Analysis results (Physio-Chemical and Bacteriological Parameter) of water bodies across Tamil Nadu state monitored during pre- and post-idol immersion activity during Vinayaga Chaturthi (30.08.2022 &10.09.2022)

S.No	District	Sampling Location	Date of sampling	Type of water body	Pre/Post immersion sampling	pH Number	DO (mg/L)	BOD (mg/L)	Fecal Coliform (MPN/ 100 ml)	Heavy metals in mg/L								
										Arsenic	Cadmium	Chromium	Copper	Iron	Manganese	Nickel	Lead	Zinc
1	Chennai	Kancheepuram (Sarva Theerthakulam)	30.08.2022	Lake	Pre-	8.50	4.4	6	78	<0.01	<0.0008	<0.05	<0.0015	0.017	0.059	<0.006	<0.015	0.094
			10.09.2022		Post-	8.49	Nil ↓	15 ↑	68 ↓	<0.01	0.068 ↑	<0.05	0.015 ↑	0.019	0.043 ↓	0.662 ↑	<0.015	0.234 ↑
2	Chennai	Ponneri Lake	30.08.2022	Lake	Pre-	6.76	3.3	5	110	<0.01	<0.0008	<0.05	<0.0015	0.010	0.168	<0.006	<0.015	0.089
			10.09.2022		Post-	6.52 ↓	Nil ↓	11 ↑	140 ↑	<0.01	0.04 ↑	<0.05	0.025 ↑	0.015 ↑	0.151 ↓	0.751 ↑	<0.015	0.246 ↑
3	Chennai	Kosasthalaiyar River	30.08.2022	River	Pre-	7.51	6.8	4	45	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	8.27 ↑	5.8	4	83 ↑	<0.01	<0.0008	<0.05	0.042 ↑	<0.05	<0.01	<0.006	<0.015	0.072 ↑
4	Chennai	Buckingham Canal	30.08.2022	River	Pre-	7.85	6.2	4	20	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.96 ↑	5.4	5	40 ↑	<0.01	<0.0008	<0.05	0.063 ↑	<0.05	<0.01	<0.006	<0.015	0.086 ↑
5	Chennai	Ezhukan Palam	30.08.2022	River	Pre-	7.56	6.0	5	61	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.006	<0.015	0.426
			10.09.2022		Post-	8.27 ↑	5.0	5	78 ↑	<0.01	<0.0008	<0.05	0.057 ↑	<0.05	<0.01	<0.006	<0.015	0.062 ↓
6	Chengalpattu	Maduranthagam Lake	30.08.2022	Lake	Pre-	7.94	7.1	2	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.2471
			10.09.2022		Post-	7.92	7.1	2	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.12 ↓
7	Cuddalore	Ulundurpet Eri	30.08.2022	Lake	Pre-	7.35	6.0	16	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.02	<0.015	0.008
			10.09.2022		Post-	7.52 ↑	6.0	26 ↑	<2	<0.01	<0.0008	<0.05	0.019 ↑	<0.05	<0.01	<0.02	<0.015	0.009
8	Dindigul	Anaipatti River Nilakkottai	30.08.2022	River	Pre-	7.66	5.7	4	<2	<0.01	<0.0008	<0.05	0.036	<0.5	<0.01	<0.006	<0.015	0.023
			10.09.2022		Post-	8.07 ↑	3.9 ↓	9 ↑	<2	<0.01	<0.0008	<0.05	0.049 ↑	<0.5	<0.01	<0.006	<0.015	0.038
9	Dindigul	Kottakudi River Bodinayakanur pudur	30.08.2022	River	Pre-	7.99	5.7	4	<2	<0.01	<0.0008	<0.05	0.042	<0.5	<0.01	<0.006	<0.015	0.034
			10.09.2022		Post-	7.65 ↓	5.5 ↓	7 ↑	<2	<0.01	<0.0008	<0.05	0.056 ↑	<0.5	<0.01	<0.006	<0.015	0.043 ↑
10	Dindigul	River cauvery at Vangal	30.08.2022	River	Pre-	7.76	5.8	4	<2	<0.01	<0.0008	<0.05	0.039	<0.5	<0.01	<0.006	<0.015	0.028
			10.09.2022		Post-	8.16 ↑	4.2 ↓	12 ↑	<2	<0.01	0.019 ↑	0.023 ↑	0.048 ↑	<0.5	0.012 ↑	<0.006	<0.015	0.051 ↑
11	Dindigul	River cauvery at Kulithalai	30.08.2022	River	Pre-	7.98	5.6	5	<2	<0.01	<0.0008	<0.05	0.046	<0.5	<0.01	<0.006	<0.015	0.035
			10.09.2022		Post-	8.02	4.6 ↓	11 ↑	<2	<0.01	0.021 ↑	0.019	0.054 ↑	<0.5	0.011 ↑	<0.006	<0.015	0.047 ↑

