

Abstract

Land use change has been occurring all over the world and its effects can be devastating. Studies have shown that it can affect water resources. A research was conducted to investigate the effects of land use change on water resources in Willowfontein, which had been affected by drought in the past years. The land in the area was mainly used for residential purposes. The effects of land use change on water resources in Willowfontein were investigated by determining both the natural and anthropogenic factors. The sample of the study comprised of twenty community project members, who were involved in various agricultural projects in an area. It also had people who were knowledgeable about the research topic. Data was collected using questionnaires, interviews, direct observations, secondary land use change, population, water demand, water runoff, and rainfall data. The collected data was analyzed using Microsoft Excel, the Statistical Package for the Social Science (SPSS) Software. Major findings were that people perceived rainfall shortage as the primary and direct cause of drought in an area. However evidence showed that rainfall did not change much in the past years. The correlation between rainfall and runoff was 0.646699147, which was insignificant. Change in land use was the possibility of frequent drought occurrence in an area. Based on the findings and conclusions of the study, specific recommendations were suggested. Moreover the areas that needed more research were identified.

Key words:
Drought, Land Cover Change, Population, Water Demand, Water Runoff, Rainfall, Willowfontein, Msunduzi Municipality, Trend Line, Correlation