



**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, PUNE
ORIGINAL APPLICATION NO. 111 of 2024 (WZ)
(EARLIER ORIGINAL APPLICATION NO. 273 of 2024 (PB))**

News Item titled:" layer of toxic foam floats on surface of indrayani river in Pune" appearing in Hindustan times Dated 12.02.2024"

**AFFIDAVIT IN REPLY ON BEHALF OF MAHARASHTRA
POLLUTION CONTROL BOARD i.e. RESPONDENT NO. 1.**

I, Babasaheb Kukade, aged adult years, occupation – Service, the Sub Regional Officer of the Maharashtra Pollution Control Board at Pune II Region, having office address at 2nd Floor, Jog Centre, Wakdewadi, Pune – 411003, do hereby state on solemn affirmation as under –

- (1) I am filing this Affidavit in compliance of the Order dated 03/09/2024 passed by this Hon'ble NGT.
- (2) I say and submit that the present Application is relating to the pollution in Indrayani River in Pune due to the untreated industrial & domestic waste being released in the said River.
- (3) I say and submit that in compliance of the Order dated 22/3/2024, passed by this Hon'ble NGT, the MPCB was filed its Report including the actions taken by the Board against the Local Bodies before the Hon'ble NGT on 24/5/2024, which was taken on record by this Hon'ble NGT.

- (4) I say and submit that PMRDA submitted Water Quality Report of Indrayani River prepared by College of Engineering, Pune (COEP) to MPCB vide letter dated 26/07/2023.
- (5) I say & submit that on 14/08/2023, the Chief Executive Officer of PMRDA convened a meeting at the Divisional Commissioner Office in Pune to address the pollution of the Indrayani River within the PMRDA region. During the meeting, PMRDA presented a water quality analysis report of the nallas meeting to the Indrayani River prepared by COEP. During the discussion, the Divisional Commissioner directed to the MPCB to re-verify the sampling locations and the water quality of the Indrayani River.
- (6) I say and submit that accordingly, MPCB has collected the water samples of Nallas and Indrayani river at selected locations and analysed in MPCB's laboratory. The analysis reports of the samples collected by the MPCB are compared with the analysis reports prepared by COEP. From the comparative statement it has been observed that the results of the samples collected by COEP for the parameters BOD and COD are much higher than the results of the MPCB. A Copy of Comparative Statement is attached as an **Annexure I**.
- (7) I say and submit that the Laboratory established by the COEP is for educational purposes. Furthermore, the samples were collected only once, rather than throughout the year or seasonal sampling.

- (8) MPCB is monthly monitoring water quality of Indrayani river at three locations namely i) Up stream of Moshigaon, ii) Down stream of Moshigaon, iii) Down stream of Alandigaon under National Water Monitoring Programme (NWMP). A copy of Statement of Analysis Reports for the year 2023 and 2024 is attached as an **Annexure II**.

From the above analysis reports of the water Quality monitoring at Indrayani river, it was observed as follows: -

For the year 2023

- At U/S of Moshigaon, range of BOD is from 2.2 mg/l to 8.3 mg/l and COD is from 8.0 mg/l to 24.0 mg/l.
- At D/S of Moshigaon, range of BOD is from 3.2 mg/l to 8.4 mg/l and COD is from 12.0 mg/l to 28.3 mg/l.
- At D/S of Alandigaon, range of BOD is from 3.5 mg/l to 8.9 mg/l and COD is from 12.0 mg/l to 27.9 mg/l.

For the year 2024

- At U/S of Moshigaon, range of BOD is from 3.2 mg/l to 13.2 mg/l and COD from 12.0 mg/l to 48.0 mg/l
- At D/S of Moshigaon, range of BOD is from 3.3 mg/l to 13.2 mg/l and COD is from 8.0 mg/l to 44.0 mg/l.
- At D/S of Alandigaon, range of BOD is from 6.0 mg/l to 16.1 mg/l and COD is from 24.0 mg/l to 60.0 mg/l.

- (9) I say and submit that the CPCB has published the reports on polluted river stretches in the year 2009, 2015, 2018 and 2022 based on the analysis reports of the samples collected under NWMP. As per the 2022 report of the polluted river stretches, Stretch of the Indrayani River from Moshigaon to Alandigaon is classified under Priority – III.
- (10) I say and submit that in the matter of Original Application bearing No.673 Of 2011 - "More river stretches are critically polluted now: CPCB", the Government of Maharashtra has prepared Action Plan for Clean-up of polluted Stretch of Indrayani River in March 2019 and submitted to CPCB.
- (11) Hence this Affidavit.

