

## WATER QUALITY CHARACTERISTICS OF RIVER GANGA AT RISHIKESH & HARDIWAR

### RIVER GANGA AT RISHIKESH U/S LAXMANJHULA, SWARGAASHRAM, U/S RISHIKESH

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/ 100 mL)	Temp °C	DO mg/L	Alkalinity CaCO <sub>3</sub> mg/L	Chlori des mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO <sub>3</sub> mg/L	TDS mg/L
<b>2022</b>												
Jan	7.60	1.0	4.0	25	16	10	126	8	150	20	170	75
Feb	7.57	1.0	4.0	22	18	9.8	74	7	60	52	112	85
Mar	7.50	1.0	4.0	24	14	11	56	6.0	50	12	62	89
Apr	7.40	1.0	4.0	27	16	10.4	67	5.0	59	21	80	77
May	7.30	1.0	4.0	31	18	10.4	62	4	54	36	90	75
June	7.37	1.0	4.0	39	24	10.2	54	4.5	64	16	80	84
July	7.50	1.0	4.0	40	23	9.8	45	3.5	50	13	63	69
Aug	7.40	1.0	4.0	43	22	9.6	60	3.0	48	37	85	55
<b>2021</b>												
Jan	7.61	1	4	27	15	11	88	10	55	19	74	112
Feb	7.28	1	4	32	10	9.8	96	8	45	40	85	76
Mar	7.81	1	4	38	19	10.4	82	7	46	34	80	70
Apr	7.26	1	4	40	20	10	97	7	53	27	80	70
May	7.6	1	4	34	20	10	100	6.5	55	10	65	97.3
June	7.80	1	4	40		10.2	60	9	58	12	70	153
July	7.80	1	4	43	21	9.2	80	9	68	28	96	278
Aug	8.25	1.2	4	40		9.8	80	7	60	18	78	66
Sept	8.15	1	4	38		10.4	170	9	67	49	116	82
Oct	7.8	1	4	33		9.8	58	7	40	21	61	73.2
Nov	7.87	1.2	4	32		10.4	63	8	60	10	70	157
Dec	7.6	1	4	34	15	10	70	9	45	19	64	120
<b>2020</b>												
Jan	7.72	<1	4	40	16	11	70	9	48	30	78	79
Feb	7.72	<1	4	40	17	10.8	62	13	60	28	88	62
Mar	7.7	<1	4	30	19	11.6	71	6.5	53	30	83	84
Apr	7.8	0.6	4	30	19	10.6	60	7.5	45	25	70	55
May	7.1	0.6	4	30	18	11	54	8	40	20	60	51
June	7.55	0.4	4	40	19	10.6	60	6	32	26	58	64
July	7.92	1	4	40	20	9.8	60	10	42	20	62	60
Aug	7.4	1.0	4	40	21	10	80	6.5	70	10	80	64
Sept	7.81	1	4	40	25	10.8	65	9	31	22	53	101
Oct	8.0	1	4	40	26	10.2	66	6	50	26	76	76
Nov	7.5	1	5	32	16	11.6	56	8	57	21	78	80
Dec	7.2	1	4	22	17	10.8	65	7	54	36	90	114
<b>2019</b>												
Jan	8.02	<1	4	40	17	10.4	64	5	38	32	70	114
Feb	7.42	<1	4	50	16	10	70	5	46	32	78	96

Mar	7.48	<1	4	40	19	9.8	62	4	42	30	72	66
Apr	7.62	<1	4	40	17	9.8	60	5	36	32	68	88
May	7.54	<1	4	50	18	10.2	68	5	38	34	72	80
June	7.62	<1	4	40	19	9.8	66	5	42	32	74	82
July	7.7	<1	4	50	18	10.2	62	4	44	26	70	78
Aug	7.48	<1	4	401	18	10.4	64	5	46	26	72	80
Sept	8.23	<1	4	50	20	9.8	58	7	40	28	68	73
Oct	8.12	<1	4	60	20	10	60	6	42	24	66	62
Nov	7.95	<1	4	58	19	11.8	50	5	40	20	60	69
Dec	7.94	<1	4	73	18	10.4	40	8	44	22	66	79
2018												
Jan	7.38	<1	4	40	16	9.8	74	5	42	38	80	92
Feb	7.82	<1	4	60	16	10.2	70	5	42	34	76	105
Mar	7.32	<1	4	30	18	10.4	76	5	40	30	70	96
Apr	7.48	<1	4	40	19	9.8	70	5	42	32	74	87
May	7.5	<1	4	60	20	10.2	68	5	38	34	72	82
June	7.42	<1	4	70	20	9.8	64	5	40	34	74	84
July	7.45	<1	4	40	20	10	74	5	46	34	80	86
Aug	7.56	<1	4	30	22	9.8	76	5	44	38	82	80
Sept	7.68	<1	4	30	18	9.8	68	5	44	34	78	74
Oct	8.4	<1	4	60	18	9	74	5	42	40	82	126
Nov	7.62	<1	4	26	17	9.6	70	5	40	36	76	80
Dec	7.71	<1	4	30	17	10	68	5	40	34	74	84

