

Water Quality Assessment of Owu Falls for Water Use Classification

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Abstract : Waterfalls create an ambient environment for tourism and relaxation. They are also potential sources for water supply. Owu waterfall located at Isin Local Government, Kwara state, Nigeria is the highest waterfall in the West African region, yet none of its potential usefulness has been fully exploited. Water samples were taken from two sections of the fall and were analyzed for various water quality parameters. The results obtained include pH (6.71 ± 0.1), Biochemical oxygen demand (4.2 ± 0.5 mg/l), Chemical oxygen demand (3.07 ± 0.01 mg/l), Dissolved oxygen (6.59 ± 0.6 mg/l), Turbidity (4.43 ± 0.11 NTU), Total dissolved solids (8.2 ± 0.09 mg/l), Total suspended solids (18.25 ± 0.5 mg/l), Chloride ion (0.48 ± 0.08 mg/l), Calcium ion (0.82 ± 0.02 mg/l), Magnesium ion (0.63 ± 0.03 mg/l) and Nitrate ion (1.25 ± 0.01 mg/l). The results were compared to the World Health Organisations standard for drinking water and the Nigerian standard for drinking water. From the comparison, it can be deduced that due to the Biochemical oxygen demand value, the water is not suitable for drinking unless it undergoes treatment. However, it is suitable for other classes of water usage.

Keywords : Owu falls, waterfall, water quality, water quality parameters, water use

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