

## 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
Sept	7.64	1.0	4.0	46	20	9.8	146	4.0	247	18	265	78
Oct	8.06	1.0	4.0	49	18	10	88	5.0	81	10	91	74
Nov	7.40	1.0	4.0	41	16	10.4	140	6.0	110	45	155	71
Dec	7.95	1.0	4.0	38	17°C	10.6	90	5.0	70	13	83	69
<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

2019												
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
Sept	7.97	1.0	4.0	47	20	9.6	55	5.0	57	19	76	63
Oct	8.31	1.0	4.0	41	20	9.8	64	6.0	61	17	78	70
Nov	7.30	1.0	4.0	39	16	10.2	105	7.0	96	34	130	67
Dec	8.11	1.0	4.0	49	16	10.2	93	7.0	87	28	115	105
<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

<b>Dec</b>	<b>7.0</b>	<b>1</b>	<b>4</b>	<b>32</b>	<b>18</b>	<b>9.8</b>	<b>90</b>	<b>8</b>	<b>50</b>	<b>20</b>	<b>70</b>	<b>114</b>
<b>2019</b>												
<b>Jan</b>	<b>7.92</b>	<b>&lt;1</b>	<b>4</b>	<b>60</b>	<b>17</b>	<b>10</b>	<b>68</b>	<b>5</b>	<b>40</b>	<b>38</b>	<b>78</b>	<b>110</b>
<b>Feb</b>	<b>7.62</b>	<b>&lt;1</b>	<b>5</b>	<b>60</b>	<b>16</b>	<b>9.8</b>	<b>72</b>	<b>5</b>	<b>44</b>	<b>36</b>	<b>80</b>	<b>105</b>
<b>Mar</b>	<b>7.56</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>20</b>	<b>9</b>	<b>68</b>	<b>4</b>	<b>40</b>	<b>34</b>	<b>74</b>	<b>90</b>
<b>Apr</b>	<b>7.68</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>19</b>	<b>9.6</b>	<b>64</b>	<b>5</b>	<b>40</b>	<b>36</b>	<b>76</b>	<b>94</b>
<b>May</b>	<b>7.52</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>19</b>	<b>9.8</b>	<b>70</b>	<b>5</b>	<b>36</b>	<b>32</b>	<b>78</b>	<b>90</b>
<b>June</b>	<b>7.68</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>20</b>	<b>9.6</b>	<b>74</b>	<b>6</b>	<b>46</b>	<b>34</b>	<b>80</b>	<b>88</b>
<b>July</b>	<b>7.86</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>19</b>	<b>9.6</b>	<b>76</b>	<b>5</b>	<b>44</b>	<b>28</b>	<b>72</b>	<b>84</b>
<b>Aug</b>	<b>7.32</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>18</b>	<b>10</b>	<b>72</b>	<b>5</b>	<b>42</b>	<b>36</b>	<b>78</b>	<b>85</b>
<b>Sept</b>	<b>8.29</b>	<b>&lt;1</b>	<b>4</b>	<b>80</b>	<b>22</b>	<b>9</b>	<b>64</b>	<b>7</b>	<b>42</b>	<b>30</b>	<b>72</b>	<b>76</b>
<b>Oct</b>	<b>7.78</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>20</b>	<b>9.6</b>	<b>62</b>	<b>6</b>	<b>44</b>	<b>26</b>	<b>70</b>	<b>66</b>
<b>Nov</b>	<b>8.04</b>	<b>&lt;1</b>	<b>4</b>	<b>60</b>	<b>19</b>	<b>11.2</b>	<b>68</b>	<b>5</b>	<b>46</b>	<b>24</b>	<b>70</b>	<b>72</b>
<b>Dec</b>	<b>8.04</b>	<b>&lt;1</b>	<b>4</b>	<b>50</b>	<b>18</b>	<b>10</b>	<b>71</b>	<b>8</b>	<b>42</b>	<b>18</b>	<b>60</b>	<b>100</b>
<b>2018</b>												
<b>Jan</b>	<b>7.54</b>	<b>&lt;1</b>	<b>4</b>	<b>60</b>	<b>16</b>	<b>9.6</b>	<b>72</b>	<b>5</b>	<b>42</b>	<b>36</b>	<b>78</b>	<b>102</b>
<b>Feb</b>	<b>7.74</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>16</b>	<b>9.8</b>	<b>68</b>	<b>6</b>	<b>40</b>	<b>34</b>	<b>74</b>	<b>108</b>
