MSc thesis offered at the Chair of Hydrogeology

Numerical modeling of surface water-groundwater interaction

Motivation:
Climate change induces changes in precipitation patterns, with fewer but more intensive precipitation events (frequent heavy rain) and higher evapotranspiration. This leads to increased flooding and more severe droughts: with the consequence of drier soils and decreased groundwater recharge.

This Master's thesis is embedded within an EU-project focusing on the **Danube region**, where different possibilities of artificial groundwater (recharge managed aquifer recharge MAR) are investigated, for improving groundwater resources.

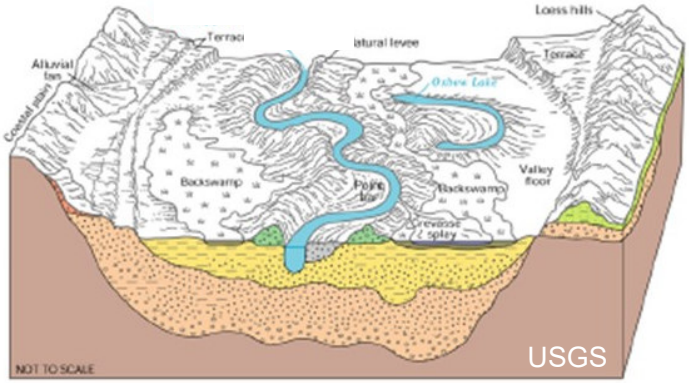
Several theses offered: You will set up a numerical model for investigating dynamic hydraulic interaction between groundwater and surface water. Different scenarios will be analyzed for storing water in suited subsurface structures such as paleochannels. Baseline questions include: *How does the surface water-groundwater system work? What are the dynamics of coupled surface water and groundwater? What are the consequences of potential MAR?*

Interreg Danube Region — Co-funded by the European Union

InnoWATCCH

https://interreg-danube.eu/projects/innowatcch

Description:
- Numerical modeling of surface water and groundwater flow



Requirements:
- Basic knowledge in hydrogeology, hydrochemistry and numerical groundwater modeling
- Interest in setting up and applying groundwater models
- Motivation to work independently on model codes and simulations

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