

## **Effects of Seasonality upon Water and Solute Movement in the Unsaturated Zone**

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Change of solute concentration and depth to peak with time are frequently used to estimate recharge rates in unsaturated soils. It is hypothesized that seasonality (directionally varying flow) will have an effect upon solute profile shape and position. A lab-column study, with a TDR system and a KCl tracer was setup to investigate seasonality. The solute profile shape and position clearly changed under repeated scenarios where downward flow was greater than upward flow and upward is greater than downward flow. Under a repeated scenario of upward water flow of equal volume as downward water flow, there was only a slight change of the solute profile shape.