

## **HYDROGEOLOGICAL STUDY OF PART OF THE RECHARGE AREA OF THE NIEBLA POSADAS AQUIFER, REGIÓN DE ANDALUCÍA, ESPAÑA**

CINTOLESI, C., CHAHBANDOUR III, J. Water Management Consultants, Santiago, Chile;  
Water Management Consultants, Santiago, Chile.

The Niebla Posada aquifer consists of conglomerates, basal brechas, limestones and sandstones. This units crop out dipping to the south, going under a thick sequence of marbles that act as a confining layer. This sediments where deposited during a transgression of the Miocene. The basement consists of devonic metasediments intruded by granitic units of the Upper Paleozoic. Locally it is fractured acting as an aquifer. The Cuaternary consists of fluvial deposits associated to local rivers which conform freatic aquifers of local extension. The main recharge processes are the direct infiltration of rainwater and the infiltration of runoff water through riverbeds. Both processes occur mainly in the winter. The main discharge processes are the direct extraction through wells and to a lesser extend, the discharge at springs. At some wells a tendency of lowering watertables has been observed. This fact, together with former artesian conditions of the confined aquifer and dried up springs, suggest a general lowering of the watertable and thus of the storage. It is possible to implement artificial recharge in the area using the excess of winter water runoffs. Superficial infiltration and injection into the saturated zone through wells has been analyzed. A combination of both processes would make the volume to be recharged biggest.