ABSTRACT.

Lake Naivasha (36 05' E, 00 24' S); lies at an altitude of 1884 m above mean sea level at the lowest point of 2 a catchment basin of approximately 1800 km .

Lake Naivasha lies about 18km from Naivasha town.The Park was first designated as a Ramsar site (Wetland of international importance) in 1995 and a UNESCO World Heritage Site in 2011 because of its outstanding universal value.

Due to its settings on the floor of the Kenyan Rift Valley Lake Naivasha does not have a surface outlet and thus functions as sink for pollutants arising from human activities in Naivasha town as well as an intensively cultivated agricultural farmland in the catchment basin. At current rates the population of Naivasha town is estimated to grow from the present 500,000 to over 1,000,000 within the coming 20 years. The lake is recharged by two rivers namely; Malewa & Gilgil as well as groundwater, surface runoff and direct rainfall. The rivers and streams have flow that is highly variable even within a single season- a response to the annual and inter-annual pattern of rainfall. Major threats include runoff and siltation, sedimentation, solid waste, waste water pollution, urban encroachment, farming as well as land cover and land use changes.

The water levels at Lake Naivasha levels aren't unprecedented, but can be termed as extraordinary. Evidence suggests that from 8,000-10,000 years ago, two large freshwater lakes occurred in the Naivasha-Nakuru area. The Northern one “Greater Nakuru'' had a surface area of 700km and a depth of 180m (McCall, 1957). At that time, the current lakes covered a much wider area referred to as the Pleistocene lakes. Recent history shows significant lake level rise in 1901, 1963 and presently since 2013The rise in water levels in Lake Naivasha and several Central Rift Valley lakes in Kenya has generated significant interest and concern among scientists and urban planners in the past decade. Onywere et al. (2013) were the first to describe the phenomena of lake level rises, including detailed descriptions of the affected lake properties. Building on these findings, Gichuru and Waithaka (2015) and Moturi (2015) focused their analyses on the trends of Lake Naivasha water surface variations between 1984 and 2013, concluding that no direct correlation between rainfall and changes in the lake surface area could be found. The Physiographic Assessment of Mau Ecosystem Study on the Rise of Water Levels in Lakes Naivasha and Elementaita among other findings concludes that the rise in lake water 6 levels was likely cause mainly by the enhanced rainfall during the 2010-2013 period (KWTA, 2015)