

## WATER QUALITY CHARACTERISTICS OF RIVER SUSWA D/S MOTHRAWALA, DEHRADUN

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 Ca mg/L	Magnesium as Mg mg/L	Hardness as CaCO <sub>3</sub> mg/L	TDS mg/L
<b>2024</b>												
Jan	7.31	26.0	90.0	22×102	15°C	2.8	293	32.0	250	57	307	316
Feb	7.49	28.0	100.0	17×102	18°C	2.4	339	34.0	281	66	347	335
Mar	7.32	27.0	90.0	28×102	18°C	2.6	326	33.0	258	72	330	321
Apr	7.51	28.0	100.0	22×102	21°C	2.4	343	34.0	271	77	348	340
May	7.63	30.0	110.0	28×102	28°C	2.0	366	36.0	286	83	369	364
June	7.56	29.0	110.0	35×102	22°C	2.2	352	36.0	284	78	362	360
July	7.55	27.0	100.0	35×102	19°C	2.2	266	32.0	218	52	270	270
Aug	7.47	24.0	98.0	22×102	20°C	3.3	268	31.0	223	53	276	264
Sept	7.24	26.0	90.0	22×102	21°C	3.2	241	33.0	226	53	279	278
Oct	8.07	28.0	86.0	28×102	21°C	2.8	234	38.0	225	51	276	299
<b>2023</b>												
Jan	6.85	20.0	82.0	6300	15	4.0	346	27.0	346	66	412	300
Feb	6.76	24.0	94.0	7000	20	3.0	315	40.0	310	135	445	390
Mar	7.83	26.0	98.0	17000	17	2.6	335	45.0	322	193	515	319
Apr	7.40	28.0	102.0	>1600	19	2.4	349	47.0	260	95	355	295
May	7.12	32.0	108.0	>1600	24	1.6	353	44.0	280	88	368	399
June	7.50	34.0	112.0	>1600	21	1.4	360	46.0	310	70	380	382
July	7.60	32.0	108.0	160000	20	2.0	240	41.0	232	117	349	212
Aug	7.40	30.0	96.0	16000	17	2.2	256	38.0	250	48	298	256
Sept	7.29	28.0	92.0	16000	20	2.4	234	36.0	232	40	272	240
Oct	7.43	30.0	100.0	16000	20	2.2	220	38.0	241	42	283	231
Nov	7.19	28.0	90.0	28×102	16	2.4	305	36.0	267	59	326	355
<b>2022</b>												
Jan	7.18	24	96	> 1600	18	3.4	207	40	270	170	440	485
Feb	7.01	22	90	> 1600	15	3.6	312	35	309	102	411	410
Mar	7.20	24	98	> 1600	19	3.4	262	40	268	40	308	432
Apr	7.05	22	90	> 1600	18	3.6	240	35	256	36	292	417
May	6.79	24	98	> 1600	21	3.2	401	40	352	44	396	303
June	6.62	25	100	> 1600	23	3.0	339	43	292	120	339	370
July	7.47	22	90	> 1600	18	3.6	302	36	360	30	390	287
Aug	7.26	18	76	> 1600	24	4.8	254	26	220	67	287	220
Sept	7.64	22	86	> 1600	20	3.8	153	28	168	22	190	149
Oct	6.93	18	72	> 1600	24	4.6	202	20	188	22	210	210

Nov	6.84	16	68	9200	19	4.8	200	17	184	46	230	278
Dec	6.75	18.0	72.0	8400	12	4.2	290	25.0	200	153	353	460
<b>2021</b>												
Jan	7.6	28	106	> 1600	18	2.8	310	45	250	45	295	620
Feb	7.28	26	94	> 1600	19	3.4	352	40	310	40	350	369
Mar	8.01	28	84	> 1600	21	3.2	400	35	320	50	370	380
Apr	7.4	26	80	> 1600	22	3.2	430	40	320	77	397	530
