



## MODFLOW-SURFACT

Software application for analysing subsurface systems and one of the most comprehensive flow and transport modelling tools available.

Built around the MODFLOW code, it includes advanced computational modules based on robust, efficient, mass conserving algorithms, making it faster and more accurate.

The software overcomes limitations and eliminates restrictions associated with MODFLOW and its current transport counterparts e.g. rewetting of drained cells, handling of pumping wells, solute mass balance problems, numerical dispersion and oscillations, and the implicit assumption of the negligible impact of transient flow storage effects on transport.

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### Key Features

HGL, the MODFLOW-SURFACT developers, have released the new version of MODFLOW-SURFACT V.4:

#### New Features

- Density dependent flow and transport

Time varying material properties

#### Advanced Features

- Robust PCG5 Module up to 20 times faster than PCG4 solver
- Reaction Module incorporates user defined reactions of mobile and immobile chemical component species – invaluable for modelling biodegradation of industrial contaminants

- Curvilinear Grid option for non rectangular grids in the areal plane
- Fully and variably saturated flow and transport modelling
- Prescribed ponding recharge and seepage face conditions, as well as delayed yield
- Adaptive time stepping to promote stability and convergence for flow and transport simulations
- Recharge package overcomes unphysical predictions for unconfined systems

## Advanced Features cont.

- Total Variation Diminishing (TVD) schemes for physically correct solutions with adaptive temporal weighting
- Multiphase, multicomponent, contaminant transport modelling with biodegradation
- Robust and efficient Newton Raphson solver for non linear problems
- Vapour flow for SVE and air sparging simulations
- Fractured porous media simulation with dual porosity

## Pricing

Please contact us for a quotation.

## Information

Comes with complete documentation including a User's Manual and step by step tutorials

System requirements: Pentium PC, 1GHz, and 1GbRAM.

Compatible with the graphical user interface (GUI) visualization tool Groundwater Vistas. Groundwater Vistas is not included in the purchase of MODFLOW-SURFACT but can be purchased separately.

**For more information contact:**



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