ABSTRACT: Industrialization process in Nigeria is a key government response to job creation and the overall development of the country. Specific cities in the country’s six geo-political zones have been earmarked as industrial areas with massive investment both by local and international investors. One major side effect of this development however, is the production of waste effluents that are hazardous to human health. This study examines the production of industrial wastes and their potential effects on health outcomes in Ota, one of the industrial areas in Nigeria with a concentration of over one hundred industries. An assessment of the pollution status of the River Illo, which is within the catchment area of River Owo in Ota, Ogun state was carried out. The study found that the biochemical oxygen demand loading of the river is very high calculated at 312.86 mg/l and a double spoon curve of dissolved oxygen of degradation and decomposition characterizing the research field. These findings are discussed within the context of water borne diseases and public health of residents in the area and conclude on measures government may initiate to mitigate the negative effects of urbanization