

عنوان مقاله:

Spatial evolution of the physico-chemical, organoleptic and bacteriological properties of a municipal artificial lake

محل انتشار:

فصلنامه بین المللی سرمایه انسانی در مدیریت شهری، دوره 5، شماره 1 (سال: 1399)

تعداد صفحات اصل مقاله: 10

نویسندگان:

A. Talla - *Energy, Water and Environment Laboratory, National Advanced School of Engineering, University of Yaounde I, Yaounde, Cameroon* | *Research Center, National Advanced School of Public Work, Yaounde, Cameroon*

F.D. Motto - *Research Center, National Advanced School of Public Work, Yaounde, Cameroon*

G.E. Nkeng - *Research Center, National Advanced School of Public Work, Yaounde, Cameroon* | *Department of chemistry, University of Buea, Buea, Cameroon*

خلاصه مقاله:

This study is a contribution to the study of the spatial evolution of the properties of the municipal lake of Yaounde-Cameroon. The objective was the characterization of the physico-chemical, bacteriological and organoleptic parameters of water of this lake in order to provide the scientifically exploitable data. To understand the sources and the evolution of the pollution of this lake, we carried out on the surface of water, fifteen samples horizontally representative and arranged on the longitudinal axis and the transverse axis of this one. Analyzes of the parameters of these samples allowed us to establish that three classes of water coexist within the expanse of this lake, in this case water of class 5 (colour = 380.3 mgPt-Co/L, conductivity at 20 °C = 3620 μ S/cm, pH = 6.2, dissolved oxygen = 0.4 mg/L) at its eastern bank; water of class 4 ($101.4 \leq$ colour ≤ 172.8 mgPt-Co/L, $25.7 \leq$ temperature ≤ 26.1 °C, $6.6 \leq$ pH ≤ 7.0 , $8.9 \leq$ BOD5 ≤ 20.7 mg/L, $43.0.103 \leq$ total coliforms $\leq 49.7.103$ CFU/100 mL) around 300 meters from its tributary and water of class 3 ($54.9 \leq$ colour ≤ 93.4 mgPt-Co/L, $24.2 \leq$ temperature ≤ 25.5 °C ; $7.4 \leq$ pH ≤ 7.7 , $6.6 \leq$ BOD5 ≤ 8.7 mg/L) in the rest of the lake. These water classes, as indicated above, cause this lake to be .polluted differently. The study also allowed us to identify two directions of self-purification within the lake expanse

کلمات کلیدی:

Bacteriological parameters, Domestic effluents, Physicochemical parameters, Runoff water, self-purification, Water class, Yaounde municipal lake

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1006972>

