Quality of Waste Water in Rural Area, Dongaon MH. INDIA

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Abstract - *Water is an essential component of life on the surface of earth. The hydrological cycle is responsible for the amount of water on the earth. Now a days researches are looking forward for the creation and conservation of the water. In this paper the quality of waste water is studied with a view to conserve the waste water and to increase the ground water level by infiltrating the treated water. A village Dongaon from Mudked Taluka in Nanded District of Maharashtra, India is selected. Waste Water from the various sources are collected and the Quality of water is studied. Parameters like BOD, COD, TSS, TDS, pH, alkalinity, oil and grease, etc., are studied. Depending on the quality treatments are suggested and then treated water is allowed to infiltrate into the soil. The treated water is further used for irrigating the crop and recharging the ground water table.*

Key Words: **Ground level, BOD, COD, Management of waste water**

1. INTRODUCTION

Water is an essential component of life on the surface of earth. The hydrological cycle is responsible for the amount of water on the earth. Now a days researches are looking forward for the creation and conservation of the water. It plays an important role in development of any activity in the world. Majority of available portable water is been evaporated and remaining water is which is available for use. [5] Therefore, there is a need to reuse the waste water for domestic purpose as well as agricultural purpose.

Due to growth of population consumption of water resources is more and availability is less. Waste water is water whose physical, chemical, biological properties have been changed as a result of the introduction of certain substance which render is unsafe of some purpose such as drinking and irrigation purpose. Dongaon is a small village in Nanded district in the India state of Maharashtra, we have choosen dongaon village for the purpose of data collection we use the proper disposal of waste water in rural area the present condition of sewer line and sewage disposal is worst so, we select the village for the project work due to the improper condition the wastage of water if more also spread the increase the spreading diseases we studied all the parameters is

of the water such as pH, BOD, COD, etc. and come on the final conclusion.

The aim of this paper is to find out the Quality of Waste water which can be reused for agricultural as well as recharging the ground water table.

2. SITE SELECTION

For the Study purpose Dongaon village has been selected the village for household 250.It is located in District Nanded of Maharastra, India. The Latitude 18.6722N and Longitude 77.3874E with a sea level Height is 365m. We select the location of Dongaon for project. This village has been selected as there is a problem of drainage System
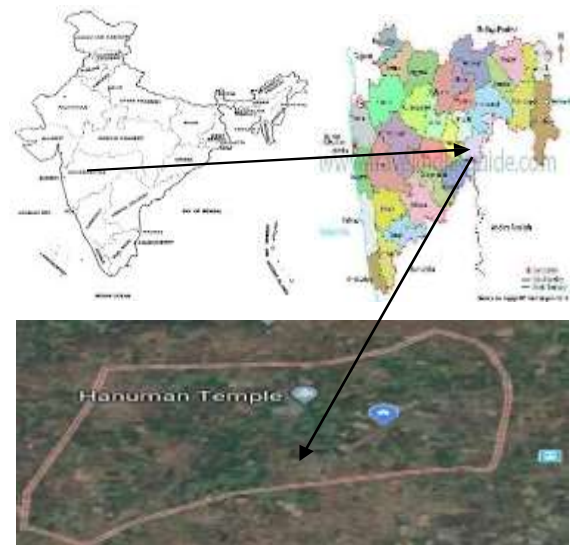

Fig.1 Location of Dongaon village

3. DATA COLLECTION

The data collection has been done from the land revenue department as well as environmental department the collection is as follow:

1. Population

2. House hold survey

3. Topo sheet and Village map

4. Utilization of water and water waste

5. Sample collection: The spot selected for sample survey are the location of drainage line monthly same for various season like survey, winter and summer are been collected on weekly basis

4. METHOD

Collection of sample we select the water sample from the different location in Dongaon village we select the location for sample is one is the staring of the locality another is end of the sewer line .the sample has collected morning 10AM with standard procedure and test conduct on sample same day.

The test conducted are pH, TDS, TSS, BOD and COD, alkalinity, oil and grease test. The permissible limit of the same are presented in table no.1

Table -1: Standard range of tests

Table No. 1 Standard Range of Tests			
Sr.no	Test	purpose	Standard range
1	pH	To know acidic and basic nature of water	6.5-8.5
2	TDS	To measure the volume of ionized solids	2000mg/l
3	TSS	To know the volume of suspended solid	2000mg/l
4	BOD	To know the biological oxygen demand	30mg/l
5	COD	To know the chemical oxygen demand	250mg/l
6	Alkalinity	The alkalinity of water is measure ofits capacity to neutralized acid	600mg/l
7	Oil and grease	To know the amount of oil and grease in sewage water	10mg/l

5. RESULT

The sample collect shows a range of pH as 7.29~7.01 which is not in the standard range 6.5~8.5. The range of TDS as 1073 ~1107 which is within the standard range 2000.The range of TSS as 109~308 which is within the standard range 2000.

Table -2: Results

Sr no	Test	Sampl no. 1	Sample no.2
1	pH	7.29	7.01
2	TDS	1073.0 mg/l	1107.0 mg/l
3	TSS	109.0 mg/l	308.0 mg/l
4	BOD	30 mg/l	78 mg/l
5	COD	201.0 mg/l	480mg/l
6	Alkalinity	192.14 mg/l	195.99mg/l
7	Oil and grease	1.0mg/l	2.0mg/l

The range of BOD as 30~78 which is not in the standard range .The range of COD as 201~480 which is not in the standard range .The range of Alkalinity as 192.14~195.99 which is within the standard range 600.The range of Oil & Grease as 1~2 which is within the standard range.

6. CONCLUSION

The ultimate goal of wastewater treatment is the protection of environment in a manner commensurate with public health and socio-economic. In the present study scheme after study all the parameter finally we conclude that the water from the sewage in directly dispose to the ground by using surge tank or primary treatment. In current result also suggest that the water after treatment can be used for plantation of trees and increase in ground water table level. From the above results it can be concluded as the waste water that is discharged is safe for use with same treatme**nt.**

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[9] IS303025(Part11) for pH test

[10] IS3025(Part16) for TDS test

[11] IS3025(Part17) for TSS test

[12] IS 3025(Part23) for Alkalinity test

[13] As per APHA Oil and grease test and BOD and COD test are conducted