The flow water in the Texcoco River is basically residual water used for crop irrigation, due to the scarcity of water in the zone. Its quality and degree of pollution are unknown, that is why the objective of the present study was to diagnose the pollution of the water discharged in the river, based on the Official Mexican Standard (NOM-001-ECOL-1996). The 14 main discharges to the river were selected and, on 10 occasions, compound samples were taken from June 2004 to April 2005. The residual water of the Texcoco River has a moderate concentration of mineral salts which, in the medium term, may affect soil and crops; the concentrations of nitrogen and phosphorus do not present any risk for crop irrigation and urban public use, but possibly they may for aquatic wild life. The content of helminth eggs slightly surpasses the limits established by the standard, but the presence of fecal coliforms widely exceeded the permissible limit, therefore, these aspects represent a health risk for the inhabitants of the zones near the river, and it is urgent to initiate the treatment of this residual water.

Abstract

The flow water in the Texcoco River is basically residual water used for crop irrigation, due to the scarcity of water in the zone. Its quality and degree of pollution are unknown, that is why the objective of the present study was to diagnose the pollution of the water discharged in the river, based on the Official Mexican Standard (NOM-001-ECOL-1996). The 14 main discharges to the river were selected and, on 10 occasions, compound samples were taken from June 2004 to April 2005. The residual water of the Texcoco River has a moderate concentration of mineral salts which, in the medium term, may affect soil and crops; the concentrations of nitrogen and phosphorus do not present any risk for crop irrigation and urban public use, but possibly they may for aquatic wild life. The content of helminth eggs slightly surpasses the limits established by the standard, but the presence of fecal coliforms widely exceeded the permissible limit, therefore, these aspects represent a health risk for the inhabitants of the zones near the river, and it is urgent to initiate the treatment of this residual water.

Keywords

Residual water, coliform bacteria, helminth, maximum permissible limit, ecological standard.