MODFLOW-SURFACT™ is a powerful 3D finite-difference flow and transport modeling code that offers substantial advancements over public-domain versions of MODFLOW. For example, MODFLOW-SURFACT™ addresses rewetting of drained cell, handling of pumping wells, solute transport problems, numerical dispersion and oscillations, and impacts of transient flow storage effects on transport. What’s more, highly efficient, mass-conserving algorithms enable MODFLOW-SURFACT™ Version 4 to deliver accurate solutions faster than ever before.

MODFLOW-SURFACT™ is compatible with all available MODFLOW-based GUIs, including Groundwater Vistas, Visual MODFLOW, GMS, Tecplot, and Argus ONE. Two-dimensional visualization is utilized in both plan and cross-sectional views for contour plots, pathlines, and velocity vectors. Three-dimensional animation is the most effective way to observe changes in parameters, head and contaminant concentrations in a transient simulation, piezometric surfaces, pathlines, velocity vectors, and isosurfaces of contaminant plumes.

**NEW Features in Version 4**
- Density-dependent flow and transport.
- Energy transport. (To be released late 2011)
- Time-varying material properties.
- Multi-core solver. (To be released late 2011)

**Advanced Capabilities**
- Robust PCG5 Module up to 20 times faster than PCG4 solver. (Developed by Dr. Peter Forsyth at the University of Waterloo.)
- Reaction Module incorporates user-defined reactions of mobile and immobile chemical component species—valuable for modeling biodegradation of industrial contaminants.
- Curvilinear Grid option for non-rectangular grids in the areal plane.
- Fully and variably saturated flow and transport modeling
- 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
- Total Variation Diminishing (TVD) schemes for physically correct solutions with adaptive temporal weighting
- Vapor flow for SVE and air sparging simulations
- Multiphase, multicomponent contaminant transport modeling with biodegradation
- Robust and efficient Newton-Raphson solver for nonlinear problems
- Fractured porous media simulation with dual porosity

**Pricing and Packaging**
MODFLOW-SURFACT™ Version 4 comes with complete documentation including a User’s Manual and step-by-step tutorials to get you up and running right away. System requirements are: a Pentium PC, 1GHz, and 1GbRAM.

- MODFLOW-SURFACT™ Ver. 4.0........... $4,400 USD
- MODFLOW-SURFACT™ Ver 4.0........... ($FLOW ONLY) $2,200 USD
- PCG5 MODULE.................................... $450 USD
- DENSITY DEPENDENT MODULE*........ $1,500 USD
- TIME-VARYING PROPERTY MODULE* ($HYDRAULIC PROPERTIES ONLY) $900 USD

*Upgrade to Version 4 of MODFLOW-SURFACT™ from Version 3............................... $400 USD

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Applicable sales tax, shipping, and handling fees for all prices listed.