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**WATER SUPPLY AND CONSUMPTION
IN ELDORET** //

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ABSTRACT

A practical problem frequently encountered by water planners is the task of providing safe, clean and reliable water to meet the increasing demand from the various sectors of the respective urban centres such as Eldoret. Any attempt to assess the need for further expansion of the water supply system depends on a realistic understanding of the actual conditions which presently exist in the town. The primary objectives of this study were therefore to investigate the inherent water supply situation (mainly sources, reliability and coverage) and consumption patterns and habits and the factors influencing the same in Eldoret. To do this effectively within the time schedule, the sampling frame was narrowed to cover only three estates (i.e Langas, Pioneer, and Elgon View which are low, medium and high income residential estates respectively), well established industries and educational institutions.

The research brought together information (data) from diverse sources, including the results of interviews with officials, workers and residents, in order to present a balanced picture of the current state of the water supply system and the prevailing water consumption characteristics in the town. Still more data (secondary data) were obtained mainly from the Municipal Council (Eldoret) and Ministry of Water Development (Eldoret, Nairobi).

The methods used in the presentation and analysis of the collected data include descriptive (proportions, percentages, averages), qualitative (tables, maps, hydrographs, bar-graphs, linegraphs) and quantitative (Analysis of Variance, Time Series Analysis, Multiple Regression Analysis) techniques.

According to the research findings, the present 'water shortage' in Eldoret is not absolute. The shortage is due to lack of adequate storage/treatment facilities, seasonal fluctuations in rainfall and river discharge levels, inadequacy of service coverage, water consumption habits, inaccessibility (in terms of monetary cost, size of population served by a given water source and the physical distance to water supply source) and the general lack of proper planning. The factors that determine water consumption between and within socio-economic groups (i.e. residential estates grouped according to their socio-economic status) include income and education levels, household sizes, distance to water supply source and consumption habits. It should also be noted here that piped 'potable' water supply in Eldoret is commonly highly skewed in favour of higher income communities, industries and educational institutions which in turn consume excessive amounts of water as compared to the disadvantaged low income communities.

Some of the recommendations/suggestions advanced in this study include the reduction of excessive water consumption through water conservation practices and the adoption of an integrated and comprehensive approach to water planning.