Flood Modelling

Floods, storms and coastal storm tides cause extensive damage, stress, loss of life and disruption. To understand and manage these risks requires software that quickly and accurately models the inundation of rivers, urban areas, and coastal floodplains.

TUFLOW is a game-changer – we are better placed than ever before to accurately assess flood risks using numerical modelling and mapping.

Confidently assess and inform your: understanding of socio-economic risks; flood management planning; and impacts of flood mitigation measures.

The TUFLOW software suite has been developed and evolved over three decades driven by industry needs. Our extensively benchmarked software offers industry-leading accuracy, computational speed, and numerical stability to model the most challenging hydraulic conditions in the natural and built environments.

TUFLOW is integrated with Geographic Information Software (GIS) software, making updates of model inputs and reviews and presentation of model outputs, workflow efficient.

As researchers, scientists and engineers we work in a range of industries that solve complex environmental problems. Our assessments span scales from the molecular, to the global, from the instantaneous to the inter-decadal. Our projects require flexible, accurate, fast and powerful tools backed up by research, benchmarking and support.

TUFLOW

The world's fastest and most accurate flood modelling software

TUFLOW Feature Focus

- Benchmarked for accuracy from flume scale to large rivers.

- No limits to model size! Build bigger higher resolution models with more than 100,000,000 2D cells.

- Licences only needed for simulations – create and review your model's inputs and outputs licence free.

- GPU acceleration provides significant benefits to project productivity, providing results 10 to 100 times quicker than CPUs or up to 400 times quicker with Quadtree meshing.

- Powerful 1D solver – embed 1D elements of any scale from thousands of pipes to river channels to operational structures.

- Proven and unrivalled 1D/2D linking performance.

- Powerful scenario and event management options. Run thousands of simulations from a single TUFLOW Control File.

- Take minutes to setup a Quadtree mesh and optimise 2D cell resolutions where the hydraulic detail is needed.

- TUFLOW's sub-grid topographic sampling is the most robust and efficient of any software – model confidently using larger cells at any orientation with no loss of accuracy.

- The most comprehensive messaging of any flood modelling software – quality control your modelling with ease.
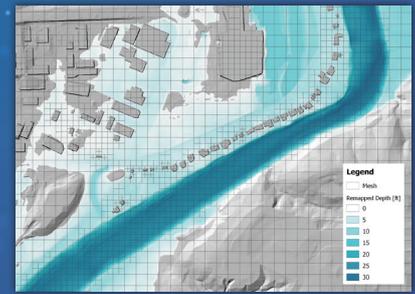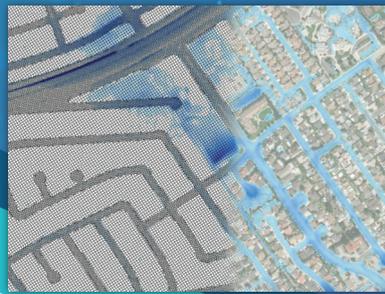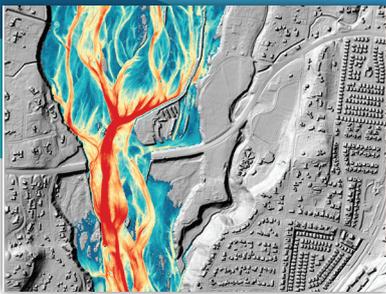
- TUFLOW is often referred to as "the Modellers' model". It sets the industry benchmark for all aspects of flood modelling:

- TUFLOW's CPU and GPU solvers are both the fastest flood modelling software available in their respective categories.

- Advanced built-in adaptive timestep algorithms have helped make TUFLOW the most stable flood modelling software.

- Over thirty years of research and continuous development have resulted in TUFLOW being the most accurate of all flood modelling software.

- No other software compares to TUFLOW's workflow efficiency.

- TUFLOW's integration with Geographic Information Systems leverages GIS performance as a modelling environment.

- TUFLOW's scriptability markedly increases the utilisation of modellers.

- No other flood modelling software has the scale flexibility of TUFLOW. Model everything from flume scale to whole of catchment. Multi-million 2D cell models are commonplace using GPU Acceleration, revolutionising the flood modelling industry globally.

- TUFLOW is uniquely integrated with mainstream GIS software such as ArcGIS, QGIS, MapInfo. Supported by free custom built TUFLOW GIS Plugins. Models can also be built and used in a range of Graphical User interfaces: 12D, Flood Modeller, SMS or WaterRide. This GIS and GUI flexibility affords the user greater freedom to choose their preferred working environments, whilst supporting easy mapping and communication of results cross-discipline, helping planners, designers, and stakeholders understand and interrogate results.

- For more information:
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