200
Kalka ji	110	200	110	60	80	6550
Tughlakabad	130	90	100	50	230	230
Shahdara	180	50	130	20	30	80900

Source: DWSSP-Project Preparation: Draft Final Report 2 Revised – Sewerage Vol.II Existing Situation (February,2004)

Table 8.6

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

Sl.No.	Name of the Area	Water Fluoride 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

Sl. No.	Location	Date of Monitoring	pH	TSS (mg/l)	COD (mg/l)	BOD (mg/l)	DO (mg/l)	
1	At Palla	02.01.03	8.0	20	12	3	8.0	
		04.02.03	8.3	12	11	1.2	6.2	
		03.03.03	8.3	8	20	2	6.7	
		02.04.03	8.0	10	6	1	7.4	
		06.05.03	8.3	10	10	1	7.0	
		03.06.03	7.7	18	16	1.8	6.8	
		03.07.03	8.5	19	16	3	5.4	
		05.08.03	8.3	910	15	3	5.0	
		02.09.03	7.9	730	18	3	5.5	
		06.10.03	8.3	7	12	2	11	
		04.11.03	8.8	16	12	2.6	11	
		03.12.03	8.2	12	14	2.4	11	
2.	At Okhla Barrage	02.01.03	8.0	59	79	38	0.5	
		04.02.03	7.8	52	11	38	4.2	
		03.03.03	8.0	28	72	22	0.6	
		02.04.03	7.7	40	28	12	Nil	
		06.05.03	No Flow					
		03.06.03	7.6	24	132	40	2.8	
		03.07.03	7.7	48	40	14	Nil	
		05.08.03	8.0	144	36	9	1.0	
		02.09.03	7.9	240	40	14	2.8	
		06.10.03	7.5	38	70	21	Nil	
		04.11.03	7.5	45	108	38	Nil	
		03.12.03	7.3	18	48	26	Nil	

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
7.	Oil and grease, mg/l, max	10	20	10	20
8.	Total residual chlorine, mg/l, Max.	1.0	---	---	1.0
9.	Ammonical nitrogen (as N), mg/l, Max.	50	50	---	50
10.	Total Kjeldahl nitrogen (as N), mg/l, Max.	100	---	---	100
11.	Free Ammonia (as NH ₃), mg/l, Max.	5.0	---	---	5.0
12.	Biochemical Oxygen Demand (5 days at 20°C) Max.	30	350	100	100
13.	Chemical Oxygen Demand, mg/l, Max.	250	---	---	250
14.	Arsenic (as As), mg/l, Max.	0.2	0.2	0.2	0.2
15.	Mercury (as Hg), mg/l, Max.	0.01	0.01	---	0.01
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 ₆ H ₅ OH), mg/l, Max.	1.0	5.0	---	5.0
35.	Radioactive materials				
	(a) Alpha emitters µc/ml, Max.	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸	10 ⁻⁷
	(b) Beta emitters µc/ml, Max.	10 ⁻⁶	10 ⁻⁶	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/>