



Ground Water Quality Analysis Report- Pre Monsoon (April-May 2024)																							Annexure-I																																	
Parameters	Date of Monitoring	Colour	Odour	Weather	Temp. (°C)	pH	Total Dissolved Solids (mg/L)	Electrical Conductivity(µs/cm)	Chemical Oxygen Demand(mg/L)	Total Hardness(mg/L)	Calcium Hardness(mg/L)	Magnesium Hardness (mg/L)	Total Alkalinity(mg/L)	Chloride (mg/L)	Fluoride(mg/L)	Nitrate - N(mg/L)	Nitrite - N(mg/L)	Sulphate (mg/L)	Phosphate(mg/L)	Sodium(mg/L)	Potassium(mg/L)	Sodium Adsorption Ratio	Total Coliform (MPN/100ml)	Fecal Coliform (MPN/100ml)	Arsenic (mg/L)	Nickel (mg/L)	Copper (mg/L)	Mercury (mg/L)	Chromium (mg/L)	Cadmium (mg/L)	Zinc (mg/L)	Lead (mg/L)	Iron (mg/L)																							
							6.5-8.5	500	N/A	N/A	200	N/A	N/A	200	250	1.00	45.00	N/A	200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NR	NR	0.01	0.02	0.05	0.001	N/A	0.003	5.00	0.01	0.30																			
Acceptable limit as per BIS IS 10500:2012						NR	2000	N/A	N/A	600	N/A	N/A	N/A	1000	1.50	NR	45.00	N/A	400	N/A	N/A	N/A	NR	NR	0.05	NR	1.5	NR	0.001	N/A	NR	15	NR	NR																						
Permissible limit as per BIS IS 10500:2012						2.00	10 mg/l	05 µs/cm	05 mg/l	10 mg/l	5 mg/l	4 mg/l	5 mg/l	5 mg/l	0.2 mg/l	0.3 mg/l	0.02 mg/l	5 mg/l	0.2 mg/l	5 mg/l	1 mg/l	N/A	1.80	1.80	0.01	0.10	0.03	0.001	0.06	0.02	0.01	0.10	0.06																							
Lowest Detection limit						2.00	10 mg/l	05 µs/cm	05 mg/l	10 mg/l	5 mg/l	4 mg/l	5 mg/l	5 mg/l	0.2 mg/l	0.3 mg/l	0.02 mg/l	5 mg/l	0.2 mg/l	5 mg/l	1 mg/l	N/A	1.80	1.80	0.01	0.10	0.03	0.001	0.06	0.02	0.01	0.10	0.06																							
S.No	Monitoring Location																																																							
1	Handpump, near patrol pump,Joshimath																						4/4/2024	Clear	Odourfree	Clear	18	7.48	120	242	BDL	76	65	11	82	20	BDL	BDL	BDL	8.11	BDL	11.74	2.46	0.58	BDL	BDL	ND	ND	ND	0.32						
2	Handpump, near Gopinath mandir, Gopeshwar																						4/5/2024	Clear	Odourfree	Clear	20	7.06	150	228	BDL	110	87	23	96	29	0.21	BDL	0.17	7.95	BDL	22.69	9.51	0.94	BDL	BDL	ND	ND	0.53							
District - Rudraprayag																																																								
3	Handpump, near Mandhakini ghat,Augestmuni																						4/2/2024	Clear	Odourfree	Clear	20	7.40	78	120	BDL	120	105	15	127	15	0.23	BDL	BDL	6.12	BDL	5.40	1.80	0.21	BDL	BDL	ND	ND	ND	ND	ND	ND	0.42	ND	0.62	
4	Handpump, near Bus Stand, Rudraprayag town																						4/2/2024	Clear	Odourfree	Clear	22	7.75	99	130	BDL	145	115	30	110	20	BDL	BDL	BDL	5.16	BDL	7.25	2.05	0.26	BDL	BDL	ND	0.86								
District - Uttarkashi																																																								
5	Handpump near market,Chinyalisaur																						4/18/2024	Clear	Odourfree	Clear	19	7.39	145	292	BDL	213	186	27	194	34	0.20	BDL	BDL	28.41	BDL	17.41	3.10	0.51	BDL	BDL	ND	ND	ND	ND	ND	ND	0.36	BDL	1.03	
6	Handpump near market, Uttarkashi																						4/18/2024	clear	Odourfree	Clear	20	7.74	153	306	BDL	132	120	12	150	30	BDL	BDL	0.22	52.83	0.21	13.36	6.58	0.50	BDL	BDL	ND	ND	ND	ND	ND	ND	0.27	BDL	1.14	
District- Tehri																																																								
7	Handpump, Bhagirathipurum, Tehri																						4/6/2024	clear	Odourfree	Clear	19	7.15	148	239	BDL	146	132	14	135	18	BDL	BDL	BDL	14.29	BDL	24.63	4.24	0.88	BDL	BDL	ND	ND	ND	ND	ND	ND	0.26	ND	0.82	
8	Handpump, near Chamund, New tehri																						4/6/2024	Clear	Odourfree	Clear	18	7.12	55	78	BDL	32	29	03	36	05	BDL	BDL	BDL	8.86	BDL	5.98	1.06	0.46	BDL	BDL	ND	0.25								
District - Pauri Garhwal																																																								
9	Handpump near Devi Mandir, Kotdwar																						4/16/2024	clear	Odourfree	Clear	19	7.37	270	416	5.20	230	206	24	240	27	0.29	BDL	BDL	18.68	BDL	16.88	2.45	0.48	BDL	BDL	ND	ND	ND	ND	ND	ND	1.95	ND	1.06	
10	Handpump near Hanuman Mandhir, Siggadi Industrial Area, Kotdwar																						4/16/2024	clear	Odourfree	Clear	20	7.23	255	396	5.20	276	254	22	289	24	0.22	BDL	BDL	25.46	BDL	14.88	1.73	0.39	BDL	BDL	ND	ND	ND	ND	ND	ND	0.42	ND	1.12	