**GANGA AT D/S OF RISHIKESH, NEAR PASHULOK, UTTARAKHAND**

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/100 mL)	Temp °C	DO mg/L	Alkalinity CaCO3 mg/L	Chlorides mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO3 mg/L	TDS mg/L
<b>2022</b>												
Jan	7.90	1.0	4.0	32	14	9.8	140	7	170	30	200	74
Feb	7.25	1.0	4.0	38	18	9.8	76	8	100	20	120	73
Mar	7.30	1.0	4.0	33	12	10.8	61	6	62	36	98	82
Apr	7.49	1.0	4.0	32	16	10.2	66	5.5	50	23	73	85
May	7.29	1.0	4.0	38	19	10.2	89	5	81	23	104	79
June	7.40	1.8	8	84	25.6	8.1	68	8	32	90	122	149.1
July	7.30	1.0	4.0	47	23	9.6	50	3.0	58	12	70	71
Aug	7.10	1.0	4.0	48	22	9.4	66	3.0	60	12	72	56
<b>2021</b>												
Jan	7.54	1.2	4	47	15	10.8	80	7	54	46	100	121
Feb	7.4	1	4	40	10	9.8	130	7	57	36	93	95
Mar	7.7	1	4	38	18	9.8	100	8	56	30	86	90
Apr	7.56	1	4	34	20	9.6	85	6	53	18	71	77
May	7.68	1.2	4	38	20	9.8	90	7	48	24	72	95.5
June	7.94	1	4	46		9.8	62	10	50	15	65	154
July	7.75	1.2	4	40	21	9.0	30	7	62	12	74	80
Aug	8.16	1.4	4	38		9	45	9	50	20	70	67
Sept	8.12	1.2	4	32		9.6	67	7	55	19	74	81
Oct	7.87	1	4	26		9.4	61	7.5	60	14	74	75.2
Nov	8.24	1.2	4	32		9.2	50	8	60	30	90	182
Dec	7.63	1	4	3	17	10.4	70	7	50	13	69	82
<b>2020</b>												
Jan	7.66	<1	4	50	17	10.6	62	8	40	24	64	74
Feb	8.0	<1	4	50	17	10.4	65	9	56	28	84	74
Mar	7.50	<1	4	40	19	10.4	60	10	48	22	70	75
Apr	7.5	0.8	4	40	19	9.8	45	6.5	30	20	50	80
May	8.0	0.4	4	40	18	9	50	12.5	35	20	55	78
June	7.57	1	4	40	20	9.4	65	6	35	25	60	63
July	8.04	1	4	40	20	9.2	74	7.5	40	23	63	60
Aug	7.8	1	4	50	22	9.4	140	7.5	105	45	150	62
Sept	7.52	1	4	50	25	10	68	9	33	20	53	104
Oct	8.05	1	4	40	24	9.8	63	7	55	17	72	86
Nov	7.4	1	5	38	16	10	67	10	55	19	74	110
Dec	7.0	1	4	32	18	9.8	90	8	50	20	70	114
<b>2019</b>												
Jan	7.92	<1	4	60	17	10	68	5	40	38	78	110
Feb	7.62	<1	5	60	16	9.8	72	5	44	36	80	105
Mar	7.56	<1	4	70	20	9	68	4	40	34	74	90
Apr	7.68	<1	4	70	19	9.6	64	5	40	36	76	94

May	7.52	<1	4	80	19	9.8	70	5	36	32	78	90
June	7.68	<1	4	90	20	9.6	74	6	46	34	80	88
July	7.86	<1	4	80	19	9.6	76	5	44	28	72	84
Aug	7.32	<1	4	90	18	10	72	5	42	36	78	85
Sept	8.29	<1	4	80	22	9	64	7	42	30	72	76
Oct	7.78	<1	4	70	20	9.6	62	6	44	26	70	66
Nov	8.04	<1	4	60	19	11.2	68	5	46	24	70	72
Dec	8.04	<1	4	50	18	10	71	8	42	18	60	100
<b>2018</b>												
Jan	7.54	<1	4	60	16	9.6	72	5	42	36	78	102
Feb	7.74	<1	4	70	16	9.8	68	6	40	34	74	108
Mar	7.52	<1	4	40	19	9.6	64	6	38	32	70	94
Apr	7.56	<1	4	60	20	9.6	66	4	38	34	72	90
May	7.52	<1	4	90	21	9.8	70	6	40	36	76	94
June	7.58	<1	4	110	20	9.2	72	6	42	32	74	92
July	7.38	<1	4	70	20	9.6	76	6	46	40	86	96
Aug	7.48	<1	4	60	20	9.6	72	5	44	40	84	88
Sept	7.42	<1	4	70	20	9.4	74	5	46	40	86	92
Oct	7.85	<1	4	60	19	9.6	72	6	44	40	84	88
Nov	7.76	<1	4	40	17	9.4	68	6	42	36	78	92
Dec	7.82	<1	4	50	17	9.8	70	5	42	40	82	94

