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DETERMINATION OF WATER PARAMETER CONDITION OF TALE PIMPALGAON [illegible] NEAR PATODA DIST-BEED. (MS) INDIA

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ABSTRACT

The Tale Pimalgaon dam is situated near Patoda Dist-Beed (MS) . The study of physico ch[illegible] parameters like watre temperature, TDS, pH, chloride, Sulphate, dissolve oxygen, biochemical [illegible] demand, chemical oxygen demand, nitrate, phosphate has been studied in the period of Jan 2012 [illegible] 2013.The study shows that seasonal variation in the physico-chemical parameters.

Figures : 00 **References:** 10 **Tables:** 01

KEY WORDS – Physico-Chemical, Parameter, Dam, Water.

Introduction

The problem of aquatic pollution is further aggravated by the direct discharge of domestic sewage in to the water bodies. Indian cities have been growing at faster rate over the past few decades. All the urban centers are facing typical environmental problem like lack of sanitation, clean potable water, sewage treatment and safe disposal. The fresh water resources now a day as consequences of population explosion coupled with industrialization, urbanization, and green revolution. In present investigation an attempt has been made to study the impact of human activities on the surface water at Tale Pimpalgaon dam. The study was carried out (Jan 2012 to Dec 2013) in considering the following aspects like physico-chemical characteristics of the dam, zooplankton diversity and primary productivity studies of the dam. Tale Pimpalgaon dam situated near Tale Pimpalgaon Village in Patoda Taluka Dist- Beed Maharashtra state. Tale Pimpalgaon dam is minor reservoir on this reservoir many villages are depends for agriculture, drinking, and domestic uses. The Tale Pimpalgaon dam is located at village Tale Pimpalgaon south side Tq-Patoda Dist-Beed. Tale Pimalgaon is [illegible] away from Taluka Patoda. The reser[illegible] constructed on the river Padmavati this [illegible] later joins the river Godavari. Tale Pimpal[illegible] dam is constructed in the year 2001 for irri[illegible] purpose.

Results and Discussion

During the study period water temper[illegible] year (Jan 2013-Dec 2013) 20.3 to 26.8 degree Celsius.The values of Total Dissolved Solids [illegible] year The higher chloride value observed in monsoon season while in winter season it was observed less. Chloride range 4.30 (Jan 2013- Dec 2013) mg/L to 11.36 mg/L.

PH of water (Jan 2013 – Dec 2013) PH ranging 6.1 to 7.4. The discharge from resorts and small industries may increase the pH of water, whereas, in monsoon, addition of rainwater diluted the effect and resulting on pH value.

The values of chloride in year (Jan 2013- Dec 2013) 4.30 mg/L to 11.36 mg/L. The higher chloride value observed in monsoon season while in winter season it was observed less.

In the present study Sulphate concentration [illegible] year (Jan 2013-Dec 2013) 2.11 mg/L to [illegible]

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The minimum as well as maximum value was observed in winter. Mg/L.

In the present study Phosphate concentration in year the minimum as well as maximum value was observed in winter. In second year (Jan 2013- Dec 2013) ranges 0.01 to 0.49 mg/l.

The nitrate values varied in year (Jan 2013-Dec 2013) 0.46 mg/L to 1.72 mg/L. Post monsoon showed the maximum value of nitrate where as minimum value observed in winter season.

During the study period (2013-Dec 2013) dissolved oxygen varied between7.55 mg/L to 7.78 mg/L. Among the all values it was observed minimum in begging of post monsoon and maximum in off set of post monsoon.

In the year (Jan 2013-Dec 2013) biochemical oxygen demand values ranges between 2.22 mg/L to 16.32 mg/L. Monsoon season shows higher value and winter shown less value of BOD.

In year (Jan 2013-Dec 2013) Chemical oxygen demand showed much variation. It ranges between 2.22 mg/L to 16.32 mg/L. The winter season showed minimum values of chemical oxygen demand were as post monsoon showed maximum value of chemical oxygen demand.

It seen that PH is also plays an important role in the formation of algal Blooms. Similarly reports were made by Anderson (1978). Water pH is also considered as an indicator of overall production .of biomass. Munawar (1970) suggested that higher concentration of chloride in water is an index of pollution of animal origin and there is a direct correlation between chloride concentration and pollution level. Pramod.P.Gaike (2011) the Chlorides of Dahiphal dam varied from 30.6 mg/l to 59.3 mg/L at A and B station in study period. The maximum of 59.3 mg/L was recorded in the month of January and the minimum of 30.6 mg/l was recorded in the month of April at A and B. Ajmal et al. (1985) found maximum value of chloride 98.5mg/l during winter season in Kalinadi. The SO_4 as electron acceptor is often used for the breakdown of organic matter and produces H_2S and a rotten egg smell. (Welch, 1980). As per NRC (1997) sulphate is removed from raw water by any of the common water treatments.Pramod.P.Gaike (2013) observed higher sulphate in monsoon season while in winter season less .The WHO (1984) limits for sulphates are 300 to 400ppm. The phosphates in small concentration are not likely to cause any harm to man and animals on the contrary, it is an essential constituent of bones and some enzyme systems. A recent finding report of Andhra Pradesh state forensic science laboratory (1988) indicates that if the phosphate is consumed excess phosphates gas is produced in the gastrointestinal tract on reaction with gastric juice. This could even lead to the death of consumers. Many workers Gaikwad, B.L.(2003) and Nagare, H.B. (2002) have reported variation of phosphates. Normally phosphates acts as limiting nutrients in the processes of eutrophication and lakes can be aesthetically classified into good, Fair, Bad, Very Bad and awful on the basis of phosphates loading Edmonson (1960).

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Materials and Methods

PHYSICO - CHEMICAL PARAMETERSAND THEIR TEST

Sr. No.	Parameters	Tests
1	Water Temperature	Recorded by using Digital thermometer.
2	Total Dissolved Solids (TDS)	Measured on the field itself with the help of portable water analysis kit.
3	pH	Measured on spot collecting water samples by using digital pH meter.
4	Chlorides	Measured in the laboratory by titrometric method (APHA, 1998.) with silver nitrate.
5	Sulphates	Measured in the laboratory by titrometric method (APHA, 1998.).
6	Phosphates	Measured in the laboratory by titrometric method (APHA, 1998.).
7	Nitrates	Measured in the laboratory by titrometric method (APHA, 1998.).
8	Dissolved Oxygen (DO)	Measured on the field itself with the help of portable water analysis kit.
9	Biochemical Oxygen Demand (BOD)	Measured on the field itself with the help of portable water analysis kit.
10	Chemical Oxygen Demand (COD)	Measured on the field itself with the help of portable water analysis kit.

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