May	7.52	24	76	> 1600	27	3.0	370	35	280	50	330	501
June	7.73	26	104	> 1600	27	3.2	350	30	354	68	422	511
July	7.90	29	116	> 1600	20	3.0	360	40	310	56	366	494
Aug	7.11	24	96	> 1600	20	3.6	245	34	230	123	353	281
Sept	7.6	25	102	> 1600	25	3.8	245	30	282	76	358	258
Oct	7.90	22	86	> 1600	24	4.0	315	45	310	48	358	494
Nov	8.1	26	78	> 1600		3.0	330	42	330	110	440	378
Dec	6.91	25	76	> 1600	22	2.4	350	46	350	110	460	480
<b>2020</b>												
Jan	8.1	26	104	>1600	8.1	26	240	25	180	120	300	380
Feb	8.34	28	112	>1600	18	4.0	260	30	210	150	360	368
Mar	8.11	26	94	> 1600	20	3.6	270	32	220	120	340	376
Apr	7.6	1	4	40	19	8.6	85	9	60	45	105	238
May	8.13	29	116	> 1600	19	3.6	395	30	255	135	390	387
June	6.67	26	110	> 1600	20	3.8	360	27.5	200	150	350	255
July	7.59	30	124	> 1600	21	2.8	365	25	145	130	275	448
Aug	7.65	32	128	> 1600	23	2.6	230	25	162	100	262	288
Sept	8.3	26	106	> 1600	26	4.0	306	22	125	93	218	428
Oct	7.9	28	112	> 1600	25	3	360	40	302	85	387	712
Nov	7.64	26	104	> 1600	24	3.6	552	37	278	113	391	749
Dec	7.0	27	108	> 1600	22	3.0	344	65	258	57	315	650
Average	7.75	25.42	101.83	40.00	20.43	5.72	313.92	30.63	199.58	108.17	307.75	439.92
Min-Max	6.67-8.34	1-32	4-128	40-40	8.1-26	2.6-26	85-552	9-65	60-302	45-150	105-391	238-749
<b>2019</b>												
Jan	8.15	26	86	>1600	18	2.8	240	25	164	126	290	328
Feb	7.85	28	110	>1600	18	3	280	27	200	140	340	390
Mar	7.52	1	4	170	20	9.4	86	7	48	44	92	136
Apr	7.84	28	112	>1600	19	3	260	24	196	124	320	372
May	7.79	30	120	>1600	20	2.6	278	25	200	148	348	410
June	7.84	26	126	>1600	20	2.8	290	30	230	128	358	430
July	7.86	25	118	>1600	19	3	270	22	220	100	320	390
Aug	6.89	27	120	>1600	20	2.6	274	26	222	102	324	392

Sept	6.94	26	120	>1600	22	2.8	260	25	220	80	300	400
Oct	8.05	28	124	>1600	20	2.8	280	28	234	78	312	415
Nov	8.1	26	116	>1600	20	3.0	284	33	236	74	310	344
Dec	8.23	28	124	>1600	18	2.2	268	30	230	56	286	328
Average	7.76	24.92	106.67	170.00	19.50	3.33	255.83	25.17	200.00	100.00	300.00	361.25
Min-Max	6.89-8.23	1-30	4-126	170-170	18-22	2.2-9.4	86-290	7-33	48-236	44-148	92-358	136-430
<b>2018</b>												
Jan	7.84	32	156	>1600	16	2.8	344	32	220	180	400	472
Feb	7.91	36	172	>1600	16	2.2	328	30	220	160	380	438
Mar	7.88	34	134	>1600	19	2.4	320	35	250	120	370	452
Apr	7.82	36	142	>1600	19	2.2	322	35	260	130	390	460
May	7.79	32	128	>1600	20	2	298	30	256	120	376	428
June	7.82	34	132	>1600	20	2.4	312	35	258	110	368	448