12	Dindigul	Vaigai Dam DS	30.08.2022	Dam	Pre-	7.96	5.4	4	<2	<0.01	<0.0008	<0.05	0.048	<0.5	<0.01	<0.006	<0.015	0.035
			10.09.2022		Post-	7.99	5.2 ↓	7 ↑	<2	<0.01	<0.0008	<0.05	0.052 ↑	<0.5	<0.01	<0.006	<0.015	0.043
13	Salem	Cauvery (Hogenakkal)	30.08.2022	Dam	Pre-	7.51	6.9	<2	7.8	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.92 ↑	6.6 ↓	<2	12 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
14	Salem	Thenpennai / Irumathur	30.08.2022	River	Pre-	7.65	5.8	<2	12	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.25 ↓	5.4 ↓	<2	17 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
15	Salem	Mookaneri Lake	30.08.2022	Lake	Pre-	7.71	5.8	<2	11	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.46 ↓	5.6 ↓	<2	22 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
16	Salem	Kumaragiri Lake	30.08.2022	Lake	Pre-	7.69	4.7	<2	21	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.96 ↑	4.4 ↓	<2	33 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
17	Salem	Annaimaduvu Dam	30.08.2022	Dam	Pre-	7.77	6.0	<2	12	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.8	4.6 ↓	<2	25 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
18	Salem	Maniyarkundam Lake	30.08.2022	Lake	Pre-	8.19	6.7	<2	17	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.84 ↑	5.5 ↓	<2	46 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
19	Salem	Muttal Lake	30.08.2022	Lake	Pre-	6.88	6.2	<2	26	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.54 ↑	5.9 ↓	<2	46 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
20	Salem	Ottamparai Lake	30.08.2022	Lake	Pre-	7.02	5.6	<2	31	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	6.98	0.5 ↓	<2	58 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
21	Salem	Sentharapatty Lake	30.08.2022	Lake	Pre-	7.93	5.7	<2	17	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.75	5.2 ↓	<2	31 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
22	Salem	Jangamasamuthiram	30.08.2022	Lake	Pre-	8.34	5.2	<2	17	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	8.42	5.0 ↓	<2	25 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
23	Salem	Seelanaickenpatti	30.08.2022	Lake	Pre-	7.09	5.9	<2	27	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.74 ↑	3.4 ↓	4.2	49 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
24	Salem	River Bhavani @ Nanjai Pulliyampatti	30.08.2022	River	Pre-	7.08	7.0	<2	6.1	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.81 ↑	6.8 ↓	<2	11 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
25	Salem	River Bhavani @ Athani	30.08.2022	River	Pre-	7.06	7.2	<2	6.8	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.61 ↑	6.9 ↓	<2	17 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015