S.No	Monitoring Location	Date of Monitoring	Colour	Odour	Weather	Temp. (°C)	pH	Total Dissolved Solids (mg/L)	Electrical Conductivity(µs/cm)	Chemical Oxygen Demand(mg/L)	Total Hardness(mg/L)	Calcium Hardness(mg/L)	Magnesium Hardness (mg/L)	Total Alkalinity(mg/L)	Chloride (mg/L)	Fluoride(mg/L)	Nitrate - N(mg/L)	Nitrite - N(mg/L)	Sulphate (mg/L)	Phosphate(mg/L)	Sodium(mg/L)	Potassium(mg/L)	Sodium Adsorption Ratio	Total Coliform (MPN/100ml)	Fecal Coliform (MPN/100ml)	Arsenic (mg/L)	Nickel (mg/L)	Copper (mg/L)	Mercury (mg/L)	Chromium (mg/L)	Cadmium (mg/L)	Zinc (mg/L)	Lead (mg/L)	Iron (mg/L)		
District - Dehradun																																				
11	Handpump near Rusan Pharma, Pharma city, Selaqui,Dehradun	4/8/2024	clear	Odourfree	Clear	21	6.85	67	126	5.20	96	75	21	80	22	0.26	BDL	BDL	26.12	BDL	8.24	2.00	0.36	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.11
12	Handpump near Old Police Station, Selaqui, Industrial Area-1	4/8/2024	Clear	Odourfree	Clear	21	6.89	120	196	BDL	87	69	18	83	19	0.25	BDL	BDL	15.96	BDL	7.96	1.98	0.37	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	0.52	ND	0.89	
13	Handpump near Honeywell Pvt. Ltd., Selaqui, Industrial Area-2	4/8/2024	clear	Odourfree	Clear	22	6.60	85	143	BDL	89	72	17	81	29	0.24	BDL	BDL	12.83	BDL	9.85	2.45	0.45	BDL	BDL	ND	ND	ND	ND	ND	ND	0.13	ND	1.09		
14	MSW Landfill site, Sisambada,Dehradun-1 ,North side	4/8/2024	Clear	Odourfree	Clear	20	6.76	118	229	BDL	93	72	21	96	14	0.21	BDL	BDL	6.24	BDL	9.18	1.56	0.41	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.82	
15	MSW Landfill site, Sisambada,Dehradun-1 ,South side	4/8/2024	Clear	Odourfree	Clear	19	6.59	126	228	5.20	98	76	22	100	15	0.25	BDL	BDL	6.82	BDL	10.52	1.64	0.46	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.15	
District - Haridwar																																				
16	Handpump at CHC, Bhagwanpur Industrial Area - 1	5/28/2024	Clear	Odourfree	Clear	23.6	7.21	218	336	5	175	98	77	190	10	0.30	0.32	0.21	8.22	BDL	24.89	3.00	0.81	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	0.29	ND	1.24	
