

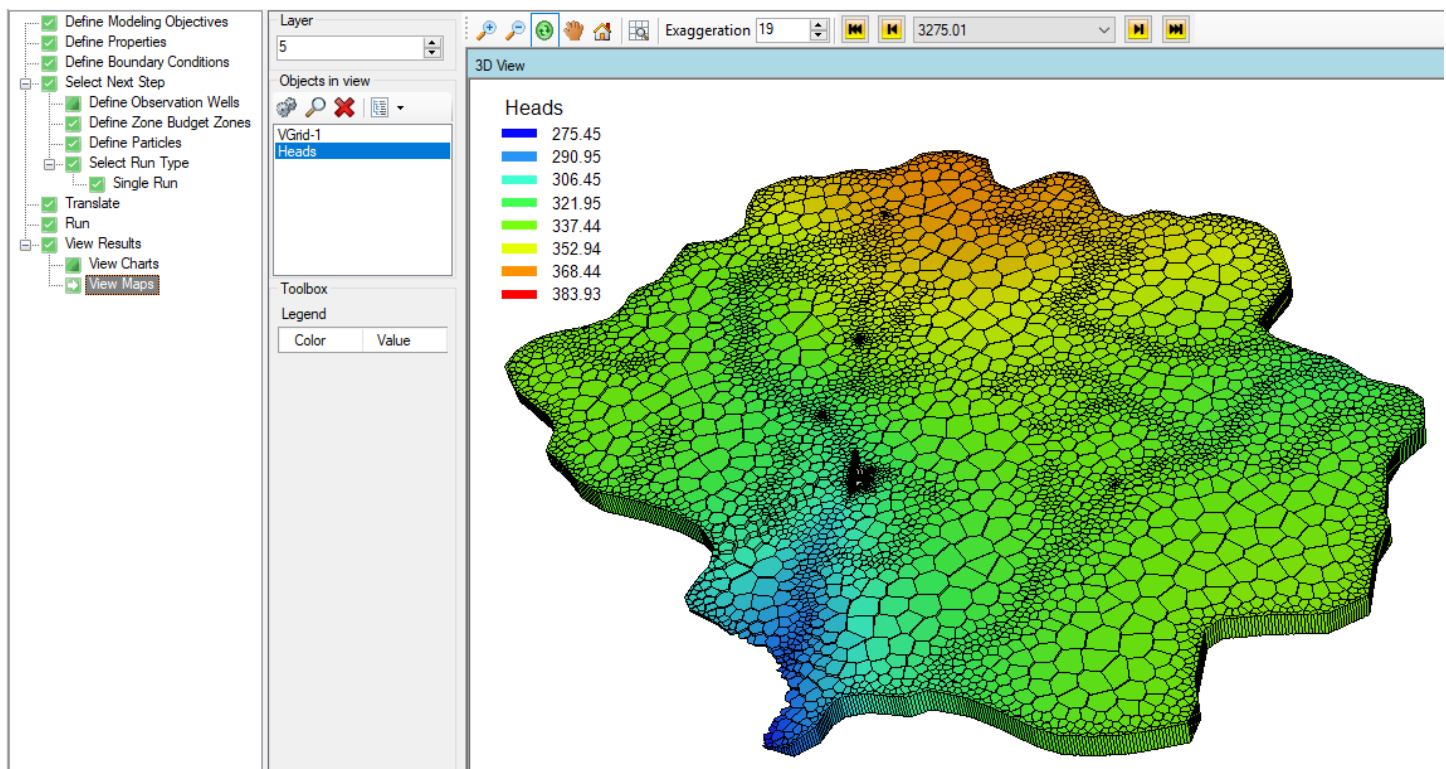
VISUAL MODFLOW FLEX / 6.0

Visual MODFLOW Flex brings together industry-standard codes for groundwater flow and contaminant transport, essential analysis and calibration tools, and stunning 3D visualization capabilities in a single, easy-to-use environment.

