

RECHARGING OF THE FREE AQUIFER IN THE LLANCANELO BASIN CAUSED BY BANKFILTRATION OF THE ATUEL RIVER

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On the foot of the Andes mountains in the south of the Mendoza Province in Argentina there expands the plain known as "The Huarpes" depression. The deepest point is the salt lake of "Laguna Llanquanelo" which forms part of a faunistic reserve. In this dessert area most of the yearly precipitation is produced during the wintertime in the form of snow in the high mountain region. From november to february (summertime) thawing produces the highest levels of the river flow rates. The flow rate of the Atuel river, which crosses the northern part of that plain, has been measured before and after passing through showing a perceptible reduction after passing the plain area during summertime. Estimations of monthly potential evaporation give less than 20% of the flow rate loss. So 80% could be expected to be bankfiltrated caused by high flow rates wich produce a higher wash down of sediments during the summertime giving way for percolation. Infiltrated water is displaced as an amplitude responsible for the groundwater elevation observed in autum and wintertime. That process feeds creeks and the Llanquanelo lake itself causing an ecological system with a very sensible equilibrium.