17	Handpump at Sikendarpur, Lakeshwari, Bhagwanpur Industrial Area- 2	5/28/2024	clear	Odourfree	Clear	23.2	7.10	198	300	5	188	106	82	196	8	0.25	0.31	0.19	6.53	0.25	28.96	3.40	0.91	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	0.21	ND	1.06	
18	Handpump at Ramnagar Roorkee Industrial Area -1	5/28/2024	Clear	Odourfree	Clear	23.4	7.36	186	284	BDL	269	142	127	253	14	0.26	BDL	0.1	6.10	0.24	20.09	3.10	0.53	BDL	BDL	ND	ND	ND	ND	ND	ND	0.26	ND	0.96		
19	Handpump at Village Sunhera, Roorkee Industrial Area - 2	5/28/2024	Clear	Odourfree	Clear	23	6.97	226	340	BDL	172	115	57	210	11	0.24	BDL	0.06	9.21	0.23	28.92	5.06	0.95	BDL	BDL	ND	ND	ND	ND	ND	ND	0.19	ND	1.09		
20	Handpump at Roshnabad, Collectorate, SIDCUL, Industrial Area - 1	5/29/2024	Clear	Odourfree	Clear	23.9	7.16	238	362	8	289	145	144	305	13	0.2	BDL	0.14	14..06	0.32	36.28	4.37	0.92	BDL	BDL	ND	ND	ND	ND	ND	ND	0.15	ND	0.87		
21	Handpump at Saleempur Mahdood Chowk, SIDCUL Industrial Area - 2	5/29/2024	Clear	Odourfree	Clear	24.3	7.22	251	379	7	280	152	128	300	12	0.23	0.32	0.16	10.24	0.24	21.89	6.94	0.57	BDL	BDL	ND	ND	ND	ND	ND	ND	0.17	ND	1.18		
22	Handpump near Municipal Solid Waste Landfill Site, Near Model Primary School, Sarai, Jawalapur Haridwar	5/29/2024	Clear	Odourfree	Clear	23.5	7.40	304	463	8	285	159	126	310	15	0.21	2.05	0.23	19.65	0.31	20.12	4.79	0.51	BDL	BDL	ND	ND	ND	ND	ND	ND	0.29	ND	0.76		
23	Handpump near Municipal Solid Waste Landfill Site, Near Jhanda Chowk,Sarai, Jawalapur Haridwar	5/29/2024	Clear	Odourfree	Clear	23.7	7.20	298	456	9	293	172	121	306	17	0.25	1.41	0.26	22.17	0.26	19.35	5.62	0.49	BDL	BDL	ND	ND	ND	ND	ND	ND	0.25	ND	1.21		
District - Udham Singh Nagar																																				
24	Handpump at Santipuri Kiccha - 1, U.S. Nagar	5/17/2024	Clear	Odourless	Clear	26	7.6	332	512	BDL	224	148	76	220	17	0.71	1.23	0.42	32.40	BDL	7.70	1.10	0.22	BDL	BDL	ND	ND	ND	ND	ND	ND	0.46	ND	1.03		
25	Handpump at Santipuri Kiccha - 2, U.S. Nagar	5/17/2024	Clear	Odourless	Clear	26	7.87	229	356	BDL	210	162	48	160	21	0.55	1.06	0.46	33.39	BDL	7.20	1.30	0.22	BDL	BDL	ND	ND	ND	ND	ND	ND	0.22	ND	0.96		