**GANGA AT HARIDWAR U/S BHINDHUGHAT, DUDHIYABAN, HARIDWAR**

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/ 100 mL)	Temp °C	DO mg/L	Alkalinity CaCO3 mg/L	Chlorid es mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO3 mg/L	TDS mg/L
<b>2022</b>												
Jan	8.30	1	4	84	16	9.8	80	5	56	11	67	138
Feb	7.8	2	10	70	15.5	9.2	88	7	22	14	36	148
Mar	7.10	1.2	12	84	19.3	8.6	97	10	57	28	85	425
Apr	7.40	2.0	5.0	70	19.5	8.1	85	20	13	11	24	106.6
May	7.30	1.4	4	70	24.1	8	86	5	8	8	16	84.4
June	7.30	1.8	8	110	22.7	7.8	72	7	28	106	134	128.6
July	8.20	2.0	5.0	94	30.6	8.20	82	15	15	12	27	93.4
Aug	7.90	1.2	6.0	110	23	8.3	80	12	53	33	86	188
<b>2021</b>												
Jan	7.59	1.2	6	110	16	8.2	92	8	92	48	140	155
Feb	7.72	1.2	4	120	18	10.8	129	8	63	45	108	92
Mar	8.3	1.0	4	94	20	9.6	102	8	74	25	99	141
Apr	7.73	1.2	4	84	22.2	8.4	98	14	76	22	98	121.9
May	7.87	1.2	6	70	27	10	95	10	65	35	100	125.6
June	8.0	1	6	84		8.95	75	07	64	18	82	186
July	7.91	1.2	6	70	24.5	9.4	70	9	58	12	70	108
Aug	8.32	1.4	6	84		9.8	82	12	80	50	130	101
Sept	7.52	1.4	4	79		8.8	85	12	69	24	93	168.32
Oct	7.6	1	4	70		8.6	60	10	50	38	88	150.7
Nov	8.3	2.5	7	70		9.6	85	10	64	28	92	137.6
Dec	8.30	1	4	79	20	9.9	65	9	42	16	58	179
<b>2020</b>												
Jan	7.7	1	6	90	17	10.8	100	9	50	42	92	126
Feb	7.5	<1	4	110	18	10	84	9	56	34	90	113
Mar	7.65	1	6	90	20	9.6	80	10	64	26	90	102
Apr	7.8	1	6	90	20	9.8	70	10	70	24	94	78
May	7.90	1	6	80	19	9.6	63	12.5	65	18	83	75
June	7.7	1	4	60	23	8.8	75	7	65	25	90	104
July	7.47	1.2	6	70	21	8.2	90	10	48	42	90	85
Aug	8.03	1	4	110	24	10.4	95	13	46	24	70	156
Sept	8.04	1	4	90	27	10	65	8	60	15	75	161
Oct	8.12	1	4	70	25	9.6	120	8	87	10	97	179
Nov												
Dec	7.7	1	6	84	20	8.8	138	6	73	22	95	161
<b>2019</b>												
Jan	8.12	<1	4	130	17	9.8	72	5	44	40	84	102

Feb	8.12	<1	4	140	16	9.6	70	6	42	36	78	136
Mar	7.62	1	4	110	19	9.2	72	5	42	38	80	108
Apr	7.64	1	4	130	19	9	74	5	42	40	82	98
May	7.82	1	4	140	20	9.2	70	5	40	36	76	90
June	7.92	1	6	170	20	9	72	6	44	34	78	94
July	7.7	1.2	6	130	19	8.2	75	5	54	30	84	95
Aug	7.92	1	6	140	19	8.8	61	5	42	38	80	90
Sept	8.44	1	6	170	20	9.8	74	7	44	34	78	92
Oct	8.3	1	6	140	20	10.8	110	11	44	24	68	140
Nov	8.4	1	6	140	19	10.6	90	10	44	28	72	113
Dec	8.02	1	6	110	19	10.4	91	5	44	29	73	80
<b>2018</b>												
Jan	7.92	<1	4	110	16	9.8	70	5	40	38	78	97
Feb	8.2	1	6	140	16	9.6	68	6	40	36	76	127
Mar	7.91	1	4	90	18	9.4	70	6	40	34	74	88
Apr	7.82	1	4	110	19	9.2	72	5	42	36	78	98
May	7.82	1	4	140	22	9.4	70	6	40	36	76	90
June	7.92	1	6	170	20	9.2	72	6	44	34	78	98
July	7.62	1	6	130	20	9	80	6	52	38	90	110
Aug	8.13	1	6	220	20	8.8	76	6	52	40	92	101
Sept	8.22	1	6	170	20	9.4	78	6	48	42	90	111
Oct	8.18	<1	6	140	18	9.6	72	6	44	38	82	121
Nov	8.41	<1	4	110	18	9	74	5	44	40	84	126
Dec	8.2	<1	4	140	17	10.2	70	5	42	40	82	100

**RIVER GANGA AT HAR-KI -PAURI, HARIDWAR (UPPER GANGA CANAL)**

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/100 mL)	Temp °C	DO mg/L	Alkalinity CaCO3 mg/L	Chlorides mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO3 mg/L	TDS mg/L
<b>2022</b>												
Jan	8.20	1	4	94	15	10	75	5	14	10	24	133
Feb	8.1	1	8	63	15	9.5	74	6	15	12	53	125
Mar	7.70	1	8	58	19.5	9.8	73	6	44	22	66	140
Apr	7.90	1.5	5	63	19.3	9	75	10	14	11	25	102
May	7.10	1.6	10	70	25.6	8	74	5	9	6	15	79.3
June	7.60	2.0	10	94	23.1	7.8	59	10	16	124	140	142
July	8.30	1.2	4.0	84	27.3	8.8	72	10	15	14	29	105.6
Aug	7.80	1.6	8.0	120	23	8.1	70	10	43	26	69	150
<b>2021</b>												
Jan	7.3	1.2	6	70	16	9.6	83	6	75	44	119	126
Feb	7.66	1	4	63	17	9.2	96	6	54	33	87	59
Mar	8.33	1.2	4	70	19	9.4	135	7	38	36	74	95
Apr	7.36	1.2	6	70	21.8	9.6	82	11	54	33	87	79.2
May	8.22	1.2	6	63	26	9.4	122	10	75	42	117	111.2
June	8.0	1.4	6	70		9.02	68	07	70	18	88	170
July	7.82	1.2	4	79	24.2	9.6	63	10	44	36	80	77
Aug	7.92	1.2	4	70		9.4	64	13	70	32	102	96
Sept	7.43	1.2	4	63		9.2	75	8	59	29	88	121.6
Oct	7.8	1	4	63		8.20	60	10	38	84	122	149.12
Nov	7.9	1.5	6	70		9.4	75	10	53	35	88	134.4
Dec	7.20	1	4	63	19	10	68	5	66	14	80	161
<b>2020</b>												
Jan	7.7	<1	4	50	17	10	94	8	72	40	112	122
Feb	8	<1	4	70	18	10.2	70	9	56	36	92	71
Mar	7.54	<1	4	60	19	9.8	80	8.5	40	30	70	105
Apr	7.6	0.6	4	50	19	10.2	60	10	54	18	72	63
May												
June	7.9	0.6	4	40	22	10	70	10	42	22	64	92
July	7.3	1.2	6	80	21	8.8	76	10	37	25	62	88