26	Salem	River Bhavani @Padaguthurai	30.08.2022	River	Pre-	7.33	7.1	<2	6.8	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.35	7.0	<2	12 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
27	Salem	River Bhavani @Perunthalaiyur	30.08.2022	River	Pre-	7.35	7.2	<2	6.8	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.30	6.9 ↓	<2	14 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
28	Madurai	Vaigai Thaikkal Palam	30.08.2022	River	Pre-	7.46	6.0	3	63	<0.01	<0.0008	<0.05	<0.0015	0.135	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.65 ↑	3.2 ↓	5 ↑	47 ↓	<0.01	<0.0008	<0.05	<0.0015	0.647 ↑	<0.01	<0.006	<0.015	<0.0015
29	Tirunelveli	Kadayam	30.08.2022	Dam	Pre-	7.30	9.0	<2	1.8	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.25	7.3 ↓	<2	1.8	<0.01	<0.0008	<0.05	<0.0015	1.18	<0.01	<0.006	<0.015	<0.0015
30	Tirunelveli	Alwarkurichi	30.08.2022	River	Pre-	7.19	8.3	<2	5.5	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.06 ↓	7.4 ↓	<2	6.1 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
31	Tirunelveli	Gundaru	30.08.2022	Dam	Pre-	7.20	7.0	2.8	6.1	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	6.96 ↓	7.2 ↑	<2 ↓	10 ↑	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
32	Tirunelveli	Karuppanathi	30.08.2022	Dam	Pre-	7.20	8.1	4.1	15	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.85 ↑	7.4 ↓	<2 ↓	15	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
33	Tirunelveli	Tirupudai Maruthur	30.08.2022	River	Pre-	7.25	8.5	<2	17	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.12 ↓	7.2 ↓	2.5 ↑	14 ↓	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
34	Tiruppur	Samalapuram Lake	30.08.2022	Lake	Pre-	8.62	7.8	3	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	0.531	<0.015	<0.0015
			10.09.2022		Post-	8.44 ↓	6.9 ↓	12 ↑	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	0.019	0.804	<0.015	0.1003
35	Tiruppur	Amarawathy River at Kaniyur	30.08.2022	Lake	Pre-	6.83	8.0	<2	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.006	<0.015	0.106
			10.09.2022		Post-	7.53 ↑	8.1	<2	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.006	1.248	0.106
Primary Water Quality Criteria for Outdoor Bathing						**6.5- 8.5**	**>5 mg/L**	**<3 mg/L**	**<500 MPN/100 ml**	**Acceptable limit (mg/l): As-0.01, Cd-0.003, Cr-0.05, Cu-0.05, Fe-0.3, Mn-0.1, Ni-0.02, Pb-0.01 & Zn-5**								

Analysis results (Physio-Chemical and Bacteriological Parameter) of Sea water across Tamil Nadu state monitored during pre- and post-idol immersion activity during Vinayaga Chaturthi (30.08.2022 &10.09.2022)

S.No	District	Sampling Location in Chennai	Date of sampling	Type of water body	Pre/Post immersion sampling	pH Number	DO (mg/L)	BOD (mg/L)	Fecal Coliform (MPN/ 100 ml)	Heavy metals in mg/L								
										Arsenic	Cadmium	Chromium	Copper	Iron	Manganese	Nickel	Lead	Zinc
1	Chennai	Kasimedu	30.08.2022	Harbour near sea	Pre-	8.55	0.8	34	<1.8	<0.01	0.385	<0.05	<0.0015	<0.05	0.094	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.89 ↓	1.6 ↑	40 ↑	<1.8	<0.01	0.393	<0.05	<0.0015	<0.05	0.116 ↑	<0.006	<0.015	<0.0015
2	Chennai	Pattinapakkam	30.08.2022	Sea	Pre-	8.52	1.1	33	<1.8	<0.01	0.379	<0.05	<0.0015	<0.05	0.156	<0.006	<0.015	<0.0015
			10.09.2022		Post-	8.01 ↓	1.6 ↑	35 ↑	<1.8	<0.01	0.399	<0.05	<0.0015	<0.05	0.084 ↓	<0.006	<0.015	<0.0015
3	Chennai	Ennore	30.08.2022	Sea	Pre-	8.39	1.8	30	<1.8	<0.01	0.411	<0.05	<0.0015	<0.05	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	8.38	1.7	35 ↑	<1.8	<0.01	0.368	<0.05	<0.134 ↑	<0.05	<0.01	<0.006	<0.015	<0.0015
4	Chennai	Pazhaverkadu	30.08.2022	Sea	Pre-	8.27	6.2	5	91	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	8.23 ↓	5.8	3 ↓	82 ↓	<0.01	<0.0008	<0.05	0.074 ↑	<0.05	<0.01	<0.006	<0.015	0.098 ↑
5	Chengalpattu	Alamparaikuppam village sea	30.08.2022	Sea	Pre-	8.20	6.0	5	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.2598
			10.09.2022		Post-	8.24	6.8 ↑	3 ↓	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.10 ↓
6	Chengalpattu	Mamallapuram sea	30.08.2022	Sea	Pre-	8.24	6.8	5	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.3107
			10.09.2022		Post-	8.32	6.3 ↓	2 ↓	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.01 ↓
7	Chengalpattu	Sadurangapattinam village sea	30.08.2022	Sea	Pre-	8.26	6.4	3	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.2042
			10.09.2022		Post-	8.34	6.6	3	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.38 ↑
8	Chengalpattu	Vadapattinum village sea	30.08.2022	Sea	Pre-	8.23	7.3	2	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.2508
			10.09.2022		Post-	8.26	6.7 ↓	4 ↑	<2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	0.38 ↑
9	Cuddalore	Bommalyar Palayam Sea-shore	30.08.2022	Sea	Pre-	8.02	5.6	16	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.02	<0.015	0.024
			10.09.2022		Post-	8.19 ↑	5.6	16	<2	<0.01	<0.0008	<0.05	0.021 ↑	<0.05	<0.01	<0.02	0.001	0.028 ↑
10	Cuddalore	Ekkiyarkuppam seashore	30.08.2022	Sea	Pre-	8.13	5.8	20	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.02	<0.015	0.020
			10.09.2022		Post-	8.13	5.6 ↓	22 ↑	<2	<0.01	<0.0008	<0.05	0.009 ↑	<0.05	<0.01	<0.02	<0.015	0.022 ↑
11	Cuddalore	Kaipanikuppam seashore	30.08.2022	sea	Pre-	8.14	5.4	18	<2	<0.01	<0.0008	<0.05	<0.0015	<0.05	<0.01	<0.02	<0.015	0.031
			10.09.2022		Post-	8.12	5.2	18	<2	<0.01	<0.0008	<0.05	0.008 ↑	<0.05	<0.01	<0.02	<0.015	0.039 ↑

