

Interaction between lake water and groundwater in Lake Biwa basin, Japan

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In order to evaluate the effects of groundwater discharge on water quality in Lake Biwa Japan, continuous measurements of rates and quality of discharged groundwater into the lake have been made, as well as numerical simulations and tracer methods. The depth of groundwater capture zone was evaluated to be more than 100 m below the surface by using stable isotopes. Calculated seepage rates with the depth of 110 m of the aquifer agreed well with the seepage rates observed by automated seepage meters. The main factors for qualities of seepage groundwater are evaluated to be gradients of groundwater concentrations and the depth of groundwater capture zone.

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