Aug	7.96	1.2	4	90	23	9.6	80	13	64	6	70	83
Sept	7.85	1	4	80	27	10.6	80	7	52	24	76	162
Oct	8.08	1	4	90	25	8	86	8	82	22	104	195
Nov	7.77	1	4	70	20	10.8	100	11	80	30	110	257
Dec	7.8	1	6	84	20	8.8	56	5	58	27	85	124
2019												
Jan	7.92	<1	4	90	18	9.6	74	5	44	40	84	98
Feb	7.68	<1	4	80	17	9.8	72	5	46	34	80	126
Mar	7.58	<1	4	70	20	9.6	74	5	44	34	78	100
Apr	7.54	<1	4	90	19	9.4	70	5	42	34	76	96
May	7.62	<1	4	110	20	9.2	72	5	42	36	78	88
June	8.4	<1	4	110	20	9	68	5	42	30	72	85
July	8.1	<1	4	90	19	9.8	60	7	42	16	58	81
Aug	7.7	<1	4	80	18	10	64	7	38	22	60	83
Sept	8.05	<1	4	70	22	10.2	79	8	40	30	70	78
Oct	8	<1	4	68	20	9.2	69	10	44	24	60	76
Nov	8.2	<1	4	72	19	10	55	9	44	28	50	105
Dec	8.13	<1	4	70	19	10.2	86	6	46	24	40	97
2018												
Jan	7.89	<1	4	80	16	9.4	68	5	40	34	74	112
Feb	8.14	<1	4	70	16	9	64	5	38	34	72	121
Mar	7.8	<1	6	160	18	9.8	70	5	42	34	76	109
Apr	7.56	<1	4	140	20	9.6	74	5	44	34	78	100
May	7.62	<1	4	170	21	9.4	72	5	42	38	80	88
June	7.94	<1	4	110	20	8.8	74	6	44	40	84	86
July	7.42	<1	4	80	20	9.4	75	6	46	40	86	98
Aug	8.04	<1	4	80	20	9	76	5	46	42	88	106
Sept	8.24	<1	4	70	20	9	80	5	48	44	92	106
Oct	8.18	<1	4	80	18	9.2	78	5	46	40	86	124
Nov	8.4	<1	4	60	18	9	74	5	42	40	82	126
Dec	8.17	<1	4	80	18	10	72	5	42	38	80	100

**GANGA CANAL AT DAMKOTI, HARIDWAR ( UPPER RIVER GANGA CANAL AT HARKI PAURI)**

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/ 100 mL)	Temp °C	DO mg/L	Alkalinity CaCO3 mg/L	Chlorides mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO3 mg/L	TDS mg/L
<b>2022</b>												
Jan	8.40	1	4	84	16	10.2	85	10	23	13	36	133.7
Feb	7.4	1.1	6	79	15.1	9.4	76	6	19	10	29	131.8
Mar	7.80	1	8	94	19.5	9.2	67	8	43	20	63	117.18
Apr	7.30	1.5	8	79	19	8.8	95	15	19	11	30	115.5
May	7.80	1	5	79	25.2	9.3	88	6	10	9	19	98.5
June	7.30	2.0	8.0	110	21.9	8.2	67	8	34	86	120	147
July	8.30	1.8	7.0	110	24.8	8.5	86	15	18	14	32	99.2
Aug	7.50	1.1	8.0	12	22	83	56	8.0	23	32	55	177
<b>2021</b>												
Jan	7.64	1.2	6	84	16	9.8	93	7.5	100	56	156	169
Feb	7.68	1	4	70	17	9.8	115	8	63	22	85	84
Mar	8.2	1	4	79	20	9.4	138	8	66	27	93	117
Apr	7.25	1	4	70	22.5	8.4	81	11	68	20	88	102.7
May	8.08	1	4	63	26	9.6	90	8	60	20	80	402
June	8.0	1	4	70		8.86	72	8.5	65	15	80	177
July	7.94	1.2	4	84	24.6	9.0	65	10	48	22	70	90
Aug	7.82	1.6	4	79		9.4	67	12	60	30	90	92
Sept	7.12	1.2	4	84		9.4	70	9	68	27	95	128
Oct	7.4	1	4	79		8.2	60	10	52	32	84	140.16
Nov	7.6	1.5	4	79		9	90	10	66	29	95	124.16
Dec	7.80	1	4	70	18	9.8	100	6	72	12	84	184.96
<b>2020</b>												
Jan	7.8	<1	4	40	16	11.4	81	8	54	28	82	94
Feb	8	<1	4	70	18	10.2	70	9	56	36	92	71
Mar	6.82	<1	4	50	19	10.4	72	9	58	38	96	99
Apr	7.7	0.6	4	50	19	9.8	75	6.5	70	20	90	69
May	8.12	0.8	4	60	18	9.2	68	8.5	62	20	82	82
June	7.9	1	4	60	22	9	80	7.5	38	24	62	88