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26	Handpump at Pantnagar Industrial Area - 1, U.S. Nagar	5/17/2024	Clear	Odourless	Clear	25	7.82	271	422	BDL	232	184	48	245	19	0.51	BDL	0.41	21.42	ND	9.70	1.60	0.28	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	0.11	ND	0.89
27	Handpump at Pantnagar Industrial Area - 2, U.S. Nagar	5/17/2024	Clear	Odourless	Clear	27	7.73	246	389	BDL	220	154	66	180	26	0.79	1.30	0.39	24.86	BDL	11.30	1.40	0.33	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	0.16	ND	1.06
28	Handpump near Sitarganj Industrial Area - 1, U.S. Nagar	5/17/2024	Clear	Odourless	Clear	26	7.69	228	354	BDL	184	145	39	235	31	0.73	0.38	0.4	8.58	BDL	6.80	1.20	0.22	BDL	BDL	ND	ND	ND	ND	ND	ND	0.15	ND	1.40	
29	Handpump at Sitarganj Industrial Area - 2, U.S. Nagar	5/17/2024	Clear	Odourless	Clear	26	7.2	542	850	8	350	271	79	290	60	0.64	ND	0.35	112.24	BDL	34.20	BDL	0.79	BDL	BDL	ND	ND	ND	ND	ND	ND	0.42	ND	1.11	
30	Handpump near Gurudwara, Muradabad Road-1, Kashipur, U.S. Nagar	5/16/2024	Clear	Odourless	Clear	26	7.85	610	945	BDL	352	235	117	315	83	0.56	BDL	0.39	26.09	BDL	81.30	BDL	1.88	BDL	BDL	ND	ND	ND	ND	ND	ND	1.42	ND	1.19	
31	Handpump near Govt Primary School, Muradabad Road-2 Kashipur, U.S. Nagar	5/16/2024	Clear	Odourless	Clear	26	7.77	379	591	BDL	157	118	39	280	9	0.71	BDL	0.38	71.37	BDL	10.20	BDL	0.35	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	ND	1.26	
32	Handpump near I.G.L Lagoon, Chamalida (Damauda), Kashipur, U.S. Nagar	5/16/2024	Clear	Odourless	Clear	27	7.93	219	337	BDL	160	118	42	180	11	0.72	0.45	0.36	37.15	BDL	12.70	BDL	0.44	BDL	BDL	ND	ND	ND	ND	ND	ND	0.09	ND	1.11	
33	Handpump at Chaiti Chauraha, Bajpur Road-1, Kashipur, U.S. Nagar	5/16/2024	Clear	Odourless	Clear	26	7.53	404	636	BDL	304	225	79	315	25	0.40	0.56	0.40	27.24	ND	32.90	1.40	0.82	BDL	BDL	ND	ND	ND	ND	ND	ND	0.13	ND	1.16	
34	Handpump near Kendriya Vidyalaya, Bazpur Road-2, Kashipur, U.S. Nagar	5/16/2024	Clear	Odourless	Clear	25	7.98	262	404	BDL	204	142	62	225	17	0.68	0.54	0.38	47.03	BDL	11.70	BDL	0.36	BDL	BDL	ND	ND	ND	ND	ND	ND	0.70	ND	0.50	
35	Handpump at Industrial Area, Mahuakheraganj, Kashipur, U.S. Nagar	5/16/2024	Clear	Odourless	Clear	26	7.73	319	495	BDL	216	169	47	245	11	0.65	ND	0.42	16.44	BDL	31	BDL	0.91	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	ND	1.06	
36	Handpump near old Industrial Area, Kashipur near IGL, U.S. Nagar.	5/16/2024	Clear	Odourless	Clear	26	7.7	293	460	BDL	222	159	63	210	25	0.66	BDL	0.41	22.57	ND	14.50	BDL	0.42	BDL	BDL	ND	ND	ND	ND	ND	ND	ND	ND	0.86	
District - Pithoragarh																																			
37	Handpump at Pithoragarh Town near Chandrabhaga, Pithoragarh	5/8/2024	Clear	Odourfree	Clear	18	7.40	142	210	BDL	182	112	70	152	13	0.25	BDL	BDL	23.90	BDL	5.69	1.08	0.18	BDL	BDL	ND	ND	ND	ND	ND	ND	0.95	ND	1.06	
38	Handpump at Pithoragarh Town near Pithoragarh fort, Pithoragarh	5/8/2024	Clear	Odourfree	Clear	18	7.25	163	240	BDL	190	108	82	168	15	0.23	BDL	0.04	8.65	BDL	22.78	5.89	0.71	BDL	BDL	ND	ND	ND	ND	ND	ND	1.01	ND	0.75	
District - Almora																																			
39	Handpump near jai shri college, Khatyari, Almora	5/8/2024	Clear	Odourfree	Clear	17	7.74	151	220	BDL	156	92	64	134	14	BDL	BDL	BDL	20.89	BDL	5.55	BDL	0.19	BDL	BDL	ND	ND	ND	ND	ND	ND	1.32	ND	1.16	
40	Handpump near Pataldevi, Almora	Handpump was dry																																	

