This paper examines the environmental risks threatening sustainable urban agriculture in Kisumu municipality. The issues covered in the paper are: review of policy and institutional framework, infrastructure and service delivery, pollution analysis of irrigation water and crops and urban agriculture waste management. In addition, the paper proposes measures for sustainable urban agriculture. Household survey and pollution analysis of irrigation water and crops (kales and yams) were conducted in the study area. To capture spatial distribution of farmers in the municipality, the municipality was stratified into four strata and in each stratum a combination of stratified-systematic-simple random sampling was used to sample 194 households. Structured household questionnaire was administered to the sampled households.