12	Cuddalore	Devanampattinam	30.08.2022	Sea	Pre-	8.21	5.4	12	<2	<0.01	<0.0008	<0.05	0.002	<0.05	<0.01	<0.02	<0.015	<0.0015
			10.09.2022		Post-	8.34 ↑	5.4	14 ↑	<2	<0.01	<0.0008	<0.05	0.002	<0.05	<0.01	<0.02	<0.015	0.019 ↑
13	Madurai	Agni Theertham Seashore Rameswaram	30.08.2022	Sea	Pre-	6.95	7.3	<2	<1.8	<0.01	<0.0008	<0.05	<0.0015	0.3012	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.35 ↑	5.0 ↓	<2	<2	<0.01	0.005 ↑	<0.05	0.02 ↑	0.682 ↑	<0.01	<0.006	<0.015	<0.0015
14	Madurai	Indra Nagar Seashore Mandapam	30.08.2022	Sea	Pre-	7.65	7.8	<2	<1.8	<0.01	<0.0008	<0.05	<0.0015	0.24	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.83 ↑	3.2 ↓	<2	<2	<0.01	0.006 ↑	<0.05	0.019 ↑	0.712 ↑	<0.01	<0.006	<0.015	0.002 ↑
15	Madurai	Navapasanam Seashore Devipattinam	30.08.2022	Sea	Pre-	7.52	7.1	<2	<1.8	<0.01	<0.0008	<0.05	<0.0015	0.22	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.88 ↑	4.2 ↓	<2	<2	<0.01	0.007 ↑	<0.05	0.022 ↑	0.732 ↑	<0.01	<0.006	<0.015	0.023 ↑
16	Madurai	Naripaiyur Seashore Naripaiyur	30.08.2022	Sea	Pre-	7.9	7.0	<2	<1.8	<0.01	<0.0008	<0.05	<0.0015	0.256	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.84	4.7 ↓	<2	<1.8	<0.01	<0.0008	<0.05	0.019 ↑	0.647 ↑	<0.01	<0.006	<0.015	0.014 ↑
17	Tirunelveli	Kudankulam	30.08.2022	Sea	Pre-	6.88	5.7	4.5	8.2	<0.01	<0.0008	<0.05	<0.0015	<0.5	<0.01	<0.006	<0.015	<0.0015
			10.09.2022		Post-	7.30 ↑	6.5 ↑	4.4	5.5 ↓	<0.01	0.016	<0.05	0.0519	0.24	<0.01	0.103	0.427 ↑	<0.0015