July	7.59	1	4	70	22	8.6	76	9	35	30	65	90
Aug	7.9	1	4	80	24	10.2	79	14	52	42	94	124
Sept	8.31	1	4	90	27	10.4	77	7	53	23	76	161
Oct	8.01	1	4	70	25	9	90	10	80	29	109	202
Nov												
Dec	8.0	1	6	70	19	10	93	7.5	72	30	102	162
<b>2019</b>												
Jan	8.05	<1	4	80	17	9.8	70	5	42	38	80	94
Feb	7.72	<1	4	60	16	10	72	5	40	36	76	115
Mar	7.68	<1	4	70	19	9.6	70	5	42	36	80	94
Apr	7.62	<1	4	90	18	10	72	5	44	38	82	90
May	7.64	<1	4	110	19	9.8	74	5	42	38	80	96
June	8	<1	4	90	20	9.4	78	5	70	28	98	90
July	8.12	<1	4	110	19	8.6	58	5	52	18	70	86
Aug	7.8	<1	4	90	18	9	60	7	46	26	72	85
Sept	8.21	<1	4	80	20	10.4	65	9	44	30	74	80
Oct	8.12	<1	4	70	21	10.6	75	15	44	28	72	83
Nov	8.2	<1	4	60	19	11	68	8	42	32	74	92
Dec	8.04	<1	4	50	19	10.6	74	8	40	32	72	73
<b>2018</b>												
Jan	7.95	<1	4	60	16	9.8	70	5	42	34	76	97
Feb	7.93	<1	4	110	18	10	68	5	42	32	74	81
Mar	7.72	<1	4	90	19	9.6	70	5	44	38	82	94
Apr	7.66	<1	4	110	20	9.8	74	5	44	40	84	98
May	7.94	<1	4	90	20	9	70	5	42	36	78	92
June	7.58	<1	4	80	20	9.4	84	6	54	42	96	102
July	8.13	<1	4	70	22	9	78	5	54	38	92	101
Aug	8.2	<1	4	90	20	9	74	5	48	38	86	107
Sept	8.13	<1	4	80	18	9.2	72	6	44	40	84	122
Oct	8.34	<1	4	70	18	9	68	5	42	36	78	126
Nov	8.24	<1	4	90	17	10	72	5	42	40	82	100

### GANGA CANAL AT LALITA RAO BRIDGE, HARIDWAR

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/ 100 mL)	Temp °C	DO mg/L	Alkalinity CaCO3 mg/L	Chlorides mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO3 mg/L	TDS mg/L
<b>2022</b>												
Jan	8.30	1	4	79	15	9.8	75	5	35	12	47	119
Feb	7.7	1.1	6	70	15	9.1	72	8	19	15	34	124.5
Mar	7.60	1	8	63	19.1	8.9	71	6	47	18	65	122.9
Apr	7.50	1.6	5	79	19.4	8.1	75	10	19	15	34	190.7
May	7.20	1.5	5	70	23.3	8.3	75	7	9	6	15	102.4
June	7.70	1.2	8.0	94	24.9	7.5	70	8	20	86	106	172.2
July	8.20	1.6	5.0	94	25.7	8.2	73	5	20	15	35	101.8
Aug	7.70	1.1	5.0	94	22	7.5	62	8.0	39	23	62	155
<b>2021</b>												
Jan	7.61	1.2	6	94	16	9.4	60	8	65	37	102	150
Feb	7.71	1.2	4	84	17	10	105	8	53	39	92	67
Mar	8.3	1.2	4	70	19	9.2	122	8	49	31	80	97
Apr	7.61	1	4	79	20.9	8.8	85	13	59	8	67	111.4
May	7.8	1.2	4	70	26	9.0	102	11	80	13	93	106.8
June	8.0	1	4	79		8.9	80	07	55	14	69	170
July	8.10	1.2	4	70	24.9	9.4	55	7	42	38	80	79
Aug	7.67	1.2	4	63		9.6	120	14	70	10	80	91
Sept	7.9	1.4	4	70		9.2	80	9	63	34	97	130.56
Oct	7.3	1	4	63		8.4	60	15	58	24	82	161.28
Nov	7.5	1.6	5	63		9.5	75	10	58	27	85	128.64
Dec	7.50	1	4	70	18	9.6	65	6	38	18	56	158
<b>2020</b>												
Jan	7.6	<1	4	40	17	10.6	86	8	80	44	124	93
Feb	7.9	<1	4	70	18	10.4	65	9	60	30	90	74
Mar	7.44	<1	4	60	19	9.8	60	6.5	58	24	82	100
Apr	7.9	0.8	4	50	19	9.2	72	6	52	32	84	68
May	8.09	0.6	4	70	19	9.4	72	7.5	55	30	85	80
June	7.6	0.8	4	60	22	9	60	8	35	20	55	77
July	7.51	1	4	50	20	8.8	65	10	35	25	60	60
Aug	8.0	1.2	4	90	23	9.8	14	4	47	40	87	122
Sept	7.96	1	4	110	27	9.6	75	10	56	28	84	162

