

THE RELATIONSHIP BETWEEN SURFACE WATER TEMPERATURE AND DISSOLVED OXYGEN IN RIVER BENUE AT MAKURDI

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ABSTRACT

Poor sanitation practice is very common in the developing nations of the world as it is observed in Nigeria and River Benue at Makurdi. Waste are indiscriminately dumped in the river without recourse to the harm of the waste on the biodiversity of the river. To access the ecological integrity of river Benue at Makurdi, water samples were collected for two years from July 2011 to June 2013. Surface water temperature and dissolved oxygen content of the water samples were determined insitu using standard measuring metres. The correlation analysis between DO and surface water temperature in River Benue at Makurdi showed that correlation was significant at the brewery location only during the course of the study. Across the study locations in River Benue during the study period indicate that the R^2 valued varied from 0.0006- 0.17 indicating a very weak relationship between surface water temperature and dissolved oxygen in River Benue. This results showed clearly the DO content of River Benue at Makurdi depend on the organic waste dumped in the river and not surface water temperature. It was recommended that indiscriminate dumping of waste in to river should be discouraged.

Keywords: Relationship, DO, Surface water temperature, River Benue.