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STUDIES ON SOME HEAVY METALS AND WATER QUALITY  
PARAMETERS IN TANNERY AND MUNICIPAL SEWER EFFLUENTS  
WITH REFERENCE TO LAKE NAKURU. //

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A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF  
PHILOSOPHY IN ENVIRONMENTAL STUDIES.  
(ENVIRONMENTAL HEALTH DIVISION)

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AUGUST 1995

080607

## ABSTRACT

This work describes the results of a study of the pollution load into Lake Nakuru from municipal and industrial waste sources in Nakuru town. It also reports the potential of avian species as bioindicators of the pollution level in the Lake Nakuru environment.

Waste water samples were collected from the tannery industry and the municipal sewer plants. These are the major sources of toxic chemical pollution in Lake Nakuru. The samples were analysed for lead, chromium, biological oxygen demand, chemical oxygen demand, total suspended solids, total dissolved solids, pH and temperature. Tissue samples for analysis were obtained from pelican and cormorant birds in Lake Nakuru national park.

It was found that levels of chromium and lead in samples taken from Njoro sewer and the conventional sewer effluents varied from  $0.02 \text{ mgL}^{-1}$  to  $0.70 \text{ mgL}^{-1}$ , while BOD values varied from  $80\text{-}200 \text{ mgL}^{-1}$ . Concentration of chromium and lead in samples taken from river Njoro and Lake Nakuru ranged from  $0.01$  to  $0.60 \text{ mgL}^{-1}$ . Levels of chromium and lead in bird tissues were below  $1 \text{ mgL}^{-1}$  and levels of these metals in Lake Nakuru exceeded the maximum permissible limits set by WHO (1971) for drinking water. Pollution load from Nakuru town to Lake Nakuru was found to be mainly from industrial and sewer discharges. The link between this pollution load and the death of wildlife in the lake Nakuru National park was not established in this study.