Water Quality Standards for Coastal Waters Marine Outfalls

Class	Designated best use	Paramters & Standards
SW - I	Salt pans, Shell fishing, Mariculture and Ecologically Sensitive Zone.	pH - 6.5-8.5; D.O - minimum 5.0 mg/l; Oil and Grease -0.1 mg/l; Heavy metals (Hg, Pb, Cd) - 0.01 mg/l
SW - II	Bathing, Contact Water Sports and Commercial fishing.	pH - 6.5-8.5; D.O - minimum 4.0 mg/l; Turbidity - 31 NTU; Fecal Coliform- 100/100 ml (MPN); B.O.D at 27°C -3 mg/l
SW - III	Industrial cooling, Recreation (non-contact) and Aesthetics.	pH - 6.5-8.5; D.O - minimum 4.0 mg/l ; Turbidity - 31 NTU; Fecal Coliform- 100/100 ml (MPN); B.O.D at 27°C -3 mg/l
SW - IV	Harbour.	pH - 6.5-9; D.O- minimum 3.0 mg/l; Fecal Coliform- 500/100 ml (MPN)
SW - V	Navigation and Controlled Waste Disposal.	pH - 6.0-9; D.O- minimum 3.0 mg/l; Fecal Coliform- 500/100 ml (MPN)

Inferences drawn from analysis results of water bodies across Tamil Nadu state during pre- and post-idol immersion activity during Ganesh Chaturthi (30.08.2022 &10.09.2022)

pH

- No exceedance observed in pH value at all monitored stations except Samalapuram Lake, Tiruppur (pre-idol immersion value; pH 8.62).

DO

- DO values meet the Primary Water Quality Criteria for Outdoor Bathing (>5 mg/L) at all the monitored stations prior to idol immersion except Kancheepuram (Sarva Theerthakulam), Ponneri Lake and Kumaragiri Lake.
- Drastic decrease and at places depletion of Dissolved Oxygen post-idol immersion was noted at Kancheepuram (Sarva Theerthakulam) (detected Nil; decrease by 4.4 mg/L), Ponneri Lake (detected Nil; decrease by 3.3 mg/L), Ottamparai Lake (decrease by 5.1 mg/L), Vaigai Thaikkal Palam (decrease by 2.7 mg/L), Seelanaickenpatti (decrease by 2.5 mg/L), Anaipatti River Nilakkottai (decrease by 1.8 mg/L), Annaimaduvu Dam (decrease by 1.4 mg/L), Kadayam (decrease by 1.7 mg/L), Tirupudai Maruthur (decrease by 1.3 mg/L) and Maniyarkundam Lake (decrease by 1.2 mg/L).
- At the monitored locations namely Anaipatti River Nilakkottai, River cauvery at Vangal, River cauvery at Kulithalai, Annaimaduvu Dam, Ottamparai Lake, Seelanaickenpatti and Vaigai Thaikkal Palam lowered values were observed during post immersion affecting the values thereby not complying to the bathing criteria (>5 mg/L).
- DO at all the sampled locations have lowered values compared to pre-immersion values.
- A general decrease in Dissolved Oxygen is observed probably due to organic loading during the festivities leading to increase in BOD.

BOD

- BOD values met the criteria (<3 mg/L) both during pre-&post-idol immersion at Maduranthagam Lake, Cauvery (Hogenakkal), Thenpennai / Irumathur, Mookaneri Lake, Kumaragiri Lake, Annaimaduvu Dam , Maniyarkundam Lake, Muttal Lake, Ottamparai Lake, Sentharapatty Lake , Jangamasamuthiram River Bhavani @ Nanjai Pulliyampatti, River Bhavani @ Athani, River Bhavani @Padaguthurai, River Bhavani @Perunthalaiyur, Kadayam, Alwarkurichi, Gundaru, Tirupudai Maruthur and Amarawathy River at Kaniyur.
- The BOD values at monitored locations Seelanaickenpatti, Vaigai Thaikkal Palam and Samalapuram Lake were detected within an acceptable limit prior to idol immersion. However, during post immersion it is observed that the values have exceeded the standard.
- The other locations do not meet the Bathing criteria (pre- & post-idol immersion).
- Further, a surge in BOD value post-immersion was observed in Ulundurpet Eri (increase by 10 mg/L), Kancheepuram (increase by 9 mg/L), Samalapuram Lake (increase by 9 mg/L), River cauvery at Vangal (increase by 8 mg/L), Ponneri (increase by 6 mg/L), Kasimedu (increase by 6 mg/L), River cauvery at Kulithalai (increase by 6 mg/L), Ennore (increase by 5 mg/L) Anaipatti River Nilakkottai (increase by 5 mg/L), Kottakudi River Bodinayakanur pudur (increase by 3 mg/L), Vaigai Dam DS (increase by 3 mg/L), and Pattinapakkam (increase by 2 mg/L).