<b>Oct</b>	<b>8.03</b>	<b>1.2</b>	<b>6</b>	<b>130</b>	<b>25</b>	<b>8.4</b>	<b>75</b>	<b>7</b>	<b>56</b>	<b>33</b>	<b>89</b>	<b>164</b>
<b>Nov</b>												
<b>Dec</b>	<b>7.4</b>	<b>1</b>	<b>6</b>	<b>110</b>	<b>20</b>	<b>9.6</b>	<b>77</b>	<b>6</b>	<b>55</b>	<b>33</b>	<b>88</b>	<b>163</b>
<b>2019</b>												
<b>Jan</b>	<b>7.95</b>	<b>&lt;1</b>	<b>4</b>	<b>110</b>	<b>17</b>	<b>9.6</b>	<b>70</b>	<b>5</b>	<b>42</b>	<b>40</b>	<b>82</b>	<b>96</b>
<b>Feb</b>	<b>7.85</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>17</b>	<b>9.8</b>	<b>72</b>	<b>6</b>	<b>42</b>	<b>36</b>	<b>78</b>	<b>110</b>
<b>Mar</b>	<b>7.62</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>19</b>	<b>9.4</b>	<b>76</b>	<b>5</b>	<b>44</b>	<b>40</b>	<b>84</b>	<b>102</b>
<b>Apr</b>	<b>7.65</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>19</b>	<b>9.4</b>	<b>78</b>	<b>5</b>	<b>44</b>	<b>42</b>	<b>86</b>	<b>94</b>
<b>May</b>	<b>7.72</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>20</b>	<b>9.4</b>	<b>76</b>	<b>6</b>	<b>42</b>	<b>40</b>	<b>82</b>	<b>98</b>
<b>June</b>	<b>8.36</b>	<b>&lt;1</b>	<b>4</b>	<b>130</b>	<b>20</b>	<b>9.2</b>	<b>74</b>	<b>5</b>	<b>52</b>	<b>30</b>	<b>82</b>	<b>97</b>
<b>July</b>	<b>8.09</b>	<b>&lt;1</b>	<b>4</b>	<b>110</b>	<b>19</b>	<b>9</b>	<b>64</b>	<b>8</b>	<b>48</b>	<b>14</b>	<b>62</b>	<b>84</b>
<b>Aug</b>	<b>8</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>18</b>	<b>10</b>	<b>76</b>	<b>6</b>	<b>48</b>	<b>30</b>	<b>78</b>	<b>83</b>
<b>Sept</b>	<b>8.18</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>22</b>	<b>10</b>	<b>78</b>	<b>6</b>	<b>42</b>	<b>32</b>	<b>74</b>	<b>79</b>
<b>Oct</b>	<b>8.1</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>20</b>	<b>9</b>	<b>76</b>	<b>7</b>	<b>42</b>	<b>28</b>	<b>70</b>	<b>73</b>
<b>Nov</b>	<b>8.1</b>	<b>&lt;1</b>	<b>4</b>	<b>60</b>	<b>18</b>	<b>9.2</b>	<b>70</b>	<b>9</b>	<b>46</b>	<b>32</b>	<b>78</b>	<b>93</b>
<b>Dec</b>	<b>8.4</b>	<b>&lt;1</b>	<b>4</b>	<b>50</b>	<b>19</b>	<b>9.8</b>	<b>80</b>	<b>6</b>	<b>71</b>	<b>20</b>	<b>91</b>	<b>77</b>
<b>20018</b>												
<b>Jan</b>	<b>7.91</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>16</b>	<b>9</b>	<b>68</b>	<b>5</b>	<b>42</b>	<b>36</b>	<b>78</b>	<b>112</b>
<b>Feb</b>	<b>7.93</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>16</b>	<b>9.2</b>	<b>64</b>	<b>6</b>	<b>40</b>	<b>30</b>	<b>70</b>	<b>126</b>
<b>Mar</b>	<b>7.77</b>	<b>&lt;1</b>	<b>6</b>	<b>90</b>	<b>18</b>	<b>10.2</b>	<b>62</b>	<b>6</b>	<b>40</b>	<b>38</b>	<b>78</b>	<b>108</b>
<b>Apr</b>	<b>7.62</b>	<b>&lt;1</b>	<b>4</b>	<b>130</b>	<b>19</b>	<b>9.4</b>	<b>80</b>	<b>5</b>	<b>44</b>	<b>36</b>	<b>80</b>	<b>102</b>
<b>May</b>	<b>7.74</b>	<b>&lt;1</b>	<b>4</b>	<b>170</b>	<b>21</b>	<b>9.4</b>	<b>76</b>	<b>5</b>	<b>42</b>	<b>40</b>	<b>82</b>	<b>96</b>
<b>June</b>	<b>7.91</b>	<b>&lt;1</b>	<b>4</b>	<b>130</b>	<b>20</b>	<b>8.8</b>	<b>72</b>	<b>5</b>	<b>44</b>	<b>36</b>	<b>80</b>	<b>94</b>
<b>July</b>	<b>7.52</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>20</b>	<b>9.4</b>	<b>82</b>	<b>6</b>	<b>54</b>	<b>44</b>	<b>98</b>	<b>105</b>
<b>Aug</b>	<b>8.11</b>	<b>&lt;1</b>	<b>4</b>	<b>110</b>	<b>20</b>	<b>9.2</b>	<b>80</b>	<b>5</b>	<b>56</b>	<b>40</b>	<b>96</b>	<b>104</b>
<b>Sept</b>	<b>8.25</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>20</b>	<b>9.8</b>	<b>72</b>	<b>5</b>	<b>44</b>	<b>40</b>	<b>84</b>	<b>106</b>
<b>Oct</b>	<b>8.05</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>18</b>	<b>9.4</b>	<b>68</b>	<b>5</b>	<b>40</b>	<b>38</b>	<b>78</b>	<b>122</b>
<b>Nov</b>	<b>8.15</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>18</b>	<b>9.2</b>	<b>70</b>	<b>6</b>	<b>42</b>	<b>38</b>	<b>80</b>	<b>125</b>
<b>Dec</b>	<b>8.23</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>17</b>	<b>10.2</b>	<b>74</b>	<b>6</b>	<b>44</b>	<b>40</b>	<b>84</b>	<b>100</b>

