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Investigation the quality of north Esfahan municipal wastewater for agricultural purposes and its impacts on environment

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In arid regions, reusing of non-prime water resources such as municipal EW is an important solution. Therefore it is necessary to set a plan to study the long term effects of implementing EW on environment, food chain and human health. The quality of municipal EW of Esfahan Northern Water Treatment plan was studied for three years. The EW was sampled, bimonthly, every six hours during 24 hours periods. The EW samples were analysed for pH, EC, TDS, TSS, N-NO3, cations, anions, BOD, COD and the concentration of Zn, Cd, Pb, Fe, Cu and Mn. The results show that the concentration of heavy metals in EW is very low and do not exceed the permissible levels. For irrigation EC and HCO3 of EW were low to moderate limiting and pH and TDS were not limiting. The BOD, COD, TSS of EW for irrigation application are limiting. So effluent water of north Esfahan municipal have limitation and pollution for irrigation for COD, BOD and TSS factors.

Keywords: Pollution, Wastewater, Permit limit, Municipal sewage

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