Solemnly affirmed on this 14th day of October, 2024 at Pune.

I know the affiant

For and on behalf of Maharashtra Pollution Control Board i.e. Respondent No. 1.

Babasaheb Kukade

(Babasaheb Kukade)
Sub-Regional Officer Pune-II

ADVOCATE



BEFORE ME
Mangala N. Wakhare
MANGALA N. WAKHARE
ADVOCATE & NOTARY
GOVERNMENT OF INDIA
14 OCT 2024



Annexure I

Comparative statement of Analysis reports of drains meeting to Indrayani river by MPCB & COEP

Sr. No.	Parameter	Dongargaon Drain, At Dongargaon , A/P. Lonavala, Tal. Maval, Dist. Pune	Dongargaon Drain, At Dongargaon , A/P. Lonavala, Tal. Maval, Dist. Pune	Dongargaon Drain (PMRDA / COEP)	Kusgaon Bk drain, A/P. Lonavala, Tal. Maval, Dist. Pune	Kusgaon Bk Drain, A/P. Lonavala, Tal. Maval, Dist. Pune	Kusgaon Bk. (PMRDA / COEP)	Varsoli drain, Old Mumbai Pune Highway, Varsoli, A/P. Lonavala, Tal. Maval, Dist. Pune	Varsoli drain, Old Mumbai Pune Highway, Varsoli, A/P. Lonavala, Tal. Maval, Dist. Pune	Varsoli Drain (PMRDA / COEP)	Nane drain	Nane drain (PMRDA / COEP)	Takawe BK drain	Takawe Bk drain (PMRDA / COEP)	Indrayani River at U/s of Takawe Bh drain & Takawe Bk drain industrial area	Takawe Bk drain industrial area	Takawe Bk drain industrial area (PMRDA / COEP)	Drain 1 Dehu	Dehu drain 1 (PMRDA / COEP)	Dehu drain 2	Dehu drain 2 (PMRDA / COEP)
		24-08-2023	10-01-2024	05-05-2023	24-08-2023	10-01-2024	05-05-2023	24-08-2023	10-01-2024	05-05-2023	24-08-2023	10-05-2023	24-08-2023	10-05-2023	24-08-2023	24-08-2023	10-05-2023	24-08-2023	20-05-2023	24-08-2023	20-05-2023
1	pH	7.7	7.4	7.83	7.7	7.5	7.8	6.9	7.1	7.67	8.2	7.91	7.6	8.13	7.9	7.5	8.46	7.8	7.54	7.5	7.61
2	Suspended Solids (SS)	17	10	440	22	10	400	42	124	320	35	440	47	350	16	18	170	12	290	117	240
3	Total Alkalinity	40	84	192	34	138	168	80	166	204	82	196	178	212	34	90	136	288	120	194	136
4	Ammonical Nitrogen	0.23	---	4.17	0.28	---	3.81	2.34	---	4.6	0.24	4.08	0.27	4.53	0.30	0.25	0.72	1.04	3.19	3.03	1.67
5	BOD	4.5	8	310	5	11	280	55	185	320	5	340	48	285	3	34	320	18	320	85	290
6	Chloride	14.50	36.99	234.9	14	56.98	309.8	28.49	68.98	299.8	28.99	569.7	53.48	429.8	12	31.99	654.7	78.48	559.7	70.98	534.7
7	Chemical Oxygen Demand (COD)	16	24	1120	20	32	920	148	488	832	20	768	132	792	12	92	760	52	1160	196	704
8	Dissolved Oxygen (DO)	6.3	---	0.3	5.8	---	0.7	NIL	---	0	5.8	0	1.3	0	6.5	2.7	1.6	180	0	156	0
9	Phosphate (Total)	0.29	0.40	43.6	0.33	0.71	21.9	2.31	4.17	18.6	---	23.6	---	18.70	0.61	---	16.5	136	14.2	126	11.7
10	Total Coliform	225	---	>2400	225	---	>2400	1800+	---	>2400	---	>2400	---	>2400	---	---	>2400	---	>2400	---	1600

