

WATER TABLE DRAW DOWN INDUCED BY WELL EXPLOITATION: A CASE IN SÃO PAULO CITY

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Aiming to water saving and the guarantee of its provisioning, great urban consumers, such as hotels, industries, condominiums, malls, etc, with high consumption of this mineral good, have been searching for the installation of deep tubular wells in places close to their consuming facilities, as an alternative to water supply. Such policy leads the survey and the installation of wells in the urban perimeter, mainly in densely populated areas. The present article deals with problems originating from this kind of exploitation carried out without a preliminary study of the impacts that could arise from the operation of these wells. With that purpose, a typical case that took place in the neighborhood of Pirituba, in the west side of São Paulo metropolitan area, Brazil, is presented. In this particular site, excessive exploitation of the aquifer has caused several damages to constructions near two deep tubular wells, due to the settlements repression that occurred in the alluvia in response to the draw down of the ground water table. The geological conditions of the site that led to the occurrence of this process, a methodology for the evaluation of damages that could be generated by ground water draw down in those conditions, as well as recommendations to avoid these kind of problem in urbanized areas, are hereby described.