**GANGA CANAL D/S HAR-KI -PAURI, HARIDWAR AT RISHIKUL BRIDGE**

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/ 100 mL)	Temp °C	DO mg/L	Alkalinity CaCO3 mg/L	Chlorides mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO3 mg/L	TDS mg/L
<b>2022</b>												
Jan	8.20	1	4	94	15	10.2	75	10	27	15	42	133
Feb	7.9	1.2	8	84	15.3	9.5	74	7	41	12	53	124
Mar	7.80	1	8	70	19.2	9.2	78	6	53	18	71	120.3
Apr	7.60	1.2	7	79	18.8	8.8	80	15	28	19	47	207.3
May	7.60	1	4	84	25	9.5	73	3	8	11	19	96
June	7.40	1.8	8	84	25.6	8.1	68	8.0	32	90	122	149.1
July	8.30	1.5	6.0	120	24.2	8.5	78	15	22	18	40	103.7
Aug	7.20	1.6	10	94	22	7.9	59	6.0	31	40	71	161
<b>2021</b>												
Jan	7.7	1.2	6	70	17	9	85	6	85	53	138	163
Feb	7.42	1.2	4	84	16	8.2	100	6	60	45	105	82
Mar	8.34	1.4	6	94	20	9.2	120	9	53	37	90	123
Apr	7.8	1.2	6	84	21.9	8.2	84	13	71	13	84	104.5
May	7.76	1.4	6	94	25	9.8	92	11	66	20	86	106.2
June	7.94	1	4	46		9.8	62	10	50	15	65	154
July	7.85	1.4	6	94		9.4	55	9	52	36	88	95
Aug	7.46	1.6	6	84		8.8	66	12	76	36	112	105
Sept	7.13	1.2	4	79		8.8	80	11	58	33	91	124.16
Oct	7.4	1	4	79		8.4	55	20	56	44	84	145.92
Nov	8.0	1.6	6	84		9.3	75	10	60	30	90	115.84
Dec	7.52	1	4	70	19	9.8	260	8	108	10	118	187
<b>2020</b>												
Jan	8	<1	4	60	17	10.8	95	9	52	26	78	115
Feb	7.6	<1	4	80	18	10.2	75	9	60	40	100	100
Mar	7.13	<1	4	50	19	9.8	76	6	76	28	104	96
Apr	7.7	0.8	4	60	19	9.8	74	10	64	36	100	64
May	7.85	1	4	70	18	9.6	72	6	50	40	90	82
June	7.58	1	4	60	22	9.2	70	12.5	36	24	60	84
July	7.5	1.2	6	70	23	8.4	90	13	40	28	68	70
Aug	8.0	1	4	90	25	9.2	100	10	60	40	100	96

Sept	8.1	1	4	80	27	10.2	90	8	49	26	75	162
Oct	8.0	1	6	110	25	8	67	9	61	24	85	140
Nov												
Dec	7.2	1	6	63	19	9	88	6	63	21	84	167
2019												
Jan	7.96	<1	4	90	17	9.6	72	5	42	40	82	98
Feb	7.68	<1	4	70	16	9.4	68	5	44	34	78	128
Mar	7.65	<1	4	80	18	9.6	66	5	42	32	74	92
Apr	7.58	<1	4	90	18	9.6	68	5	42	36	78	95
May	7.71	<1	4	110	20	9.2	66	5	40	36	76	92
June	8.4	<1	4	110	20	9	68	5	42	30	72	85
July	8.04	<1	4	110	19	10	69	4	50	20	70	88
Aug	7.87	<1	4	80	18	10	70	5	46	32	78	89
Sept	8.16	<1	4	90	20	10.2	75	6	44	36	80	88
Oct	8.05	<1	4	80	20	10.8	80	6	44	22	66	89
Nov	8.1	<1	4	70	19	10.4	70	8	44	32	76	102
Dec	8.48	<1	4	80	19	10.2	92	9	56	25	81	81
2018												
Jan	7.98	<1	4	70	16	9.8	66	5	40	34	74	104
Feb	7.72	<1	4	90	16	9.2	68	5	40	32	72	110
Mar	7.57	<1	4	140	18	9.6	70	6	42	34	76	111
Apr	7.65	<1	4	80	18	9.4	66	5	40	34	74	92
May	7.71	<1	4	170	21	9	68	5	40	36	76	95
June	7.94	<1	4	130	20	9	70	5	40	38	78	94
July	7.48	<1	4	110	22	9.6	88	5	70	40	110	115
Aug	8.11	<1	4	140	22	9.2	82	4	54	44	98	100
Sept	8.23	<1	4	110	20	8	76	5	46	44	90	107
Oct	8.17	<1	4	90	18	9	70	5	42	40	82	121
Nov	8.41	<1	4	70	18	8.8	72	5	44	42	86	126
Dec	8.16	<1	4	80	17	9.8	70	5	42	38	80	101