Comparative statement of Analysis reports of Indrayani river water meeting to Indrayani river by MPCB & COEP								
Sr. No.	Parameter	Standard	U/s. of Talawade, River Water Sample.	Talawade River Point (PMRDA / COEP)	D/s. of Moi, River Water Sample	Moshi Upstream point (PMRDA / COEP)	Charoli, River Water Sample, Pune	Charoli Kh. River (PMRDA / COEP)
			24.08.2023	01-06-2023	24.08.2023	01-06-2023	24.08.2023	01-06-2023
1	pH	6.5-8.5	7.4	7.32	7.8	7.8	7.7	7.93
2	Suspended Solids (SS)	Not less than 10 mg/l	24	40	26	240	25	180
3	Total Alkalinity	---	40	152	56	188	58	156
4	Ammonical Nitrogen	Not less than 5 mg/l	0.34	0.93	0.40	2.24	0.24	2.64
5	BOD	Not less than 10 mg/l	3.5	43	5.5	87.5	7.5	57
6	Chloride	---	15.50	274.8	20.49	229.9	15.50	229.9
7	Chemical Oxygen Demand (COD)	Not less than 50 mg/l	16	120	20	344	28	144
8	Dissolved Oxygen (DO)	Not less than 4 mg/l	6.2	1.9	5.5	1.1	5.2	2.1
9	Phosphate (Total)	Not less than 2 mg/l	0.39	6.5	---	12.7	---	15.1
10	Total Coliform	230/100 ml	25.00	---	275	---	25.00	---

Analysis Reports for the year 2023

Annexure 158

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Indrayani River at U/s. of Moshigaon, Tal- Haveli, Dist- Pune. Station code no. 2669

Parameters	Standard Limit	3.1.2023	2.2.2023	2.3.2023	3.4.2023	5.5.2023	2.6.2023	4.7.2023	2.8.2023	4.9.2023	5.10.2023	3.11.2023	1.12.2023	Min	Max	Average
DissolvedO2	4 mg/lit or more	5.4	4.8	5.2	5.8	5.5.4	6.1	6.1	5.7	5.4	5.3	5	5.6	4.8	6.1	5.5
pH	6 to 9	7.2	7.3	7.8	7	7.7	7	7.6	7.7	7	7.2	7.4	7.1	7	7.8	7.3
Conductivity		667.8	435.4	621.3	564.5	549.5	406.1	252.3	216.4	396.6	350.2	777.4	579.1	216.4	777.4	484.7
BOD	3 mg/lit or less	6	8.3	4.8	4.6	4.5	2.2	3.4	4	4.6	7	6.5	4.4	2.2	8.3	5.0
NitrateN		7.25	2.27	1.14	1.21	1.27	0.56	1.74	0.3	0.3	0.3	0.56	0.45	0.3	7.25	1.4
TotalColiform	500 or less	250	425	85	140	200	225	170	175	170	250	900	350	85	900	278.3
FecalColiform		11	15	9	9	14	17	9	8	30	30	70	65	8	70	23.9
Fecal Streptococci		6	9	4	4	6	11	2	2	9	13	30	7	2	30	8.6
Turbidity		1	1	1.52	1.64	1.19	1	1	1.73	1.80	1.12	1.00	1.00	1	1.8	1.3
Phenophelene		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.0
Alkanity		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.0
TotalAlkalinity		110	70	100	90	86	128	96	72	110	78	194	146	70	194	106.7
Chloride		92.97	57.98	92.47	74.98	85.97	39.99	20.99	18.49	31.99	29.99	79.98	49.48	18.49	92.97	56.3
COD		19.8	23.9	16	20	16	8	12	12	20	20	24	12	8	24	17.0
TotalKjeldahl		1.5	1.5	21.28	1.5	1.5	1.5	1.5	1.74	1.74	3.14	2.86	1.5	1.5	21.28	3.4
AmoniaN		0.41	0.4	7.66	0.40	0.4	0.4	0.41	0.68	0.81	1.31	1.16	0.55	0.4	7.66	1.2
HardnessCaCo3		178	112	164	148	144	170	112	88	132	94	212	158	88	212	142.7
CalciumCaCo3		106	68	98	88	84	90	76	52	76	54	116	84	52	116	82.7
Mg Hardness		72	44	66	60	60	80	36	36	56	40	96	74	36	96	60.0
Sulphate		74.24	47.12	55	38.60	26.30	28.30	20.40	16.10	38.90	22.80	38.20	27.80	16.1	74.24	36.1
Sodium		42.56	29.39	13.26	34.88	34.94	24.26	12.18	10.73	10.73	15.38	17.35	32.4	10.73	42.56	23.2
Total Dissolved Solids		494	322	460	426	426	362	230	204	366	324	716	536	204	716	405.5
TotalFixedSolids		407	273	382	358	352	302	204	178	296	262	578	446	178	578	336.5
Total Suspended Solids		12	15	14	13	21	14	17	11	21	11	14	16	11	21	14.9
Phosphate		0.98	0.38	0.2	0.86	1.29	1.04	1.65	0.30	0.34	0.34	0.28	0.2	0.2	1.65	0.7
Boron		0.5	0.5	0.5	1.09	1.28	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.28	0.6
Potassium		3.69	3.69	2.02	5.98	3.76	3.49	2.51	1.45	1.45	2.27	1.21	4.86	1.21	5.98	3.0
Flouride		0.2	0.2	0.2	1.12	1.48	0.66	0.22	0.2	0.2	0.2	0.2	0.21	0.2	1.48	0.4
Cadmium		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0.0
Copper		0	---	---	0.05	---	---	---	---	---	0	---	---	0	0.05	0.0
Lead		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0.0
Chromium Total		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0.0
Nickel		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0.0
Zinc		0	---	---	0.05	---	---	---	---	---	0	---	---	0	0.05	0.0
Mercury		0	---	---	NA	---	---	---	---	---	0	---	---	0	0	0.0
Iron Total		0	---	---	0.39	---	---	---	---	---	0	---	---	0	0.39	0.2

