Development of a facies model to identify hydraulic relevant variations in high permeable, glacifluvial sediments of the Munich Gravel Plain

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1. Goal: Can we see regional variations of structures and compositions of hydrofacies types in the area of Munich?

2. Goal: How far borehole data are appropriate to transfer in probabilities of hydrofacies types?

3. Goal: Is it possible to predict areas of high permeable sediments with a stochastic 3D hydrofacies model?

Method:

The Regli-Umwelt types distributions on plants
Application of Ground penetrating radar (GPR) to delineate 3D structures of the hydrofacies

Target parameters:

correlation lengths and composition of hydrofacies types

Research goals

1. Goal:

Method: Field work in gravel pits in the area of Munich
Application of the borehole data in grain size distribution curves

2. Goal:

Method: Translate the borehole data in grain size distribution curves
Similarity analyses with known grain size distributions curves of hydrofacies types

3. Goal:

Method: Create a hydrofacies model with Sequential Indicator Simulation (SIS) or Multiple Points Statistic (MPS) algorithms in SKUA (Paradigm).
The model will be validated with hydraulic permeability values from pumping tests and k-f-value-fields from groundwater models in Munich.

References