**GANGA AT HARIDWAR D/S BALAKUMARI MANDIR, AJEETPUR, HARIDWAR**

Month	pH	BOD mg/L	COD mg/L	Total Coliform (MPN/ 100 mL)	Temp °C	DO mg/L	Alkalinity CaCO3 mg/L	Chloride s mg/L	Calcium as Cl mg/L	Magnesium as Mg mg/L	Hardness as CaCO3 mg/L	TDS mg/L
<b>2022</b>												
Jan	8.30	1.4	6	130	16	9.8	85	10	21	17	38	155
Feb	8.6	1.4	10	110	16.1	9.6	86	8	19	15	34	159
Mar	7.50	1.6	6	110	21.1	9.8	87	10	45	14	59	183
Apr	7.60	1.9	8	84	18.2	9.2	65	5	25	13	38	105.8
May	7.50	2.5	7	170	27.1	9.4	70	9	17	11	28	145.9
June	7.70	2.4	12	120	26.8	7.8	60	30	62	100	162	249
July	7.90	1.1	6.0	120	24.5	8.0	681	10	25	15	40	129.3
Aug	8.10	1.4	7.0	94	24	7.6	90	12	45	18	63	151
<b>2021</b>												
Jan	7.75	1.6	8	130	16	8.8	83	8	75	28	103	148
Feb	7.54	1.4	6	140	16	10.4	125	8	60	37	97	92
Mar	8.37	1.6	6	150	19	9.2	145	11	60	26	86	121
Apr	7.52	1.4	6	130	22.2	8.2	82	13	60	16	76	99.4
May	7.62	1.2	6	120	24	8.8	95	10	71	19	90	106.3
June	8.1	1.6	6	130		8.28	89	09	61	14	75	241
July	7.90	1.8	6	110		9.0	63	10	50	16	66	88
Aug	7.84	2.6	8	120		9.6	95	12	86	28	114	120
Sept	7.09	2.2	6	130		9.4	65	12	48	27	97	130.56
Oct	6.5	1	8	130		8.6	70	20	62	36	98	179.84
Nov	7.6	1	4	84		8.6	95	5	53	36	89	140.8
Dec	8.27	1	6	120	20	9.68	90	7	44	16	60	216
<b>2020</b>												
Jan	7.1	1	6	110	17	9.6	162	15	80	48	128	193
Feb	7.26	1	6	140	18	9.4	93	10	60	28	88	106
Mar	7.64	1.2	6	110	19	9.6	94	15	64	46	110	139
Apr	7.7	1	6	90	20	10	90	12	84	26	110	74
May	8.02	1.2	6	80	19	9.2	100	10	70	40	110	120
June	7.68	1.4	6	70	29	9	100	10	45	40	85	178
July	7.2	1.2	6	60	22	8.4	85	15	40	35	758	67
Aug	7.78	1.4	6	140	25	8.4	73	16	57	25	82	153
Sept	8.0	1.6	6	130	25	9.4	72	9	50	12	62	141

<b>Oct</b>	7.99	1	6	140	25	8.4	115	7	99	31	130	233
<b>Nov</b>	7.63	1.2	6	120	20	10.6	120	10	88	29	117	287
<b>Dec</b>	8.0	1.4	8	110	20	9	88	7.5	85	45	130	160
<b>2019</b>												
<b>Jan</b>	7.98	1	6	220	17	9.4	78	6	44	42	86	107
<b>Feb</b>	7.82	1	6	300	16	9.2	76	7	44	40	84	116
<b>Mar</b>	7.72	1	6	280	19	9	78	8	46	42	88	110
<b>Apr</b>	7.76	1	5	220	18	9	80	7	50	40	90	140
<b>May</b>	7.68	1	6	350	20	8.8	76	8	46	42	88	124
<b>June</b>	7.4	1.2	6	300	19	8.6	78	9	98	34	132	207
<b>July</b>	7.18	1.4	6	280	19	8.6	90	9	60	24	84	132
<b>Aug</b>	7.37	2	8	350	18	9	100	9	46	42	88	142
<b>Sept</b>	7.59	1.4	6	300	22	8.6	110	13	50	40	90	143
<b>Oct</b>	8.02	1.2	6	280	20	8.8	148	19	52	22	74	153
<b>Nov</b>	7.5	1	6	220	19	9	128	14	50	28	78	173
<b>Dec</b>	7.72	1	6	130	19	9.4	118	12	45	30	75	112
<b>2018</b>												
<b>Jan</b>	7.76	1	6	220	16	9.2	76	8	44	40	84	182
<b>Feb</b>	7.74	1	6	280	16	9	74	10	46	42	88	242
<b>Mar</b>	7.69	1.2	6	220	18	9.2	76	8	44	40	84	232
<b>Apr</b>	7.72	1	6	280	19	9	78	8	52	44	96	172
<b>May</b>	7.68	1.2	6	350	20	8.8	76	7	50	42	92	124
<b>June</b>	7.87	1	6	300	20	8.6	74	6	44	38	82	95
<b>July</b>	7.67	1	6	220	20	9.2	90	8	62	48	110	125
<b>Aug</b>	8.04	1.2	6	240	21	8.6	92	7	72	34	106	104
<b>Sept</b>	8.29	<1	4	280	20	10.6	78	6	48	42	90	107
<b>Oct</b>	8.21	1	4	240	18	9.6	72	5	42	40	82	108
<b>Nov</b>	7.8	1	6	220	18	9	74	8	46	38	84	128
<b>Dec</b>	8.1	1	6	280	17	9.6	76	7	42	40	82	100