Indrayani River at D/s. of Moshigaon, Tal- Haveli, Dist- Pune. Station code no. 2668

Parameters	Standard Limit	3.1.2023	2.2.2023	1.3.2023	3.4.2023	5.5.2023	2.6.2023	4.7.2023	2.8.2023	4.9.2023	5.10.2023	3.11.2023	1.12.2023	Min	Max	Average
DissolvedO2	4 mg/lit or more	5.2	5.3	5.2	5.7	5.4	5.8	5.4	5.3	5.2	5.2		5.3	5.2	5.8	5.4
pH	6 to 9	7.1	7.5	7.4	7	7.8	7.1	7.9	7.8	7.2	7.3		7	7	7.9	7.4
Conductivity		784.6	419.5	669.2	494.7	534.4	458.1	232.4	210.1	311.2	322.5		647	210.1	784.6	443.7
BOD	3mg/lit or less	7.9	7.3	8.4	5.4	5	3.2	4.8	5	6.4	8		4.8	3.2	8.4	6.1
NitrateN		1.59	3.41	1.94	1.26	1.36	1.17	1.96	0.32	0.3	0.3		1.32	0.3	3.41	1.4
TotalColiform	500 or less	275	275	170	195	250	275	220	250	220	350		550	170	350	248
FecalColiform		14	12	10	12	17	20	13	14	60	115		70	10	115	28.7
Fecal Streptococci		8	8	5	6	7	13	4	4	20	14		11	4	20	8.9
Turbidity		1.75	1.00	1	1	1	1	1	4.09	1	1.32		1.73	1	4.09	1.4
Phenophelene Alkanity		5	5	5	5	5	5	5	5	5	5		5	5	5	5.0
TotalAlkalinity		128	66	106	78	86	152	82	68	88	68		160	66	152	92.2
Chloride		109.97	54.98	99.97	84.97	83.97	50.48	19.99	16	24.99	26.99		55.48	16	109.97	57.2
COD		28.3	19.9	24	24	20	12	16	16	24	24		16	12	28.3	20.8
TotalKjeldahl N		17.36	1.50	1.5	1.5	1.5	1.5	1.5	1.90	1.50	3.36		2.07	1.5	17.36	3.3
AmoniaN		6.55	0.4	0.4	0.4	0.4	0.4	0.53	0.77	0.63	1.43		0.80	0.4	6.55	1.2
Hardness CaCo3		210	108	176	128	140	192	106	82	106	88		186	82	210	133.6
CalciumCaCo3		126	64	104	76	82	106	64	44	66	52		108	44	126	78.4
Mg Hardness		84	44	72	52	58	86	42	38	40	36		78	36	86	55.2
Sulphate		87.24	45.38	33.40	24.20	25.80	33.60	20.40	19.60	28.10	20.50		36.80	19.6	87.24	33.8
Sodium		49.13	28.29	14.68	41.40	35.91	31.42	12.18	9.94	9.17	13.97		36.66	9.17	49.13	24.6
Total Dissolved Solids		591	310	495	378	416	416	214	196	288	298		604	196	591	360.2
Total Fixed Solids		488	265	416	326	345	354	196	174	232	242		506	174	488	303.8
Total Suspended Solids		15	17	19	21	17	26	24	15	26	13		22	13	26	19.3
Phosphate		1.57	0.27	0.29	1.68	2.39	1.84	2.33	0.91	0.72	0.94		0.2	0.27	2.39	1.3
Boron		0.5	0.5	0.5	1.10	0.96	0.5	0.5	0.5	0.5	0.5		0.5	0.5	1.1	0.6
Potassium		7.33	2.42	2.52	6.68	4.14	4.33	2.38	1.30	1.38	1.97		6	1.3	7.33	3.4
Flouride		0.2	0.2	0.22	0.92	1.29	0.86	0.35	0.2	0.26	0.2		0.41	0.2	1.29	0.5
Copper		0	---	---	0.03	---	---	---	---	---	0		---	0	0.03	0.0
Cadmium		0	---	---	0	---	---	---	---	---	0		---	0	0	0.0
Lead		0	---	---	0	---	---	---	---	---	0		---	0	0	0.0
Chromium Total		0	---	---	0	---	---	---	---	---	0		---	0	0	0.0
Nickel		0	---	---	0	---	---	---	---	---	0		---	0	0	0.0
Zinc		0	---	---	0	---	---	---	---	---	0		---	0	0	0.0
Mercury		0	---	---	NA	---	---	---	---	---	0		---	0	0	0.0
Iron Total		0	---	---	0.18	---	---	---	---	---	0		---	0	0.18	0.1