<b>Mar</b>	<b>7.52</b>	<b>&lt;1</b>	<b>4</b>	<b>40</b>	<b>19</b>	<b>9.6</b>	<b>64</b>	<b>6</b>	<b>38</b>	<b>32</b>	<b>70</b>	<b>94</b>
<b>Apr</b>	<b>7.56</b>	<b>&lt;1</b>	<b>4</b>	<b>60</b>	<b>20</b>	<b>9.6</b>	<b>66</b>	<b>4</b>	<b>38</b>	<b>34</b>	<b>72</b>	<b>90</b>
<b>May</b>	<b>7.52</b>	<b>&lt;1</b>	<b>4</b>	<b>90</b>	<b>21</b>	<b>9.8</b>	<b>70</b>	<b>6</b>	<b>40</b>	<b>36</b>	<b>76</b>	<b>94</b>
<b>June</b>	<b>7.58</b>	<b>&lt;1</b>	<b>4</b>	<b>110</b>	<b>20</b>	<b>9.2</b>	<b>72</b>	<b>6</b>	<b>42</b>	<b>32</b>	<b>74</b>	<b>92</b>
<b>July</b>	<b>7.38</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>20</b>	<b>9.6</b>	<b>76</b>	<b>6</b>	<b>46</b>	<b>40</b>	<b>86</b>	<b>96</b>
<b>Aug</b>	<b>7.48</b>	<b>&lt;1</b>	<b>4</b>	<b>60</b>	<b>20</b>	<b>9.6</b>	<b>72</b>	<b>5</b>	<b>44</b>	<b>40</b>	<b>84</b>	<b>88</b>
<b>Sept</b>	<b>7.42</b>	<b>&lt;1</b>	<b>4</b>	<b>70</b>	<b>20</b>	<b>9.4</b>	<b>74</b>	<b>5</b>	<b>46</b>	<b>40</b>	<b>86</b>	<b>92</b>
<b>Oct</b>	<b>7.85</b>	<b>&lt;1</b>	<b>4</b>	<b>60</b>	<b>19</b>	<b>9.6</b>	<b>72</b>	<b>6</b>	<b>44</b>	<b>40</b>	<b>84</b>	<b>88</b>
<b>Nov</b>	<b>7.76</b>	<b>&lt;1</b>	<b>4</b>	<b>40</b>	<b>17</b>	<b>9.4</b>	<b>68</b>	<b>6</b>	<b>42</b>	<b>36</b>	<b>78</b>	<b>92</b>
<b>Dec</b>	<b>7.82</b>	<b>&lt;1</b>	<b>4</b>	<b>50</b>	<b>17</b>	<b>9.8</b>	<b>70</b>	<b>5</b>	<b>42</b>	<b>40</b>	<b>82</b>	<b>94</b>



<b>Dec</b>	7.7	1	6	84	20	8.8	138	6	73	22	95	161
<b>2019</b>												
<b>Jan</b>	8.12	<1	4	130	17	9.8	72	5	44	40	84	102
<b>Feb</b>	8.12	<1	4	140	16	9.6	70	6	42	36	78	136
<b>Mar</b>	7.62	1	4	110	19	9.2	72	5	42	38	80	108
<b>Apr</b>	7.64	1	4	130	19	9	74	5	42	40	82	98
<b>May</b>	7.82	1	4	140	20	9.2	70	5	40	36	76	90
<b>June</b>	7.92	1	6	170	20	9	72	6	44	34	78	94
<b>July</b>	7.7	1.2	6	130	19	8.2	75	5	54	30	84	95
<b>Aug</b>	7.92	1	6	140	19	8.8	61	5	42	38	80	90
<b>Sept</b>	8.44	1	6	170	20	9.8	74	7	44	34	78	92
<b>Oct</b>	8.3	1	6	140	20	10.8	110	11	44	24	68	140
<b>Nov</b>	8.4	1	6	140	19	10.6	90	10	44	28	72	113
<b>Dec</b>	8.02	1	6	110	19	10.4	91	5	44	29	73	80
<b>2018</b>												
<b>Jan</b>	7.92	<1	4	110	16	9.8	70	5	40	38	78	97
<b>Feb</b>	8.2	1	6	140	16	9.6	68	6	40	36	76	127
<b>Mar</b>	7.91	1	4	90	18	9.4	70	6	40	34	74	88
<b>Apr</b>	7.82	1	4	110	19	9.2	72	5	42	36	78	98
<b>May</b>	7.82	1	4	140	22	9.4	70	6	40	36	76	90
<b>June</b>	7.92	1	6	170	20	9.2	72	6	44	34	78	98
<b>July</b>	7.62	1	6	130	20	9	80	6	52	38	90	110
<b>Aug</b>	8.13	1	6	220	20	8.8	76	6	52	40	92	101
<b>Sept</b>	8.22	1	6	170	20	9.4	78	6	48	42	90	111
<b>Oct</b>	8.18	<1	6	140	18	9.6	72	6	44	38	82	121
<b>Nov</b>	8.41	<1	4	110	18	9	74	5	44	40	84	126
<b>Dec</b>	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 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	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
