

O 86. HYDROCHEMICAL AND PIEZOMETRIC STUDY OF THE ALLUVIAL AQUIFER OF THE GUERRARA REGION, ALGERIA

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ABSTRACT: This study is interested in the degradation of the water quality of the alluvial aquifer of Guerrara region, Algeria , and examines the processes that affect the physicochemical and hydrodynamic quality of the waters of this surface water table. 30 water samples were taken in October 2011, 18 in April 2012, 30 in October 2012 and 30 in April 2013. It is a hydro-chemical and hydrodynamic (piezometric) study of groundwater. The parameters studied are: EC, pH, mineralization, total hardness and the ionic balance of the water. The physico-chemical study of the waters indicates a great variability of the EC of the water in time and space, with values varying from 0.91 to 11.63 dS / m (October 2011) and from 2.25 to 19.04 dS/m (April 2013). the pH is slightly alkaline, with values changing from 7.4 to 8.4 (October 2011) and from 6.51 to 7.61 (April 2013). The chemical facies of waters is chlorinated and sulphated, and the most represented facies is the sulphated sodium facies. The piezometric study of the aquifer over four companions of monitoring shows that the direction of flow is from South West to North East in a general way. Seasonal fluctuations in the piezometric surface oscillate between 0.2 and 5 m. These fluctuations are subject to the climatic characteristics of the region: low rainfall and high evaporation on the one hand, and on the other hand, and pumping.

Key words: alluvial water, physico-chemical quality, piezometry, Guerrara, Algeria.