

Water Analysis of Godavari River from Loni Savangi Barrage to Dhalegaon Barrage near Majalgaon Taluka (MS)

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Abstract: The present short research report indicates analysis of water samples of Godavari River from Loni Savangi Barrage to Dhalegaon Barrage near Majalgaon taluka (MS). Water samples were collected from selected six locations from different villages. The parameter of water samples at these sites has been studied. Observed results were compared with desirable limits.

Keywords: Water analysis, TDS.

I. INTRODUCTION

Many small springs and water streams flow from Majalgaon taluka. Many villages from Majalgaon taluka are situated on the bank of one of the most important river Godavari. Godavari River water is used mainly for agricultural and other domestic purposes. It is generally observed that rivers passing from the cities and villages are usually polluted due to domestic and industrial wastages. The present short research report deals with analysis of water samples of Godavari River from Loni Savangi Barrage to Dhalegaon Barrage near Majalgaon taluka (MS).

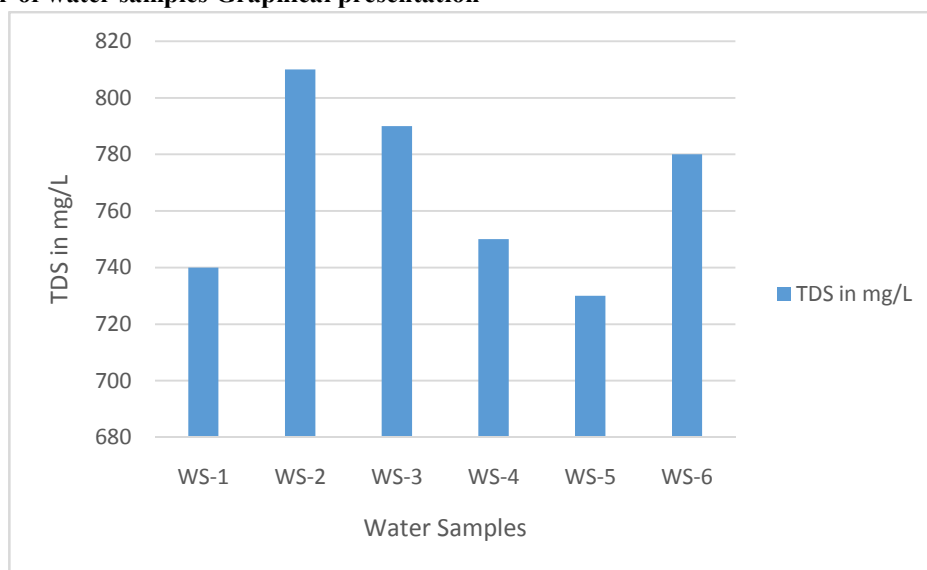
II. MATERIALS METHODS

River water samples were collected from various sites from different villages of Majalgaon taluka. The samples were collected in the last week of month October 2023. The work was planned to investigate and assess the TDS of the river water regarding its suitability for drinking and agricultural purpose. Samples were analyzed by standard methods. Important parameter TDS was analyzed. Standard benchmarks from WHO (World Health Organization) and BIS (Bureau of Indian Standard) for drinking water were used to compare with these results.

Table 1: Analysis of water- Numeric Data

Sr. No.	Sampling Location	Water Sample No.	Temperature (°C)	PH	TDS Mg/L
1	Gautam Rushi Temple (Near Loni Savangi Barrage)	WS 1	23	7.21	740
2	Manjrath	WS 2	24	8.39	810
3	Aalshewadi	WS 3	24	7.90	790
4	Borgaon	WS 4	23	7.78	750
5	Abegaon	WS 5	23	7.54	730
6	Pimpalgaon (Near Dhalegaon Barrage)	WS 6	24	8.10	780

TDS parameter of water samples Graphical presentation



III. RESULTS AND DISCUSSION

The results indicated in above Table shows chemical analysed values obtained at six spots from various parameters. The temperature of river water from 23°C to 24°C. Very little variation in P H (7.21 to 8.39) was observed, which is within permissible limits.

Total dissolved solids (TDS) is defined as the quantity of dissolved material in water, and depends mainly on the solubility of rocks and soils the water contacts. For instance, water that flows through limestone and gypsum dissolves calcium, carbonate, and sulfate, resulting in high levels of total dissolved solids. The river is supposed most suitable place to dump garbage waste and it is proved as a major load on the river, it increases TDS in water, and it causes unhygienic atmosphere and creating health problems like malaria, diarrhea, etc TDS is observed in the range of 730 to 810mg/L. According to WHO who have published the standards for the TDS as 300 mg/L (Permissible) and 500 mg/L (Excessive). Whereas according to BIS acceptable limit is 500mg/L. If we consider the BIS acceptable limit all the values are crossing the permissible limit. So this is the time to take some necessary action to prevent further pollution and keep the river clean.

High TDS value at manjarath is due to religious activities as Manjarth is a Holy place. Large number of devotee’s visit resulting in high floating population all through the year. Devotees perform various kinds of Pujas at the bank of the river. This leads to addition of organic matter in to the river directly, ‘Pindadan’ comprising of cooked rice during Dashakriya and nirmalya in the river, Human body ash (Asthi) Visarjan activities at Manjarth.

3.1 Preventive Measures

- Awareness should be created through an audio visual show for violators with the help of NGOs and citizen groups
- It is recommended to have soak pits for villages in close proximity of river in order to avoid direct discharge of sewage in to the river.
- Disposal of nirmalya and other organic matters directly in to the river flow should be avoided.
- Human activities like washing cloths should be avoided.

IV. CONCLUSION

Total Dissolved Solids impact on water quality harmfully in many ways. According to WHO who have published the standards for the TDS as 300 mg/L (Permissible) and 500 mg/L (Excessive). Whereas according to BIS acceptable limit is 500mg/L. The values of TDS of all water samples cross the permissible limits. TDS of water is important in

determining the suitability of water for domestic uses. Hard water with more TDS creates problem to human health, such water is not suitable for certain species of fish and other aquatic lives. Poor water quality is also harmful to soil health and can affect the production. The measures suggested will be quite useful for not to cross the limit.

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