Dry River

Indrayani River at D/s. of Alandigoan, Tal- Haveli, Dist- Pune. Station code no. 2197

Parameters	Standard Limit	3.1.2023	2.2.2023	1.3.2023	3.4.2023	5.5.2023	2.6.2023	4.7.2023	2.8.2023	4.9.2023	5.10.2023	3.11.2023	1.12.2023	Min	Max	Average
Dissolved O2	4 mg/lit or more	5.4	4.8	5.3	5.8	5.8	5.5	5.6	5.7	5.5	5.1	5.8	4.9	4.8	5.8	5.433333333
pH	6 to 9	7.2	7.4	7.6	7.1	7.8	7.1	7.7	8	7.2	7.4	7.5	7	7	8	7.416666667
Conductivity		711.5	432.2	697.9	472.2	559.9	458	234.2	190.3	340.8	330.4	687.7	646.8	190.3	711.5	480.1583333
BOD	3mg/lit or less	6.9	8.9	7.8	4.8	3.5	4.8	4.4	4	4.8	8	3.8	6	3.5	8.9	5.641666667
NitrateN		7.70	2.86	6.31	1.30	0.91	1.08	1.85	0.3	0.3	0.3	1.84	1.48	0.3	7.7	2.185833333
TotalColiform	500 or less	425	425	140	190	275	350	220	225	250	275	550	550	140	550	322.9166667
FecalColiform		17	20	8	12	20	30	11	11	35	35	45	70	8	70	26.16666667
Fecal Streptococci		9	9	5	7	8	25	4	4	13	13	17	11	4	25	10.41666667
Turbidity		1.91	1	1	1	1	1.12	1	2.51	2.21	1	1	1	1	2.51	1.3125
Pheno phelene Alkanity		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
TotalAlkalinity		118	68	112	76	88	144	86	62	100	74	162	158	62	162	104
Chloride		99.97	56.98	104.97	62.48	89.97	46.49	21.99	16.99	27.99	29.99	63.98	60.48	16.99	104.97	56.85666667
COD		27.9	27.9	20	20	16	20	16	12	16	20	16	20	12	27.9	19.31666667
TotalKjeldahl		1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.24	1.85	2.74	2.24	2.86	1.5	2.86	1.869166667
AmoniaN		0.45	0.4	0.4	0.4	0.4	0.4	0.52	0.85	0.73	1.11	0.88	1.21	0.4	1.21	0.645833333
Hardness CaCo3		190	110	184	122	146	186	102	76	120	92	184	178	76	190	140.8333333
Calcium CaCo3		116	66	110	72	86	98	62	44	76	56	100	106	44	116	82.66666667
Mg Hardness		74	44	74	50	60	88	40	32	44	36	84	72	32	88	58.16666667
Sulphate		79.12	46.76	40	28.20	28.60	35.60	22.00	16.80	26.60	18.80	31.70	32.70	16.8	79.12	33.90666667
Sodium		46.14	29.21	15.92	28.54	40.01	28.53	12.29	9.71	9.29	15.27	15.78	38.53	9.29	46.14	24.10166667
TotalDissolvedSolids		527	320	516	356	432	412	216	178	316	308	634	602	178	634	401.4166667
TotalFixed Solids		438	275	432	302	356	352	202	156	256	248	512	504	156	512	336.0833333
TotalSuspendedSolids		16	19	16	15	24	25	27	12	32	11	16	21	11	32	19.5
Phosphate		1.11	0.34	0.24	1.87	2.72	1.65	2.94	0.61	0.69	0.96	0.25	0.2	0.2	2.94	1.131666667
Boron		0.5	0.5	0.5	1.10	1.56	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.56	0.638333333
Potassium		4.93	2.82	1.98	4.90	4.36	2.48	2.50	1.38	1.30	2.19	1.85	6.09	1.3	6.09	3.065
Flouride		0.2	0.2	0.21	0.31	0.87	0.46	0.31	0.2	0.24	0.2	0.36	0.49	0.2	0.87	0.3375
Cadmium		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0