Sept	7.60	2.4	10	94	27	8.9	171	8	47	44	91	317
Oct	8.0	1.6	8.0	79	22.6	8.2	74	6.6	20	16	36	141
Nov	7.60	2.2	9.0	70	20.5	9.9	161	9.0	24	45	69	140
Dec	7.40	1.0	4.4	63	19.3	10.2	30	4.0	14	96	110	165
<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

<b>May</b>												
<b>June</b>	7.9	0.6	4	40	22	10	70	10	42	22	64	92
<b>July</b>	7.3	1.2	6	80	21	8.8	76	10	37	25	62	88
<b>Aug</b>	7.96	1.2	4	90	23	9.6	80	13	64	6	70	83
<b>Sept</b>	7.85	1	4	80	27	10.6	80	7	52	24	76	162
<b>Oct</b>	8.08	1	4	90	25	8	86	8	82	22	104	195
<b>Nov</b>	7.77	1	4	70	20	10.8	100	11	80	30	110	257
<b>Dec</b>	7.8	1	6	84	20	8.8	56	5	58	27	85	124
<b>2019</b>												
<b>Jan</b>	7.92	<1	4	90	18	9.6	74	5	44	40	84	98
<b>Feb</b>	7.68	<1	4	80	17	9.8	72	5	46	34	80	126
<b>Mar</b>	7.58	<1	4	70	20	9.6	74	5	44	34	78	100
<b>Apr</b>	7.54	<1	4	90	19	9.4	70	5	42	34	76	96
<b>May</b>	7.62	<1	4	110	20	9.2	72	5	42	36	78	88
<b>June</b>	8.4	<1	4	110	20	9	68	5	42	30	72	85
<b>July</b>	8.1	<1	4	90	19	9.8	60	7	42	16	58	81
<b>Aug</b>	7.7	<1	4	80	18	10	64	7	38	22	60	83
<b>Sept</b>	8.05	<1	4	70	22	10.2	79	8	40	30	70	78
<b>Oct</b>	8	<1	4	68	20	9.2	69	10	44	24	60	76
<b>Nov</b>	8.2	<1	4	72	19	10	55	9	44	28	50	105
<b>Dec</b>	8.13	<1	4	70	19	10.2	86	6	46	24	40	97
<b>2018</b>												
<b>Jan</b>	7.89	<1	4	80	16	9.4	68	5	40	34	74	112
<b>Feb</b>	8.14	<1	4	70	16	9	64	5	38	34	72	121
<b>Mar</b>	7.8	<1	6	160	18	9.8	70	5	42	34	76	109
<b>Apr</b>	7.56	<1	4	140	20	9.6	74	5	44	34	78	100
<b>May</b>	7.62	<1	4	170	21	9.4	72	5	42	38	80	88
<b>June</b>	7.94	<1	4	110	20	8.8	74	6	44	40	84	86
<b>July</b>	7.42	<1	4	80	20	9.4	75	6	46	40	86	98
<b>Aug</b>	8.04	<1	4	80	20	9	76	5	46	42	88	106
<b>Sept</b>	8.24	<1	4	70	20	9	80	5	48	44	92	106
<b>Oct</b>	8.18	<1	4	80	18	9.2	78	5	46	40	86	124
<b>Nov</b>	8.4	<1	4	60	18	9	74	5	42	40	82	126
<b>Dec</b>	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 CaCO <sub>3</sub> mg/L	Chlorides 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	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
Sept	7.60	2.2	8	110	26	8.2	170	9	46	40	86	311
Oct	8.30	1.2	9.0	70	22.1	8.3	80	9.0	22	12	34	119
Nov	7.70	1.8	7.0	70	19.7	8.5	172	8.0	29	45	74	146.5
Dec	7.60	1.0	5.2	79	15.6	10.0	170	4.0	10	74	84	189
<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
Sept	7.50	2.4	8.0	94	27	8.2	172	8.0	42	39	81	315
Oct	8.10	1.4	8.0	63	22.6	8.3	70	7.0	24	14	38	132
Nov	7.60	2.0	8.0	63	20.2	8.8	168	9.0	22	40	62	154
Dec	7.50	1.0	4.8	70	15.4	10.0	64	6.0	12	67	79	160
<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
Oct	8.03	1.2	6	130	25	8.4	75	7	56	33	89	164
Nov												
Dec	7.4	1	6	110	20	9.6	77	6	55	33	88	163
<b>2019</b>												
Jan	7.95	<1	4	110	17	9.6	70	5	42	40	82	96
Feb	7.85	<1	4	80	17	9.8	72	6	42	36	78	110
Mar	7.62	<1	4	90	19	9.4	76	5	44	40	84	102
Apr	7.65	<1	4	80	19	9.4	78	5	44	42	86	94
May	7.72	<1	4	90	20	9.4	76	6	42	40	82	98
