

Tari Eyenghe

Storm Water Drainage and Management in Yenagoa City in Nigeria

Master's Thesis

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An Assessment of Storm Water Drainage
and Management in Yenagoa City, Bayelsa State

BY

EYENGHE, Tari

**A DISSERTATION SUBMITTED TO THE POSTGRADUATE SCHOOL,
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ABSTRACT

Yenagoa, capital city of Bayelsa State, lies in floodplain and surrounded by freshwater swamp environment of the Nun River, Ekole and Epie Creeks, lakes and other natural drainage paths. The city is annually inundated for about nine months in every year. The causal factor of this flooding is primarily high and continuous rainfall during the year. The aim of this research is to assess the existing storm water drainage and management in Yenagoa, with the view to suggest relevant measures for ameliorating the condition. The objectives of the study include (a) assessing the problems and challenges of storm water, (b) climatic and hydrological settings of the study area, and (c) develop an effective management strategy to mitigate the problem. The research adopted a multi-stage sampling procedure to select 6 communities in the study area. Simple random sampling technique was used to determine the sample size from the selected communities and 377 questionnaires were administered to the respondents and key informants in the study area. The Spearman Rank Correlation Analysis was used to test the relationship between the adequacy of drains and annual flooding incidence in the study area. The research found that lack of storm water management in the study area and extensive urban development especially on wetlands due to pressure of urbanisation; poor development control mechanisms had caused flooding incidents in the study area. The study recommends that the Yenagoa Master, 2004 should be implemented and proffers a Model of Urban Stormwater Improvement Conceptualisation. The study also recommends that the Bayelsa State Physical Planning Board should prepare and enforce development control regulations that recognize the poor drainage system that currently exists. Efforts should be made to keep the natural drainage paths and wetlands clear with adequate storm water infrastructure provided.

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DEDICATION

This work is dedicated to my Wife and Son; Comfort and Davis

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