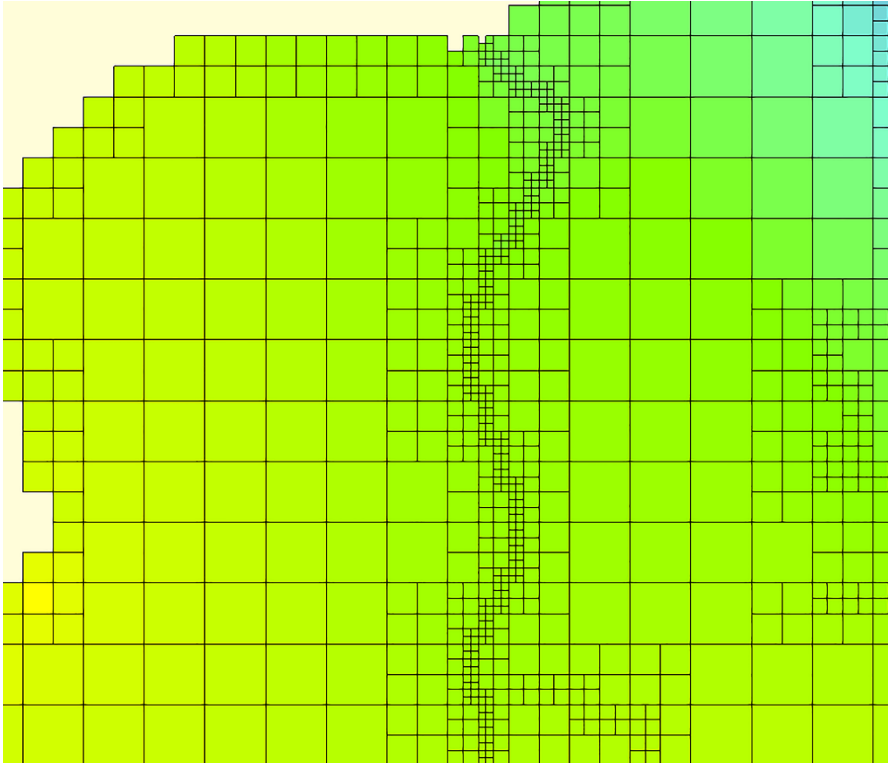
Experience the new version release of Visual MODFLOW Flex 6.0

MODFLOW-USG Workflow Enhancements

- Build your unstructured MODFLOW-USG model using the same workflow steps and tools as in a structured Finite Difference model:
 - Define Modeling Objectives
 - Specify model properties
 - Add Boundary Conditions
 - Define ZoneBudget Zones
 - Add Particles



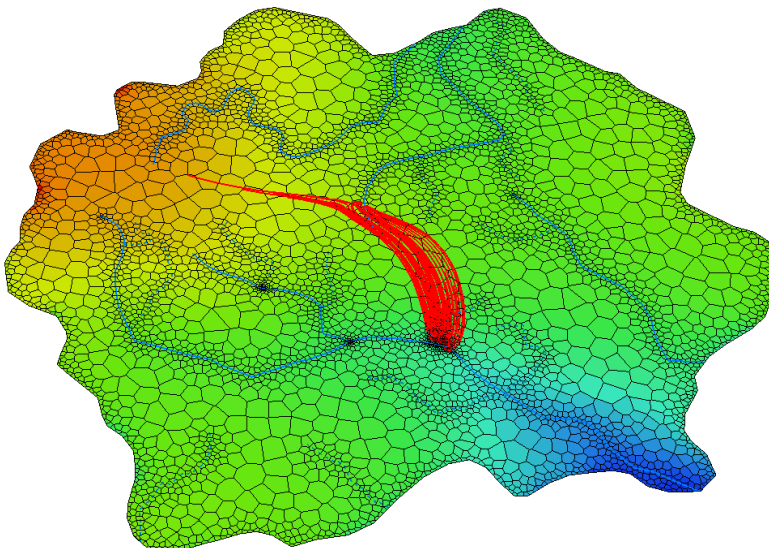
- Define Quadtree Grids (Q-Grids)



- Refine vertical layers when creating unstructured grids
- Make use of advanced translation settings which provide greater flexibility in how your model simulations are formulated
- Support for the MODFLOW-USG Ghost Node Correction (GNC) package
- Flex is now packaged with MODFLOW-USG v1.4, the latest official USGS version as of the release date of Flex 6.0.