Copper		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0
Lead		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0
Chromium Total		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0
Nicke		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0
Zinc		0	---	---	0	---	---	---	---	---	0	---	---	0	0	0
Mercury		0	---	---	NA	---	---	---	---	---	0	---	---	0	0	0
Iron Total		0	---	---	0.03	---	---	---	---	---	0	---	---	0	0.03	0.015

Analysis Reports for the year 2024

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Indrayani River at U/s. of Moshigaon, Tal- Haveli, Dist- Pune. Station code no. 2669

Parameters	Standard Limit	2.1.2024	7.2.2024	4.3.2024	2.4.2024	2.5.2024	6.6.2024	1.7.2024	Min	Max	Average
DissolvedO2	4 mg/lit or more	4.8	5.1	4.6	5.1	3.2	3.7	4.6	3.2	5.1	4.4
pH	6 to 9	7.9	7.6	8	7.8	7.5	7.5	7.3	7.3	8	7.7
Conductivity		781.1	783.9	932.5	664.4	561.3	432.5	347.1	347.1	932.5	643.3
BOD	3 mg/lit or less	9	5.8	4.8	3.2	13.2	11.2	4.9	3.2	13.2	7.4
NitrateN		1.41	0.56	1.60	0.85		0.88	1	0.56	1.6	1.1
TotalColiform	500 or less	170	900	920	900	900	1600	920	170	1600	901.4
FecalColiform		32	110	130	150	95	250	110	32	250	125.3
Fecal Streptococci		13	17	13	20	10	25	6	6	25	14.9
Turbidity		1.91	1.48	5.15	5.38	1	1.14	2.58	1	5.38	2.7
Phenophelene											
Alkanity		5	5	5	5	5	5	BDL	5	5	5.0
TotalAlkalinity		192	196	220	154	132	102	102	102	220	156.9
Chloride		77.98	77.98	83.97	58.98	71.38	47.74	37.39	37.39	83.97	65.1
COD		28	20	24	20	48	24	12	12	48	25.1
TotalKjeldahl		2.07	2.69	3.08	3.14	5.82	3.81	NA	2.07	5.82	3.4
AmoniaN		0.86	1.11	1.24	1.25	2.43	1.74	0.40	0.4	2.43	1.3
HardnessCaCo3		212	214	244	176	150	118	112	112	244	175.1
CalciumCaCo3		116	128	126	100	92	64	62	62	128	98.3
Mg Hardness		96	86	118	76	58	54	50	50	118	76.9
Sulphate		6.80	34.20	43.30	18.31	17.00	62.26	36.33	6.8	62.26	31.2
Sodium		69.45	9.81	56.15	25.38	25	19.60	19.69	9.81	69.45	32.2
Total Dissolved Solids		720	722	766	544	460	337	297	297	766	549.4
TotalFixedSolids		591	578	660	450	381	284	244	244	660	455.4
Total Suspended Solids		15	13	14	17	13	14	19	13	19	15.0
Phosphate		1.71	7.27	3.48	5.08	0.91	0.25	0.24	0.24	7.27	2.7
Boron		0.5	0.5	0.5	0.5	0.5	0.5	BDL	0.5	0.5	0.5
Potassium		12.4	1.12	9.54	2.37	1	1	3.42	1	12.4	4.4
Flouride		0.2	0.2	0.21	0.2	0.2	0.2	BDL	0.2	0.21	0.2
Cadmium		---	---	---	0	---	---	---	0	0	0.0
Copper		---	---	---	0.01	---	---	---	0.01	0.01	0.0
Lead		---	---	---	0	---	---	---	0	0	0.0
Chromium Total		---	---	---	0	---	---	---	0	0	0.0
Nickel		---	---	---	0	---	---	---	0	0	0.0
Zinc		---	---	---	0.03	---	---	---	0.03	0.03	0.0
Mercury		---	---	---	0	---	---	---	0	0	0.0
Iron Total		---	---	---	0.15	---	---	---	0.15	0.15	0.2