July	7.66	32	128	>1600	20	3	290	30	244	136	380	432
Aug	7.86	34	118	>1600	20	2.6	260	34	186	92	278	398
Sept	7.82	32	110	>1600	20	2.4	254	32	168	100	268	405
Oct	7.81	34	128	>1600	19	2.6	270	30	200	148	348	417
Nov	8.15	32	136	>1600	18	2	264	35	184	134	318	380
Dec	8.21	30	124	>1600	18	2.4	260	30	180	130	310	344
Average	7.88	33.17	134.00		18.75	2.42	293.50	32.33	218.83	130.00	348.83	422.83
Min-Max	7.66-8.21	30-36	110-172		16-20	2-3	254-344	30-35	168-260	92-180	268-400	344-472

**WATER QUALITY CHARACTERISTICS OF RIVER GANGA AFTER CONFLUENCE OF RIVER SONG NEAR SATYANARAYAN TEMPLE D/S RAIWALA, DEHRADUN**

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 Ca mg/L	Magnesium as Mg mg/L	Hardness as CaCO <sub>3</sub> mg/L	TDS mg/L
<b>2024</b>												
Jan	8.33	1.1	5.0	70	16	9.2	121	5.0	105	26	131	150
Feb	8.07	1.3	5.0	63	17	9.0	133	7.0	112	30	142	130
Mar	7.91	1.5	5.0	70	22	8.6	146	8.0	110	38	148	142
Apr	8.45	1.6	5.0	63	21	8.4	131	9.0	95	39	134	125
May	8.09	1.8	6.0	70	22	8.0	134	10.0	95	42	137	130
June	7.74	1.7	6.0	110	21	8.4	128	9.0	89	43	132	128
July	7.71	1.7	6.0	120	21	8.2	131	9.0	92	44	136	133
Aug	7.85	1.4	5.0	130	17	8.4	131	8.8	86	54	140	125
Sept	7.96	1.4	5.0	110	20	8.6	112	9.0	101	43	144	98
Oct	8.12	1.6	5.2	94	20	8.4	123	9.0	117	27	144	150
<b>2023</b>												
Jan	7.09	1.2	4.8	63	13	9.6	149	6.0	121	34	155	139
Feb	7.34	1.3	4.8	63	25	9.4	195	7.0	193	12	205	205
Mar	7.95	1.0	4.0	63	18	9.8	149	9.0	168	32	200	179
Apr	8.40	1.0	4.0	70	19	9.6	177	11.0	213	17	230	189
May	8.01	1.1	4.4	58	19	9.4	168	10.0	156	24	180	162
June	7.80	1.5	5.2	63	22	8.8	184	6.0	170	31	201	200
July	8.09	1.6	5.6	58	20	8.4	118	5.0	91	13	104	185
Aug	8.26	1.7	5.6	63	15	8.2	115	8.0	104	27	131	154
Sept	7.95	1.5	5.2	70	21	8.4	123	9.0	119	23	142	163
Oct	7.70	1.4	5.0	63	22	8.6	110	8.0	103	17	120	131
Nov	7.85	1.3	5.0	79	16	8.8	102	7.0	98	15	113	123
<b>2022</b>												
Jan	7.20	1.4	6	58	18	9.4	224	14	230	40	270	262
Feb	7.60	1.4	6	63	17	9.4	212	14	210	48	258	255
Mar	7.90	1.4	6	58	19	10.2	210	12	186	64	250	312
Apr	7.80	1.4	5.6	63	20	9.8	160	10	205	35	240	277
May	7.24	1.4	5.6	70	22	9.0	114	8.5	102	34	136	260
June	7.36	1.6	6.0	79	24	9.2	230	7.0	210	46	256	238
July	7.65	1.5	6.0	84	24	8.8	115	8	120	33	153	161
Aug	7.40	1.6	6.0	94	21	8.6	105	6.0	110	25	135	138

Sept	8.11	1.5	6.0	84	20	8.8	157	7.5	168	27	195	173
Oct	8.40	1.4	5.6	79	20	9.0	179	7.0	167	18	185	206