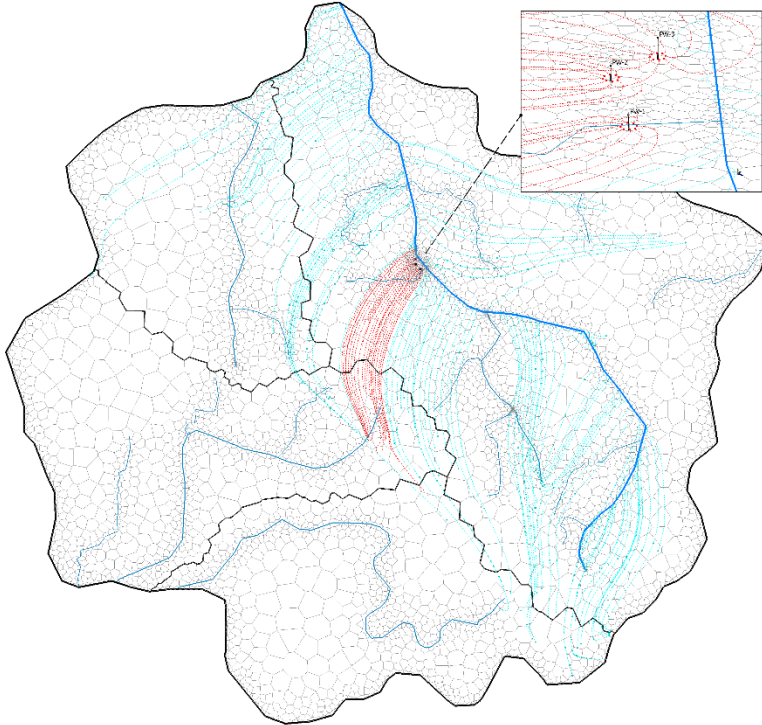
Particle Tracking

- Support for mod-PATH3DUv3.0*, which enables particle tracking in unstructured grid (MODFLOW-USG) models



* mod-PATH3DU is a free utility developed by S.S. Papadopoulos, Inc. (SSPA) that must be downloaded and installed separately from the [SSPA website](#).

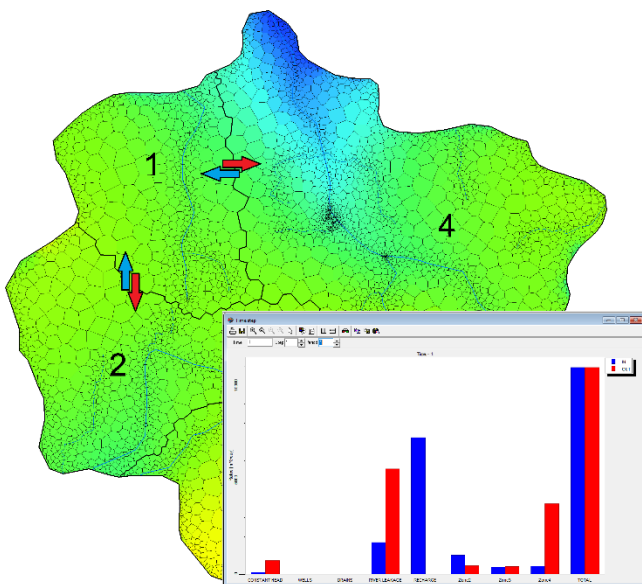
- Enhanced particle tracking capabilities allowing you to define:
 - Groups of particles that can be tracked and visualized separately
 - Separate particle release times for each particle group
 - Locations of particles based on existing or drawn point, polyline, polygon, or well features



