



## **Comparing pore water dynamics in earth dam using two different model approaches**

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The water dynamics within an earth dam may be evaluated using different simulation tools – numerical simulation models. In the presented contribution the solution based on a standard MODFLOW application is compared with the results of the saturated/unsaturated Richards' flow approach incorporated in the simulation model S\_2D\_DUAL (Vogel et al., 2000). The flow domain in both cases is practically identical, as well as initial and boundary conditions. The course of a selected flood event is simulated considering a stepwise increase of the water level at the waterface of the earth dam, neglecting the evapotranspiration and precipitation at the dam surface. The part behind the dam of the simulated domain is extended significantly to incorporate also the part where the upward flow caused by the flood event could affect the protected area. The study is being performed for a selection of boundary conditions and the soil hydraulic properties.

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