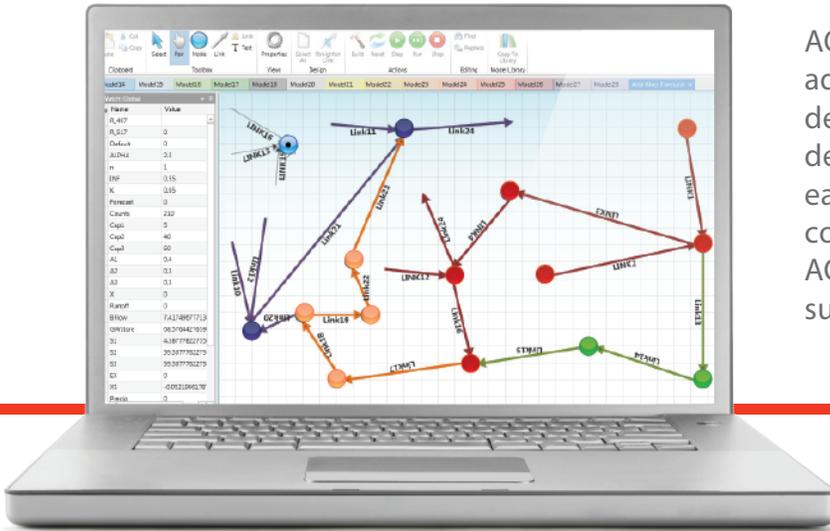




# AQUARIUS Forecast

## Modern Hydrological Modelling Software Simpler Workflows. Complex Models. Timely Forecasts.



AQUARIUS Forecast is modern software for advanced environmental modelling, delivering higher accuracy, speed, and a decisive edge. Simpler workflows make it easier to build sophisticated models of complex water resource systems. AQUARIUS Forecast is your vital decision support tool.

### Resource Modelling Improve Water Accounting

Generate the water balance models required to optimize allocation demands for public water supply, irrigation, hydropower, and environmental flows. Robust simulations of complex hydrological systems, such as rainfall run-off and river routing, ensure that limited water resources are effectively managed in an integrated and equitable fashion. Armed with real-time and long-term river flow simulations, you can make the right operational decisions quickly.

### Hydropower Simulation Optimize Power Production

Hydropower producers use AQUARIUS Forecast for a wide range of applications, from initial feasibility investigations to long-term system planning. Water is a precious asset. Hydropower simulations help track and precisely predict reservoir levels, water balances for inflows and outflows, and flood hazards. Optimum reservoir routing helps to maximize power production and to meet regulatory flow requirements, while preserving dam safety and aquatic ecology.

### Flood Forecasting Gain a Time Advantage

AQUARIUS Forecast features rich modelling capabilities for flood analysis and forecasting. Post-flood models integrate historical storm, weather, and flow data. Insights into past conditions support better planning for future floods. When facing imminent flood dangers, time is of the essence. Hydrological modelling of predicted rainfall and associated stream-flows within river catchments results in precise, timely forecasts. Advanced flood predictions allow city officials to take decisive action to safeguard lives, homes, and urban economies.

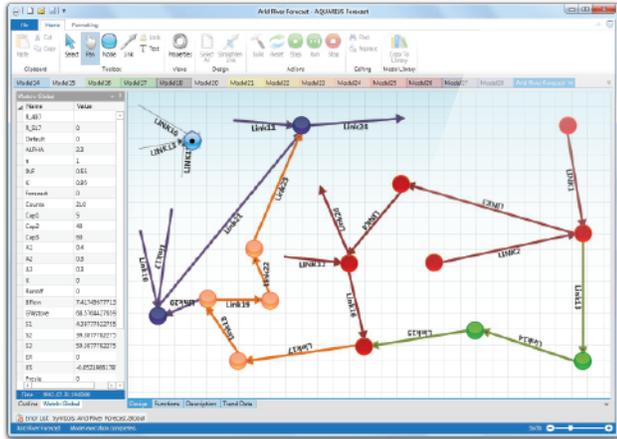


## Create Models in a Graphical Environment

The interactive graphical environment makes it easy to assemble models using a rich set of building blocks and analytical functions. Links represent channels, conduits, or river reaches. Nodes represent connecting points for locations or branches within river systems. Rule scripts define how Links and Nodes operate at each time step.

## Build Complex Custom Models Easily

Use the flexible SupraScript scripting language to fully customize simulations. The intuitive script editor helps you refine the model logic. Empowered to run simulations for alternative scenarios, you can make better decisions that optimize the use of water resources.



## Save Time with the Model Library

Build models efficiently by using, adapting, and extending the set of elements and functions supplied. Model Library elements are “transparent” so you can see exactly how they work. Easily copy and adapt any Library element, saving it as a new element type. Create your own library elements based on new or alternative algorithms (e.g. routing, rainfall-runoff, reservoir operations, etc.) to build models that embody your business logic.

## Define the Model Timing

A model time step can be specified from any fixed interval down to a resolution of 1 second. It includes special cases for monthly and yearly time steps. Model start and finish times can be specified using either standard notation (for a specific fixed period) or using the flexibility of a relative date/time format for real-time operations where the model period is defined relative to the current time.

## Connect Time Series Inputs & Outputs

AQUARIUS Forecast is the most contemporary solution for building models using time series data. Build a complete river network of Nodes and Links and simply connect any time series data source at the required points. Data is automatically converted to the required model time step. Various input data (historical, real-time, and forecast data) can be used.

## Visualize Trend Data In Charts & Grids

AQUARIUS Forecast provides a highly intuitive graphical environment, displaying trend data in charts and grids. You can quickly visualize the results of your models and forecasts, facilitating fast analysis and effective decisions.



## View Multiple Models in a Graphical Interface

Various windows can be arranged in tabbed views or docked on a single screen. Floating windows allow you to move freely between computer monitors. You gain access to the exact information needed to manage multiple models.

## Test, Update, & Refine Your Models

Simpler workflows make it easier to build complex models with confidence. A simple click runs models for full defined periods. Any errors are identified in a clickable list, making them easy to find and fix. AQUARIUS Forecast is designed to run safely in 24x7 operations. It logs errors, such as arithmetic script errors, while completing processes normally.

## Leverage the AQUARIUS Time-Series Software Suite

AQUARIUS Forecast is a powerful solution that integrates seamlessly with the entire AQUARIUS suite. Models can read input data and write predictive data to the AQUARIUS Server. Results can be published online with the AQUARIUS WebPortal.

