Ground Water Quality in OsmanabadCity (MS)

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Abstract:

In India water table has gown down in many areas as a recent of indiscriminate and high withdrawal ground water for drinking and sanitation purposes, with lowering of water table, the cost of ground water extraction has not only increased but also affected the quality of water.

Keywords: *Physical parameter, ground water quality.*

Introduction:

Tremendous increase of population in last two decade has put extra trace in water source in any area. The ground water quality directly depends upon geology of the area .The sewage water released from city contributes to the pollutant ground water surrounding the area. Their fore, detail study of hydrogeological and hydro chemical condition of the area.To understand the groundwater quality of the hour.

In the present investigation the relation between ground water quality and health effect has been studied.

Study area:

Osmanabad city is located in central part of Osmanabad district. The area is acquired in 3.57Sq.km.The whole region is an average elevation on 548 meters. Mean sea level. Ground water available only in weathered and fractured zone. Most of the people depend on ground on ground water. Average annual rainfall is around 700 mm, which is mostly loss surface and runoff and

Aim and Objectives:

For this study we have choose following objectives.

- To identify the ground water quality for drinking purposes.
- To study the spatio -temporal analysis of ground water.
- To understand the geological conditions.
- To suggest the measures to improve underground water levels. Evaporation. Geographically location of Osmanabadis 18^0 08' north latitude and 74^0 32' east longitude.

Material and Methods:

For this study we have collected six samples from different places in Osmanabad city .All samples were kept in pre cleaned white polythene plastic made Jeri cane. EDTA trimetric and gravitation of were sold for the determination of calcium. TDS denote the various type mineral present in the water in dissolved form .According to BIS the limit of TDS in drinking water is 500mg (Dhembare 1998,Sangeetha 2000)observed higher values of TDS that of is standard calcium and magnesium are the major cation responsible for hardness.

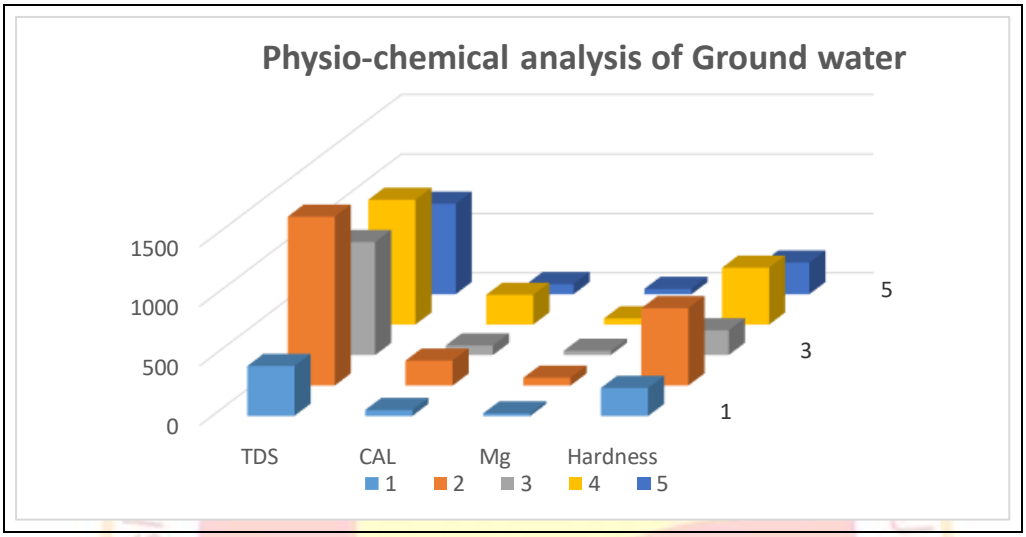
Result and Discussion:

The present study is undertaken to assess the water quality and identify physiochemical analysis of ground water quality. More than 75% population depends upon ground water in study region. We report here this study had been

Obtained result of ground water were within the limit as compare to drinking water standard.

Physio-Chemical Analysis of Ground Water in OsmanabadCity

Site	1 Police line-B	2 Tambri area-H	3 Barshinaka-B	4 Ganesh nagar-H	5 Amrutnagar-B
DS	420	1420	950	1050	0
AL	50	10	1	251	5
g	21	65	35	52	45
ss	235	650	208	478	265



Above table shows that, the contamination of TDS, Cal. Mg, and Hardness are observed in different sites in Osmanabad city. The higher concentration of TDS shows in site no.2 (Tambri area) and site no. 4 & 5 (Ganesh nagar & Amrutnagar). On the other hand higher concentration of calcium has been found in site no.2, whereas site no.1&3 (Police line and Barshinaka) calcium observed under permissible limit. Of BIS. So high content of calcium is undesirable for clothing, bathing and drinking. Above table indicate that Tambri area has more hardness compare to other samples. Hence, this ground water is very hard and not suitable for drinking purposes' K Jain (1992) reported that the content of hardness may be causes kidney problem, high content of mg causes nausea, muscular weakness and paralysis in human being.

The study is reveals that, ground water is deteriorate with high level of TDS, Ca, mg, and hardness. The permeability in the rock formation is high especial Tambri area and Ganesh nagar. City waste water comes and stored in Tambri area. So, it is affecting ground water quality.

References:

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