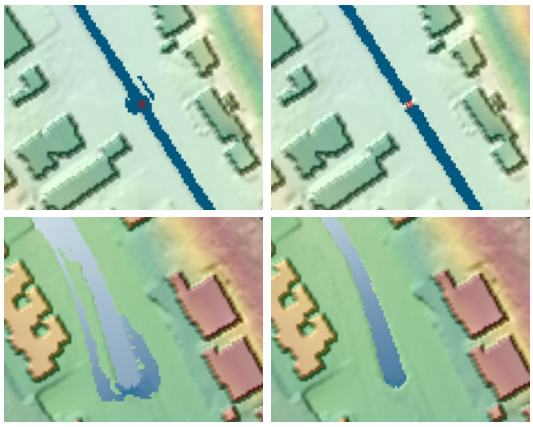


FloodArea HPC 11.4 FloodArea HPC 11.6

FloodArea^{HPC} 11.6

improved accuracy and handling

With version 11.6, FloodArea HPC has been 'core-renovated', i.e. a number of improvements have been made to the calculation core. In particular, the internal slope calculations for special situations such as ditches or roof runoff have been revised.

The changeover from 16 to 32 exchange directions and the resulting more even flow fields are just one point where the calculation accuracy has been increased. Furthermore, the impulse mapping was improved, optimisations were carried out in the area of very shallow water depths and the interpolation between different roughness value grids was improved.

+ Optimisation of the volume balance

An almost 100% correct balance is achieved as a result of the improved calculation accuracy. For better validation, the volume balance is broken down in detail according to the individual elements: (i) model input: irrigation, pump feed and water level; (ii) water in the system; (iii) water leaving the model system: infiltration, pump connections without destination and water flowing over the edge of the model.

+ Improvements in tiling

This lead to a better distribution of the calculation load across the available computational kernels. The handling of inactive calculation tiles has also been optimised: Areas in which there is currently nothing to calculate do not burden the simulation resources.

+ Changes in the handling of NoData

Outflows into NoData areas are removed from the modelling system. However, the quantities are listed in the volume balance output. As a result, it is now possible to map the model boundaries more clearly or to exclude watercourses that should not be included in the simulation.

+ Improved model management

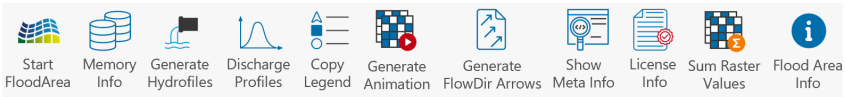
Through integrity checks and clearer error messages: New integrity checks at programme start reduce miscalculations due to incorrect input data. This includes, for example, incorrect entries due to coordinates outside the working area (point feed, sewer network coupling). Together with extended and more informative error messages, this saves valuable time in everyday project work.

+ New functions for pump connections

A flow momentum (direction) can now be added to the flow connections, thus generating a more realistic flow pattern. The flow connections are optionally only active if the water level at the target coordinate is also lower. This makes it easier to model backwater effects across the linear flow connections. In particular, flow movements over a low point such as a pedestrian underpass or under a bridge can also be modelled realistically.

+ ArcGIS Pro Ready

You now have a taskbar (ribbon) embedded in ArcGIS Pro as well as a toolbox at your disposal. Here you have access to functions that could previously be used in ArcMap only, such as the creation of flow animations and flow profiles.



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