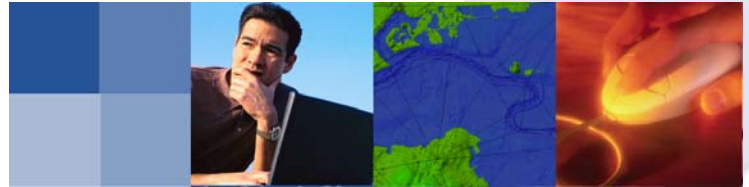


STAVRoS

Integrated urban drainage catchment model



STAVRoS is a simplified and integrated urban drainage catchment model developed by Halcrow with support from Anglian Water. It models the operation of Combined Sewer Overflows (CSOs) in sewerage networks, the receiving river system and interfaces with process models of sewage treatment works. It is therefore able to simulate the water quality impact of polluting runoff and effluent from urban areas. It can be used to rapidly assess the outcome of catchment strategies such as storm separation, real time control and storage construction. It is compatible with the UK's Urban Pollution Management (UPM) procedure for planning wet weather discharges in urban drainage systems.

STAVRoS is straightforward to apply and excellent in data poor environments. It therefore provides a low cost means of understanding sewerage asset performance and investigating strategic wastewater collection and treatment options. Strategic planning can be carried out in STAVRoS prior to more detailed investigation of preferred options in more detailed and data hungry modelling tools.

Halcrow are continuously developing the STAVRoS platform to support a range of urban drainage planning and asset management tools.

STAVRoS provides links to other software including:

- GPS-X
- ISIS
- InfoWorks CS
- Microsoft Office

Recent projects using STAVRoS include:

- Anglian Water Shellfishery programme
- UKWIR Network & STW integration
- Corby Water Cycle Study

Continuous Simulation

- Reads continuous 5 min rainfall event file from historical or stochastic time series
- Continuous and contiguous river and sewer flow simulation with sewer discharges correctly correlated to river flow
- Sewer sediment deposition & erosion simulation, representing 'first foul flush' effects

Slow runoff and infiltration

- New UK Runoff model used for pervious runoff in urban areas
- Annual groundwater infiltration profile

Drag & drop GUI

- Easy to use by managerial and operational staff unfamiliar with wastewater modelling

Import observed data

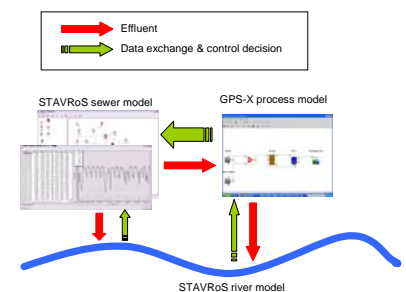
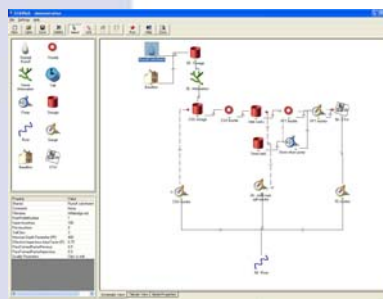
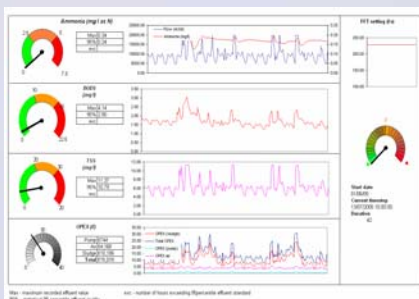
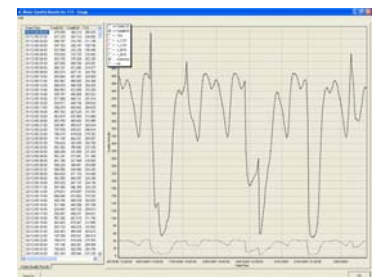
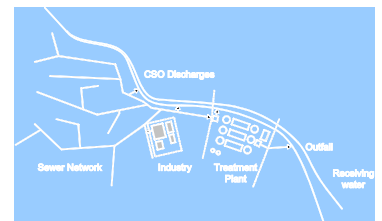
- Import in standard format of sewer flow survey data
- Import of river gauge data for calibration against observed data

Export results

- Spill event analysis
- Time series export to 3rd party impact assessment models

GPS-X link

- Parallel simulation with GPS-X to assess WwTW response to wet weather and network changes
- Easy to use dashboard interface showing compliance with effluent consent
- Dynamic link allowing for integrated network, WwTW and river real time control



STAVRoS is now at the centre of an UKWIR funded research project for the UK water industry which is investigating the benefits and risks of closer integration in the design and operation of sewer networks and sewage treatment works.

For further information about STAVRoS please contact:
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Innovative software solutions for smarter working

