



## **Subdaily evapotranspiration rate calculation from streamflow summer diurnal signal**

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In riparian shallow groundwater environment vegetation has a great influence on water resources which manifests e.g. in diurnal signal of groundwater level and groundwater-sustained stream baseflow. Recently a new technique was developed by us to calculate daily or even subdaily groundwater evapotranspiration rates from groundwater-level measurements, and that method now is modified to estimate groundwater evapotranspiration rates (on a catchment scale) from the baseflow diurnal signal. The new method takes into account diurnally change replenishment rate therefore gives higher ET values than former estimations. Only basic geometric characteristics of the riparian zone (length, width) and stream (width) are required for the calculations, without the need of any soil hydraulics parameters. The new method was successfully tested with a dataset of the Hidegvíz Valley experimental catchment, located in the Sopron Hills, at the western border of Hungary, and also verified by a 2D numerical model experiments.