

## 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>2021</b>												
Jan-21	7.6	28	106	> 1600	18	2.8	310	45	250	45	295	620
Feb-21	7.28	26	94	> 1600	19	3.4	352	40	310	40	350	369
Mar-21	8.01	28	84	> 1600	21	3.2	400	35	320	50	370	380
Apr-21	7.4	26	80	> 1600	22	3.2	430	40	320	77	397	530
May-21	7.52	24	76	> 1600	27	3.0	370	35	280	50	330	501
<b>2020</b>												
Jan-20	8.1	26	104	>1600	8.1	26	240	25	180	120	300	380
Feb-20	8.34	28	112	>1600	18	4.0	260	30	210	150	360	368
Mar-20	8.11	26	94	> 1600	20	3.6	270	32	220	120	340	376
Apr-20	7.6	1	4	40	19	8.6	85	9	60	45	105	238
May-20	8.13	29	116	> 1600	19	3.6	395	30	255	135	390	387
June-20	6.67	26	110	> 1600	20	3.8	360	27.5	200	150	350	255
July-20	7.59	30	124	> 1600	21	2.8	365	25	145	130	275	448
Aug-20	7.65	32	128	> 1600	23	2.6	230	25	162	100	262	288
Sept-20	8.3	26	106	> 1600	26	4.0	306	22	125	93	218	428
Oct-20	7.9	28	112	> 1600	25	3	360	40	302	85	387	712
Nov-20	7.64	26	104	> 1600	24	3.6	552	37	278	113	391	749
Dec-20	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-19	8.15	26	86	>1600	18	2.8	240	25	164	126	290	328
Feb-19	7.85	28	110	>1600	18	3	280	27	200	140	340	390
March-19	7.52	1	4	170	20	9.4	86	7	48	44	92	136
April-19	7.84	28	112	>1600	19	3	260	24	196	124	320	372
May-19	7.79	30	120	>1600	20	2.6	278	25	200	148	348	410
June-19	7.84	26	126	>1600	20	2.8	290	30	230	128	358	430
July-19	7.86	25	118	>1600	19	3	270	22	220	100	320	390
Aug-19	6.89	27	120	>1600	20	2.6	274	26	222	102	324	392
Sep-19	6.94	26	120	>1600	22	2.8	260	25	220	80	300	400
Oct-19	8.05	28	124	>1600	20	2.8	280	28	234	78	312	415
Nov-19	8.1	26	116	>1600	20	3.0	284	33	236	74	310	344
Dec-19	8.23	28	124	>1600	18	2.2	268	30	230	56	286	328

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

**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 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>2021</b>												
Jan-21	7.8	1.6	8	120	18	10	120	12	125	45	170	416
Feb-21	8.0	1.8	6	110	18	9.6	91	10	45	43	88	69
Mar-21	8.0	1.6	6	94	23	9.8	96	9	44	40	84	86
Apr-21	7.96	1.4	6	110	23	8.2	245	15	195	70	265	235
May-21	7.9	1.2	6	94	25	9.4	250	9	200	30	230	312
<b>2020</b>												
Jan-20	7.8	1	4	90	17	10.2	84	8	44	32	76	120
Feb-20	8.44	1	6	90	17	10	85	12	68	46	114	236
Mar-20	7.94	1.2	6	80	20	10.8	100	9	85	51	136	279
Apr-20	8.2	1.2	6	80	20	10.6	110	10	60	22	82	236
May-20	7.5	1	6	70	19	8.4	120	10	80	75	155	213
June-20	7.75	1.2	6	60	20	8.6	256	9.5	148	110	258	254
July-20	8	1.2	6	70	22	8.8	169	17	118	83	201	262
Aug-20	7.6	1.4	6	110	23	8.6	184	16	190	50	184	222
Sept-20	8.15	2.0	6	130	29	10.6	165	13	90	62	152	328
Oct-20	8.18	1.2	6	140	29	8.6	235	10	140	60	200	317
Nov-20	7.15	1	6	120	18	8.4	55	10	40	30	70	154
Dec-20	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-19	7.96	1	6	170	18	9.4	76	7	44	42	86	115
Feb-19	7.48	1	6	220	16	9.6	82	8	54	36	90	160
March-19	7.52	1	4	170	20	9.4	86	7	48	44	92	136
April-19	7.54	1	4	220	18	9.2	80	6	46	42	88	118
May-19	7.48	1	6	280	20	8.8	84	6	54	40	94	144
June-19	7.84	1	6	220	20	9	78	6	50	34	84	118
July-19	7.91	1.2	6	170	19	8.6	76	7	48	26	74	122
Aug-19	7.81	1.2	6	220	18	8.8	78	6	46	30	76	110

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