



## **Variation of water quality Index (IRWQI) in Chitgar Lake during 2013-2019**

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### **Abstract**

Chitgar Lake is an artificial and recreational lake and is located in the north-western of Tehran and was filled water of the Kan River in 2012. The water quality was investigated on 5 stations site during 2013-2019. Standard methods were used for analysis. There is no significant different between the parameters at the stations ( $P > 0.05$ ). Based on the study, the results indicated that the yearly mean of dissolve oxygen, total hardness, total phosphorous, total nitrogen, COD, respectively were:  $8.3 \pm 1.4$ ,  $141 \pm 24$ ,  $0.041 \pm 0.015$ ,  $2.828 \pm 1.342$ ,  $21.5 \pm 7.8$  as mg/l and chlorophyll- $\alpha$  was  $1.59 \pm 0.810$   $\mu\text{g/l}$ . EC was  $432 \pm 65$   $\mu\text{s/cm}$  and pH was  $7.79 \pm 0.45$ . The water temperature varied between  $5.8 \pm 0.4$  to  $28.9 \pm 0.2$  as  $^{\circ}\text{C}$ . Numerical range of Iranian water quality index (IRWQI) was 53-81 and yearly mean of this index was  $72 \pm 9$ . Although until IRWQI was in level of good, in addition to keeping the water treatment system active, it is necessary to biologically controlled the balance of living organisms in the lake.

**Keywords:** Chitgar Lake, physical and chemical parameters, IRWQI