

“Investigating Nitrate Variation In The University Of Embu Dams”

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Abstract

Atmospheric deposition of inorganic nitrogen (mainly in the form of NO_3) has dramatically increased because of the extensive use of nitrogenous fertilizers and the huge combustion of fossil fuels. As a result, concentrations of nitrate in ground and surface waters are increasing around the world, causing one of the most prevalent environmental problems responsible for water quality degradation on a worldwide scale. At the University of Embu, wastes discharged from the kitchen, application of fertilizer and pesticides and run-off from the animal farm is the major source of nitrate variation in the dam. The objective of this study was to establish the nitrates levels of dams one to five in the University of Embu. The method used during the study was experimental whereby the samples were randomly collected at inlet and outlets and taken to the laboratory for measurements. The data was collected in all dams for variation purposes. The results were subjected to single factor GENSTAT 14 to obtain their significance. From the results it was found out that the dams' nitrates level varied and dam 1 had higher nitrate content than the rest of the dams. It was concluded that high levels of nitrates in dams' water makes water unsafe for irrigation purposes. It was recommended that dams should be restored to their initial stages to avoid problem occurring.