Fecal Coliform

- Fecal coliform was found well within the desirable level at all the monitored locations. (<500 MPN/100 ml)
- However, a general increase in fecal coliform was noted in most of the sampled locations post-idol immersion, though the values do not exceed the standard criteria.

Heavy metals

- Arsenic (As) and Chromium (Cr) values were well within the Acceptable Limit at all the monitored locations.

- Cadmium (Cd) concentraion does not meet the standard limit (0.003 mg/l) post-idol immersion at Kancheepuram (Sarva Theerthakulam), Ponneri Lake, River cauvery at Vangal and River cauvery at Kulithalai.
- Increase in the concentration of Copper (Cu) was observed at Kancheepuram (Sarva Theerthakulam), Ponneri Lake, Kosasthalaiyar River, Ulundurpet Eri, Anaipatti River Nilakkottai and River cauvery at Vangal. The sampled locations namely Buckingham Canal, Ezhukan Palam, Kottakudi River Bodinayakanur pudur, River cauvery at Kulithalai, Vaigai Dam DS and River cauvery at Vangal, concentration of the metal has exceeded the limit (0.005 mg/l) post-idol immersion.
- Iron levels at sampled locations Vaigai Thaikkal Palam and Kadayam have recorded values exceeding the standard.
- Ponneri Lake has recorded Manganese level exceeding the standard limit (0.1 mg/L)
- Post-idol immersion, increase in concentration of Nickel (Ni) at Kancheepuram (Sarva Theerthakulam) and Ponneri Lake is observed, thereby exceeding the standard (0.02mg/L). Though, exceedance of Nickel values was noted at Samalapuram Lake both pre- & post-idol immersion, an increase in concentration was distinctly observed during post immersion.
- Post idol-immersion, dramatic increase in concentration of Lead (Pb) (1.248 mg/L) is noted at Amarawathy River at Kaniyur causing to exceed the standard (0.01 mg/L).
- Though, a general increase in concentration of Zinc (Zn) is observed at many sampled locations, all the values fall well within acceptable limit at all the sampled locations.

Inferences drawn from analysis results of Sea water across Tamil Nadu state during pre- and post-idol immersion activity during Ganesh Chaturthi (30.08.2022 &10.09.2022)

pH

- No exceedance of pH value observed at all monitored stations.

DO & BOD

- Prior to idol immersion, DO values observed at Indra Nagar Seashore-Mandapam, Navapasanam Seashore- Devipattinam and Naripaiyur Seashore-Naripaiyur fall into SW – I category of Water Quality Standards for Coastal Waters Marine Outfalls. However, post-idol immersion, decrease in DO lead the values fall under SW-II.
- DO and BOD, both the parameters does not meet the criteria of SW-V (DO-minimum 3 mg/L) at Kasimedu, Pattinapakkam and Ennore.
- BOD meets the SW-I criteria at five locations (pre- & post-) only (Sadurangapattinam village sea, Agni Theertham Seashore Rameswaram, Indra Nagar Seashore Mandapam, Navapasanam Seashore Devipattinam and Naripaiyur Seashore Naripaiyur) out of 17 monitored locations.
- Increase in BOD, post idol-immersion caused the values at Vadapattinum village to fall into SW-IV category from SW-I.

Fecal Coliform

- Fecal coliform met the criteria (<500 MPN/100 ml) at all the monitored locations.

Heavy metals

- Cadmium (Cd) level does not meet the standard limit (0.01 mg/l) at Kasimedu, Pattinapakkam and Ennore (pre- & post-).
- Also, a distinctive increase in concentration of Lead post-immersion was highly notable at Kudankulam exceeding the standard limit (0.01 mg/l).
- Otherwise, a marginal increase in concentration of heavy metals was observed post-idol immersion.