June	8.36	<1	4	130	20	9.2	74	5	52	30	82	97
July	8.09	<1	4	110	19	9	64	8	48	14	62	84
Aug	8	<1	4	90	18	10	76	6	48	30	78	83
Sept	8.18	<1	4	80	22	10	78	6	42	32	74	79
Oct	8.1	<1	4	90	20	9	76	7	42	28	70	73
Nov	8.1	<1	4	60	18	9.2	70	9	46	32	78	93
Dec	8.4	<1	4	50	19	9.8	80	6	71	20	91	77
<b>20018</b>												
Jan	7.91	<1	4	80	16	9	68	5	42	36	78	112
Feb	7.93	<1	4	70	16	9.2	64	6	40	30	70	126
Mar	7.77	<1	6	90	18	10.2	62	6	40	38	78	108
Apr	7.62	<1	4	130	19	9.4	80	5	44	36	80	102
May	7.74	<1	4	170	21	9.4	76	5	42	40	82	96
June	7.91	<1	4	130	20	8.8	72	5	44	36	80	94
July	7.52	<1	4	90	20	9.4	82	6	54	44	98	105
Aug	8.11	<1	4	110	20	9.2	80	5	56	40	96	104
Sept	8.25	<1	4	90	20	9.8	72	5	44	40	84	106
Oct	8.05	<1	4	70	18	9.4	68	5	40	38	78	122
Nov	8.15	<1	4	80	18	9.2	70	6	42	38	80	125
Dec	8.23	<1	4	90	17	10.2	74	6	44	40	84	100

**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 Ca 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
Sept	7.60	2.6	12	84	26	8.6	164	8	52	48	90	249
Oct	8.0	1.8	8.0	84	22.3	8.6	72	8.0	32	14	46	136
Nov	7.80	2.0	9.0	94	20.1	8.6	169	10.0	24	30	54	152
Dec	7.40	1.0	4.8	70	15.7	10.0	250	9.0	10	78	88	186
<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
<b>2019</b>												
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
<b>2018</b>												
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
Sept	7.60	2.8	12	110	29	9.3	158	15	48	44	92	222
Oct	8.20	2.4	12	110	24.5	7.9	90	8.6	28	16	44	160
Nov	7.80	2.4	11.0	84	22.3	8.4	187	14	34	46	80	198
Dec	8.20	1.2	4.8	84	17.5	10.4	80	8.0	14	30	44	138
<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
Oct	7.99	1	6	140	25	8.4	115	7	99	31	130	233
Nov	7.63	1.2	6	120	20	10.6	120	10	88	29	117	287
Dec	8.0	1.4	8	110	20	9	88	7.5	85	45	130	160
2019												
Jan	7.98	1	6	220	17	9.4	78	6	44	42	86	107
Feb	7.82	1	6	300	16	9.2	76	7	44	40	84	116
Mar	7.72	1	6	280	19	9	78	8	46	42	88	110
Apr	7.76	1	5	220	18	9	80	7	50	40	90	140
May	7.68	1	6	350	20	8.8	76	8	46	42	88	124
June	7.4	1.2	6	300	19	8.6	78	9	98	34	132	207
July	7.18	1.4	6	280	19	8.6	90	9	60	24	84	132
Aug	7.37	2	8	350	18	9	100	9	46	42	88	142
Sept	7.59	1.4	6	300	22	8.6	110	13	50	40	90	143
Oct	8.02	1.2	6	280	20	8.8	148	19	52	22	74	153
Nov	7.5	1	6	220	19	9	128	14	50	28	78	173
Dec	7.72	1	6	130	19	9.4	118	12	45	30	75	112
2018												
Jan	7.76	1	6	220	16	9.2	76	8	44	40	84	182
Feb	7.74	1	6	280	16	9	74	10	46	42	88	242
Mar	7.69	1.2	6	220	18	9.2	76	8	44	40	84	232
Apr	7.72	1	6	280	19	9	78	8	52	44	96	172
May	7.68	1.2	6	350	20	8.8	76	7	50	42	92	124
June	7.87	1	6	300	20	8.6	74	6	44	38	82	95
July	7.67	1	6	220	20	9.2	90	8	62	48	110	125
Aug	8.04	1.2	6	240	21	8.6	92	7	72	34	106	104
Sept	8.29	<1	4	280	20	10.6	78	6	48	42	90	107
Oct	8.21	1	4	240	18	9.6	72	5	42	40	82	108
Nov	7.8	1	6	220	18	9	74	8	46	38	84	128
Dec	8.1	1	6	280	17	9.6	76	7	42	40	82	100