S.No	Monitoring Location	Date of Monitoring	Colour	Odour	Weather	Temp. (°C)	pH	Total Dissolved Solids (mg/L)	Electrical Conductivity(µs/cm)	Chemical Oxygen Demand(mg/L)	Total Hardness(mg/L)	Calcium Hardness(mg/L)	Magnesium Hardness (mg/L)	Total Alkalinity(mg/L)	Chloride (mg/L)	Fluoride(mg/L)	Nitrate - N(mg/L)	Nitrite - N(mg/L)	Sulphate (mg/L)	Phosphate(mg/L)	Sodium(mg/L)	Potassium(mg/L)	Sodium Adsorption Ratio	Total Coliform (MPN/100ml)	Fecal Coliform (MPN/100ml)	Arsenic (mg/L)	Nickel (mg/L)	Copper (mg/L)	Mercury (mg/L)	Chromium (mg/L)	Cadmium (mg/L)	Zinc (mg/L)	Lead (mg/L)	Iron (mg/L)
District - Nainital																																		
41	Handpump at Ramnagar Town near Govt PG College, Ramnagar	Handpump was dry																																
42	Handpump at Nainital Town near Sariyatal	5/8/2024	Clear	Odourfree	Clear	17	7.29	122	180	BDL	168	90	78	150	15	BDL	BDL	BDL	25.84	BDL	13.83	7.12	0.46	BDL	BDL	ND	ND	ND	ND	ND	ND	0.63	ND	0.99
District - Bageshwar																																		
43	Handpump near Kafilgair, Bageshwar	5/7/2024	Clear	Odourfree	Clear	18	7.15	161	240	BDL	186	106	80	174	17	0.23	BDL	0.05	27.96	BDL	15.42	5.96	0.49	BDL	BDL	ND	ND	ND	ND	ND	ND	0.89	ND	1.15
44	Handpump at Bageshwar Town - 2 near Roadways station, District-Bageshwar	5/7/2024	Clear	Odourfree	Clear	19	7.53	149	220	BDL	172	94	74	156	14	0.26	BDL	BDL	20.15	BDL	12.64	3.82	0.42	BDL	BDL	ND	ND	ND	ND	ND	ND	1.26	ND	1.10
District - Champawat																																		
45	Handpump near Shivmandir, Champawat	5/8/2024	Clear	Odourfree	Clear	18	7.48	125	180	BDL	164	86	78	142	15	0.28	BDL	BDL	23.40	BDL	9.22	5.66	0.31	BDL	BDL	ND	ND	ND	ND	ND	ND	0.95	ND	1.28
46	Handpump near Gas Station Lohaghat, Champawat	5/8/2024	Clear	Odourfree	Clear	17	7.64	137	190	BDL	192	104	88	166	17	0.20	BDL	BDL	26.12	BDL	6.38	2.99	0.20	BDL	BDL	ND	ND	ND	ND	ND	ND	0.88	ND	0.96

Note: Abbreviations-

N/A= Not Applicable
BDL= Below Detection Limit

ND= Not Detected
NR= No Relaxation

NSL= No Specified Limit

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