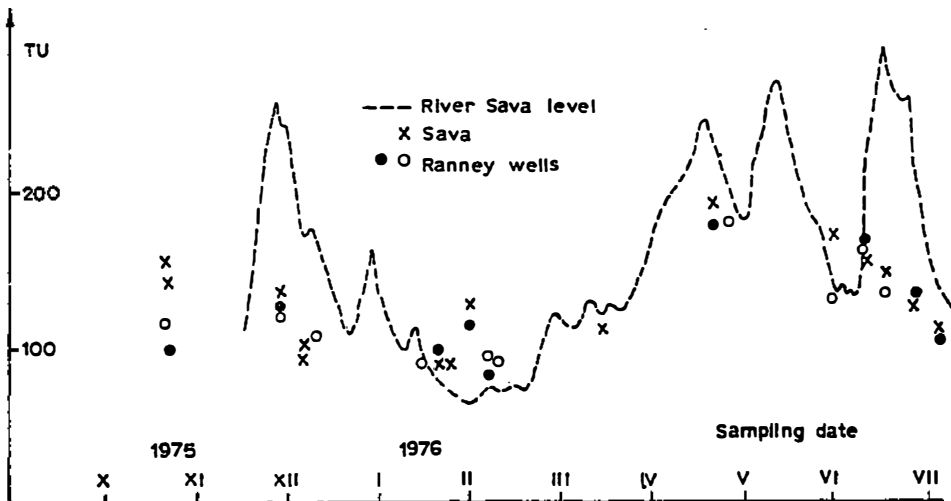


THE INTERCONNECTION OF RIVER SAVA AND RANNEY WELLS BY
ENVIRONMENTAL TRITIUM

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To investigate the interconnection of the Sava, Sava lake and Ranney wells waters the concentration of the environmental Tritium was investigated.

Starting from the generally accepted hydrogeological aquifer model for this region which supposes that only two water components contribute to the pumped Ranney wells water, the water sampling was done from the Sava, the Sava lake and properly selected Ranney wells in the riverbank around Beograd. The period of sampling was from December 1975 till October 1976. As the characteristic sampling position of the backside groundwater reservoir, a deep back-positioned well was chosen. The dates of sampling corresponded to the high low water level of the Sava.



The tritium data as given in Fig. 1. show that, in the limit of the measurement error, the concentration in the pumped Ranney wells water follows relatively well the concentration in the Sava and Sava lake water with a time delay of less than 10 days. This means that the interconnection between these waters is quite strong. Relatively high Tritium concentration in water sample from the well (PB) of about 80 TU shows that we deal with a relatively young groundwater aquifer which is regularly replenished from a large catchment area. This was the reason that Tritium could not be used for the determination of the components water in the pumped water of ranney wells.

Reference:

Guidebook on Nuclear Techniques in Hydrology, IAEA, Vienna. 1968.