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Groundwater research in the alluvial of river Sitnica, Kosova

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In the today's world, the problems of too much, too little or too polluted water are increasing at a rapid rate. Water resources in Kosova are relatively small, the average of annual runoff is 3.61miliard m3, relatively 113m3/s. Territory of Kosova is divided in four river basins: Drini i Bardhë, Ibri, Morava e Binqës and Lepenci. Sitnica River belongs to the river basin Ibri. The total surface of in this river is 2.861km2, the average of the annual rainfalls is 686mm, from which around 93mm (13.6%) flows on the surface and around 593mm (84.6%) infiltrates. In this case study are applied different methods for groundwater research and calculations of hydro-geological parameters in the alluvial of river Sitnica. Geophysics researches carried out with geo-electrical sounding and geo-electrical profile line. The goal of the geophysics researches is to identify hydrogeological collector and to determine the best position for placement of the piezometers.
The geophysics research are done in aquifer area, in which 10 profiles line with different lengths and placed in distance from 30 m between each other are done.
After finishing of the geophysics works, seven drilling wells with general length from 95.5 m are completed. Based to the testing results of two drilling wells we have concluded that the quantity of 27.4(l/sec) water can be exploited. The achieved results from application of those methods in this case study show that alluvial of river Sitnica are rich with groundwater.
Based to the statistics the population is increasing in Kosova also water needs will be increasing too, so it is necessary to explore the existing groundwater for improving drinking water supply, industrial waters, agriculture etc.

Key works: river, alluvial, geophysics researches, drilling wells, hydrogeological collector, water