Nov	8.05	1.3	5.6	84	17	9.2	184	9.0	165	35	200	196
Dec	8.23	1.2	5.2	94	16	9.4	165	7.0	160	20	180	190
<b>2021</b>												
Jan	7.8	1.6	8	120	18	10	120	12	125	45	170	416
Feb	8.0	1.8	6	110	18	9.6	91	10	45	43	88	69
Mar	8.0	1.6	6	94	23	9.8	96	9	44	40	84	86
Apr	7.96	1.4	6	110	23	8.2	245	15	195	70	265	235
May	7.9	1.2	6	94	25	9.4	250	9	200	30	230	312
June	7.95	1	4	46		9	200	9	198	22	220	264
July	7.05	1.4	6	94	24	9.6	72	13	60	20	80	82
Aug	7.40	1.8	6	84		9.2	190	8	190	50	240	250
Sept	7.95	1.6	6	70		9.6	55	11	40	30	70	112
Oct	8.16	1.4	6	84		9.0	184	13	195	30	225	262
Nov	8.3	1.4	6	70		9.0	175	11	178	78	256	392
Dec	7.63	1.2	4	63	17	9.2	180	12	180	30	210	277
<b>2020</b>												
Jan	7.8	1	4	90	17	10.2	84	8	44	32	76	120
Feb	8.44	1	6	90	17	10	85	12	68	46	114	236
Mar	7.94	1.2	6	80	20	10.8	100	9	85	51	136	279
Apr	8.2	1.2	6	80	20	10.6	110	10	60	22	82	236
May	7.5	1	6	70	19	8.4	120	10	80	75	155	213
June	7.75	1.2	6	60	20	8.6	256	9.5	148	110	258	254
July	8	1.2	6	70	22	8.8	169	17	118	83	201	262
Aug	7.6	1.4	6	110	23	8.6	184	16	190	50	184	222
Sept	8.15	2.0	6	130	29	10.6	165	13	90	62	152	328
Oct	8.18	1.2	6	140	29	8.6	235	10	140	60	200	317
Nov	7.15	1	6	120	18	8.4	55	10	40	30	70	154
Dec	8.0	1.4	6	110	20	9.2	100	9	70	40	110	240
Average	7.89	1.23	5.83	95.83	21.17	9.40	138.58	11.13	94.42	55.08	144.83	238.42
Min-Max	7.15-8.44	1-2	4-6	6-140	17-29	8.4-10.8	55-256	8-17	40-190	22-110	70-258	120-328
<b>2019</b>												
Jan	7.96	1	6	170	18	9.4	76	7	44	42	86	115
Feb	7.48	1	6	220	16	9.6	82	8	54	36	90	160
Mar	7.52	1	4	170	20	9.4	86	7	48	44	92	136
Apr	7.54	1	4	220	18	9.2	80	6	46	42	88	118
May	7.48	1	6	280	20	8.8	84	6	54	40	94	144
June	7.84	1	6	220	20	9	78	6	50	34	84	118

<b>July</b>	<b>7.91</b>	<b>1.2</b>	<b>6</b>	<b>170</b>	<b>19</b>	<b>8.6</b>	<b>76</b>	<b>7</b>	<b>48</b>	<b>26</b>	<b>74</b>	<b>122</b>
<b>Aug</b>	<b>7.81</b>	<b>1.2</b>	<b>6</b>	<b>220</b>	<b>18</b>	<b>8.8</b>	<b>78</b>	<b>6</b>	<b>46</b>	<b>30</b>	<b>76</b>	<b>110</b>
<b>Sept</b>	<b>8.45</b>	<b>1</b>	<b>6</b>	<b>280</b>	<b>25</b>	<b>8.6</b>	<b>76</b>	<b>13</b>	<b>44</b>	<b>38</b>	<b>82</b>	<b>246</b>
<b>Oct</b>	<b>8.3</b>	<b>1</b>	<b>6</b>	<b>220</b>	<b>22</b>	<b>8.8</b>	<b>78</b>	<b>11</b>	<b>48</b>	<b>36</b>	<b>84</b>	<b>190</b>
<b>Nov</b>	<b>8.22</b>	<b>1</b>	<b>6</b>	<b>140</b>	<b>20</b>	<b>9.2</b>	<b>80</b>	<b>11</b>	<b>66</b>	<b>44</b>	<b>110</b>	<b>195</b>