Indrayani River at D/s. of Moshigaon, Tal- Haveli, Dist- Pune. Station code no. 2668

Parameters	Standard Limit	2/1/2024	7.2.2024	4.3.2024	2.4.2024	2.5.2024	6.6.2024	1.7.2024	Min	Max	Average
DissolvedO2	4 mg/lit or more	4.8	4.7	4.8	3.4	3.2	3.7	5.6	3.2	5.9	4.5
pH	6 to 9	7.6	7.6	8	7.9	7.7	7.5	7.5	7.5	8	7.7
Conductivity		707.8	772.7	740.9	677.8	470.4	492.8	371.4	147.7	772.7	547.7
BOD	3mg/lit or less	10	8.4	5.6	5.8	12.2	13.2	3.3	3.3	13.2	8.3
NitrateN		4.51	1.08	8.92	0.67	0.50	1.35	0.60	0.5	8.92	2.5
TotalColiform	500 or less	210	1600	1600	1600	1800	1800+	1600	210	1800	1333
FecalColiform		63	150	350	150	120	275	140	63	350	164.8
Fecal Streptococci		14	20	21	20	12	25	12	8.1	25	16.5
Turbidity		1	3.51	1	1.21	1	1	1.16	1	11.4	2.7
Phenophelene											
Alkanity		5	5	5	5	5	5	BDL	5	5	5.0
TotalAlkalinity		182	194	176	156	112	126	108	32	194	135.8
Chloride		65.98	71.98	69.98	62.98	71.48	57.53	50.23	11.6	71.98	57.7
COD		32	28	32	28	44	28	8	8	44	27.5
TotalKjeldahl N		2.91	3.36	3.14	5.54	5.26	4.98	NA	2.91	5.54	4.2
AmoniaN		1.17	1.34	1.21	2.21	2.11	2.31	0.48	0.48	2.31	1.5
Hardness CaCo3		194	208	196	174	128	138	122	36	208	149.5
CalciumCaCo3		106	112	106	106	72	78	68	20	112	83.5
Mg Hardness		88	96	90	68	56	60	54	16	96	66.0
Sulphate		53	36.40	35.98	27.61	19.23	66.70	36.33	9.74	66.7	35.6
Sodium		55.35	9.28	46.24	28.10	26.80	24.40	21.80	5.38	55.35	27.2
Total Dissolved Solids		654	712	608	556	386	384	318	118	712	467.0
Total Fixed Solids		544	570	528	456	323	318	222	105	570	383.3
Total Suspended Solids		22	17	18	15	14	11	11	11	22	16.0
Phosphate		1.35	5.40	5.48	3.20	0.66	0.42	0.26	0.26	5.48	2.4
Boron		0.5	0.5	0.5	0.50	0.5	0.5	BDL	0.5	0.5	0.5
Potassium		9.65	1.12	6.65	2.97	1	1	3.86	1	9.65	3.4
Flouride		0.25	0.20	0.34	0.26	0.26	0.23	0.21	0.2	0.34	0.3
Copper		---	---	---	0.02	---	---	---	0.02	0.02	0.0
Cadmium		---	---	---	0	---	---	---	0	0	0.0
Lead		---	---	---	0	---	---	---	0	0	0.0
Chromium Total		---	---	---	0	---	---	---	0	0	0.0
Nickel		---	---	---	0	---	---	---	0	0	0.0
Zinc		---	---	---	0.03	---	---	---	0.03	0.03	0.0
Mercury		---	---	---	0	---	---	---	0	0	0.0
Iron Total		---	---	---	0.14	---	---	---	0.14	0.14	0.1

