

FEFLOW

Groundwater and Porous Media Modelling—Licensing

LICENSING

FEFLOW is available in five different license types to offer the best option for your personal needs:

| 4Free | Essentials | Personal FMH3 [*] | Corporate FMH3 [*] | Subscription FMH3 [*] | |
|-------------------------|------------|----------------------------|-----------------------------|--------------------------------|---|
| • | • | • | • | • | Groundwater Flow |
| • | • | • | • | • | FePEST |
| • | • | • | • | • | Age Calculation |
| • | • | • | • | • | Heat Transport |
| • | • | • | • | • | Solute Transport |
| • | | • | • | • | Multispecies Transport |
| • | | • | • | • | Borehole Heat Exchangers |
| • | | • | • | • | Unsaturated/Variably Saturated Flow |
| • | | • | • | • | Density-dependent Flow |
| • | | • | • | • | Discrete Features |
| • | | • | • | • | Cross-sectional / Axisymmetric Modeling |
| • | | • | • | • | Rotation of Gravity Vector |
| • | | • | • | • | Element Deactivation |
| • | | • | • | • | Plug-in Use |
| | | | • | • | Network License Management |
| | | | • | • | License Sharing for Similar Models |
| 10 ⁴ nodes** | unlimited | unlimited | unlimited | unlimited | Model Size |
| | | • | • | • | Physical Delivery (Software / Manuals / Book) |
| • | • | • | • | • | Download Delivery (Software / Manuals) |

lower feature levels available, see next page ** max. 5 slices with 2000 nodes each

FEFLOW 4Free

Free FEFLOW license for commercial, research, educational or demo use

- Full functionality
- Model size limited to 4 layers and 10⁴ nodes (max. 5 slices and 2,000 nodes per slice)

FEFLOW Essentials

- Essential functionality (see table above) for flow, age, solute- and heat-transport simulation in 2D and 3D
- Licensed locally



LICENSING

FEFLOW Personal

- Full functionality, physical processes depending on chosen feature level
- Licensed locally

FEFLOW Corporate


- Full functionality, physical processes depending on chosen feature level
- Licensed via a network license server
- Unlimited parallel execution of the same model, e.g., for scenario analysis or parameter estimation (distributed parallel computing with FePEST)

FEFLOW Subscription

- Full functionality, physical processes depending on chosen feature level
- Licensed via a network license server
- Unlimited parallel execution of the same model, e.g., for scenario analysis or parameter estimation (distributed parallel computing with FePEST)
- One year expiry

Feature Levels

Personal, Corporate and Subscription licenses for FEFLOW are available in six different feature levels, hereby providing a maximum of scalability.



| | |
|-----------|--|
| FMH3 | • F3 plus mass/age and heat transport in 3D |
| FM3 / FH3 | • F3 plus mass/age transport in 3D (FM3) or heat transport in 3D (FH3) |
| F3 | • FM2 plus flow in 3D |
| FM2 | • F2 plus mass/age transport in 2D |
| F2 | • Fluid flow in 2D |
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| | |

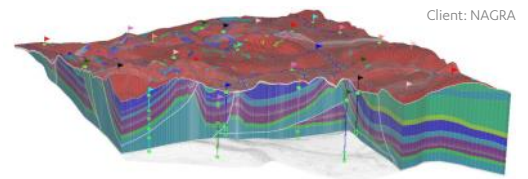
OUR TECHNOLOGY



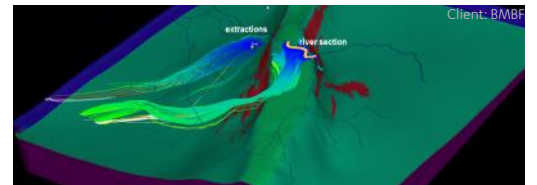
For more than 25 years, MIKE Powered by DHI software products have been used in water environments all over the world. Thousands of professionals choose MIKE software to solve tough and complex challenges in areas such as oceans and coastlines, rivers and reservoirs, ecology, groundwater, water distribution, wastewater and many more. Our data management, decision support and operational forecasting software suite traverses all our areas of applications, complementing existing MIKE technologies in the work we do for you.

FEFLOW PROJECT EXAMPLES

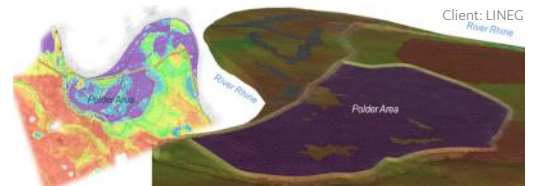
In the Swiss road map to establish repositories for radioactive waste five geologically suitable siting regions in northern Switzerland have been proposed. As a decision basis for the next selection stage, numerical models of the groundwater flow conditions were elaborated on regional and local scales. With FEFLOW the geology of the five regions including the proposed repository sites could be realistically described, including faults, thrusts and anticlines and taking into account sensitivity analyses and parameter uncertainties.



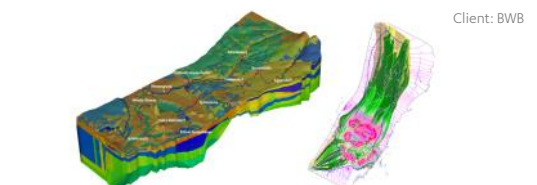
A historical deep salt mine in Stassfurt in Germany: The salt mine causes serious uncontrolled salt leaching and mass displacement effects in the underground. 3D FEFLOW variable density flow simulations have been performed, incorporating the geometry of the mine workings in suited detail. Model scenarios gave a better insight into flow and mass transport processes, which could help to quantify subsidence potential.



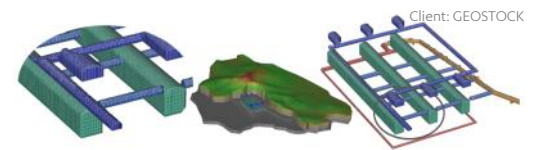
Impact of polder flooding: Along the river Rhine the impact of a retention polder has been analyzed with a 3D FEFLOW model. The polder is located in a mining region where subsidence is evident and artificial regulation of groundwater levels is already obligatory to prevent flooding of settlements. A special FEFLOW plug-in was developed enabling an accurate description of the temporal and spatial spreading of the flooded area, with which areas could be identified that are potentially affected by the polder flooding.



Berlin Water Works: For most of the Berlin Water Works studies have been performed with FEFLOW. These studies include the quantification of drinking water protection zones, catchment analyses for changing extraction rates or climatological conditions, mass transport simulations including hazard risk analyses and remediation strategy development, quantification of bank infiltration volumes and environmental impact studies.



Underground oil and gas storage: Simulation of the dewatering process during the construction of storage caverns for liquefied natural gas (LNG), including seawater intrusion (density-dependent flow) and variably saturated flow. The work carried out dealt with complex geometrical and physical conditions. Within the project innovative solutions for the posed problems have been applied, including script developments that can also be applied in other subsurface construction projects.



DHI THE EXPERT IN WATER ENVIRONMENTS

DHI are the first people you should call when you have a tough challenge to solve in a water environment.

In the world of water, our knowledge is second to none, and we strive to make it globally accessible to clients and partners.

So whether you need to save water, share it fairly, improve its quality, quantify its impact or manage its flow, we can help. Our knowledge, combined with our team's expertise and the power of our technology, hold the key to unlocking the right solution.

CONTACT:

Peter Schätzl
Business Area Manager Groundwater & Porous
Media | FEFLOW
mike@dhi-group.com

For more information visit: www.mikepoweredbydhi.com