- Particles in cross-section views (i.e. row and column views) of a finite difference model
- Particle elevations based on layer(s), surface(s), or a constant elevation

ZoneBudget Improvements

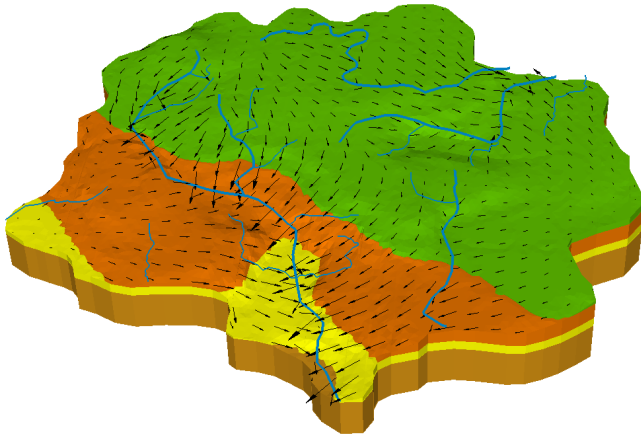
- ZoneBudget is now supported in unstructured MODFLOW-USG models



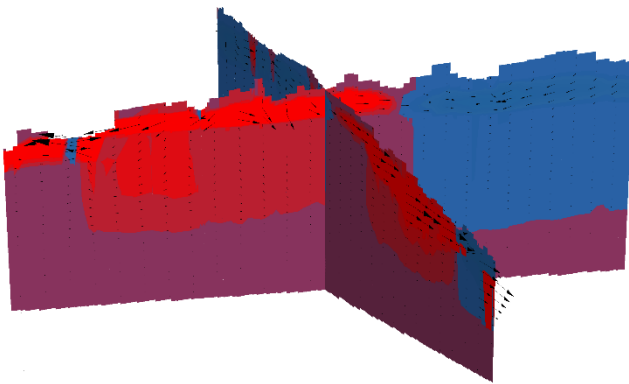
- You can use point, polyline, or polygon features to define Zone Budget zones and zones can be specified directly using feature attributes from a data field

Visualization and Settings

- Visualize velocity vectors in finite difference and unstructured grids. View:
 - In-plane velocity vectors



- Color maps of out-of-plane velocities



- Display average or Darcy velocities (total or in-plane) or by direction
- Specify a line feature along which to show cross-sectional color maps of unstructured grid model properties and outputs
- Cell Inspector now includes Layer/Model Top and Bottom elevations, and the magnitude and X-, Y-, and Z-components of the average/Darcy groundwater velocity
- When creating horizons, you can preview how the rules will be enforced in the 3D Viewer rather than viewing the raw surfaces.

Packages, Properties, and Boundary Conditions

- Field calculator/expression builder includes
 - cell geometry variables: Cell Bottom (\$BOT), Model Bottom (\$MBOT), Cell Thickness (\$DZ), Cell Width (\$DX), and Cell Length(\$DY) and
 - additional functions: LOG, LOG10, NOT, ABS, DOT

- Copy Model (Flow/Transport) Properties and Boundary Conditions to from one Layer, Row, or Column to other Layers. Rows, or Columns
- Edit cells (active/inactive, zone budget) in row/column views.

Data Import/Export

- Import distributed property values from Classic Models
- Use a source data field to map feature elevations when importing point, polyline, and polygon data
- Model outputs including groundwater heads, drawdown, velocity, and concentrations can be exported to text files
- Export contours as polyline shapefiles

Usability and Other Enhancements

- Observation Wells can be specified as separate groups
- Performance improvements on project open and close operations for larger projects [
- Output Control file translation supports keywords or codes and the standard or compact budget formats to provide support of MODPATH and mod-PATH3Du.
- Added MT3D-MS and RT3D summary output (.OT) files to the open files dialog at the model run step