Indrayani River at D/s. of Alandigoan, Tal- Haveli, Dist- Pune. Station code no. 2197

Parameters	Standard Limit	2.1.2024	7.2.2024	4.3.2024	2.4.2024	2.5.2024	6.6.2024	1.7.2024	Min	Max	Average
Dissolved O2	4 mg/lit or more	4.9	4.9	3.8	3.2	3.2	2.1	5.2	2.1	5.2	4.05
pH	6 to 9	7.8	7.5	8.1	7.9	7.7	7.5	7.4	7.4	8.1	7.6875
Conductivity		728.7	771	737.7	741	543.8	487.9	382.1	160.8	771	569.125
BOD	3mg/lit or less	9.5	7.6	6	12.5	16.1	15.1	6.3	6	16.1	10.3
NitrateN		7.41	1.94	8.99	0.37	0.70	1.20	1	0.37	8.99	3.18
TotalColiform	500 or less	920	900	920	900	1800	1800+	1800	900	1800	1291.428571
FecalColiform		110	120	150	120	140	350	170	110	350	161.25
Fecal Streptococci		17	14	14	14	11	35+	14	11	17	14
Turbidity		1	1	1.06	1.57	1.89	1	BDL	1	9.33	2.407142857
Pheno phelene Alkanity		5	5	5	5	5	5	BDL	5	5	5
TotalAlkalinity		180	186	168	170	134	118	112	38	186	138.25
Chloride		73.48	73.98	64.98	70.48	62.38	67.03	42.04	12.5	73.98	58.35875
COD		28	24	28	44	60	32	28	24	60	33.5
TotalKjeldahl		2.41	2.86	2.74	6.33	6.72	4.70	NA	2.41	6.72	4.16
AmoniaN		0.92	1.15	1.15	2.52	2.68	2.11	BDL	0.92	2.68	1.734285714
Hardness CaCo3		204	204	190	190	146	132	126	42	204	154.25
Calcium CaCo3		116	116	98	98	80	76	76	18	116	84.75
Mg Hardness		88	88	92	92	66	56	50	24	92	69.5
Sulphate		30.20	7.30	37.62	29.70	22.44	59.96	38.26	7.3	59.96	29.55375
Sodium		69.35	9.77	44.47	31.00	24.90	27.60	24.13	6.13	69.35	29.66875
TotalDissolvedSolids		674	710	604	608	446	381	332	129	710	485.5
TotalFixed Solids		560	568	526	498	375	315	265	85	568	399
TotalSuspendedSolids		21	16	21	16	18	10	10	10	21	16.25
Phosphate		1.24	6.44	2.52	1.24	0.2	0.44	0.21	0.2	6.44	1.755714286
Boron		0.5	0.5	0.5	0.50	0.5	0.5	BDL	0.5	0.5	0.5
Potassium		12	1.08	6.83	2.19	1.64	1	4.24	1	12	3.78125
Flouride		0.23	0.21	0.36	0.32	0.24	0.21	0.23	0.21	0.36	0.255
Cadmium		---	---	---	0	---	---	---	0	0	0
Copper		---	---	---	0.02	---	---	---	0.02	0.02	0.02
Lead		---	---	---	0	---	---	---	0	0	0
Chromium Total		---	---	---	0	---	---	---	0	0	0
Nicke		---	---	---	0.04	---	---	---	0.04	0.04	0.04
Zinc		---	---	---	0.13	---	---	---	0.13	0.13	0.13
Mercury		---	---	---	0	---	---	---	0	0	0
Iron Total		---	---	---	0.19	---	---	---	0.19	0.19	0.19