<b>Dec</b>	<b>8.26</b>	<b>1</b>	<b>6</b>	<b>110</b>	<b>19</b>	<b>10.4</b>	<b>88</b>	<b>10</b>	<b>45</b>	<b>33</b>	<b>78</b>	<b>255</b>
<b>Average</b>	<b>7.90</b>	<b>1.03</b>	<b>5.67</b>	<b>201.67</b>	<b>19.58</b>	<b>9.15</b>	<b>80.17</b>	<b>8.17</b>	<b>49.42</b>	<b>37.08</b>	<b>86.50</b>	<b>159.08</b>
<b>Min-Max</b>	<b>7.48-8.45</b>	<b>1-1.2</b>	<b>4-6</b>	<b>110-280</b>	<b>16-25</b>	<b>8.6-10.4</b>	<b>76-88</b>	<b>6-13</b>	<b>44-66</b>	<b>26-44</b>	<b>74-110</b>	<b>110-255</b>
<b>2018</b>												
<b>Jan</b>	<b>7.52</b>	<b>&lt;1</b>	<b>6</b>	<b>350</b>	<b>16</b>	<b>9</b>	<b>88</b>	<b>6</b>	<b>62</b>	<b>48</b>	<b>110</b>	<b>168</b>
<b>Feb</b>	<b>7.84</b>	<b>1</b>	<b>6</b>	<b>300</b>	<b>16</b>	<b>8.8</b>	<b>82</b>	<b>8</b>	<b>56</b>	<b>40</b>	<b>96</b>	<b>123</b>
<b>Mar</b>	<b>7.54</b>	<b>1</b>	<b>4</b>	<b>240</b>	<b>18</b>	<b>9.4</b>	<b>84</b>	<b>8</b>	<b>52</b>	<b>40</b>	<b>92</b>	<b>186</b>
<b>Apr</b>	<b>7.55</b>	<b>1.2</b>	<b>6</b>	<b>220</b>	<b>20</b>	<b>9.2</b>	<b>88</b>	<b>7</b>	<b>52</b>	<b>44</b>	<b>96</b>	<b>154</b>
<b>May</b>	<b>7.48</b>	<b>1</b>	<b>6</b>	<b>280</b>	<b>22</b>	<b>8.8</b>	<b>84</b>	<b>8</b>	<b>54</b>	<b>40</b>	<b>94</b>	<b>170</b>
<b>June</b>	<b>7.58</b>	<b>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>7.68</b>	<b>1.2</b>	<b>6</b>	<b>130</b>	<b>20</b>	<b>8.6</b>	<b>90</b>	<b>8</b>	<b>70</b>	<b>40</b>	<b>110</b>	<b>112</b>
<b>Aug</b>	<b>7.62</b>	<b>1</b>	<b>6</b>	<b>130</b>	<b>20</b>	<b>8.4</b>	<b>88</b>	<b>6</b>	<b>60</b>	<b>38</b>	<b>98</b>	<b>98</b>
<b>Sept</b>	<b>7.84</b>	<b>1</b>	<b>6</b>	<b>170</b>	<b>20</b>	<b>8.8</b>	<b>84</b>	<b>6</b>	<b>52</b>	<b>40</b>	<b>92</b>	<b>100</b>
<b>Oct</b>	<b>7.75</b>	<b>1.2</b>	<b>6</b>	<b>220</b>	<b>19</b>	<b>8.4</b>	<b>80</b>	<b>8</b>	<b>50</b>	<b>44</b>	<b>94</b>	<b>104</b>
<b>Nov</b>	<b>7.82</b>	<b>1</b>	<b>6</b>	<b>170</b>	<b>18</b>	<b>8.6</b>	<b>76</b>	<b>7</b>	<b>46</b>	<b>40</b>	<b>86</b>	<b>116</b>
<b>Dec</b>	<b>7.89</b>	<b>1</b>	<b>6</b>	<b>220</b>	<b>17</b>	<b>9.2</b>	<b>74</b>	<b>8</b>	<b>44</b>	<b>40</b>	<b>84</b>	<b>110</b>
<b>Average</b>	<b>7.68</b>	<b>1.05</b>	<b>5.67</b>	<b>211.67</b>	<b>18.83</b>	<b>8.87</b>	<b>82.50</b>	<b>7.17</b>	<b>53.33</b>	<b>40.50</b>	<b>93.83</b>	<b>127.75</b>
<b>Min-Max</b>	<b>7.48-7.89</b>	<b>&lt;1-1.2</b>	<b>4-6</b>	<b>110-350</b>	<b>16-22</b>	<b>8.4-9.4</b>	<b>72-90</b>	<b>6-8</b>	<b>42-70</b>	<b>32-48</b>	<b>84-110</b>	<b>92-186</b>