MWH Soft

WATER RESOURCE WORKGROUP MANAGEMENT SOFTWARE
FOR THE WORLDWIDE WATER INDUSTRY
With a heritage that stems from the UK’s Hydraulics Research Station more than half a century ago and a reputation for world class products and services, the MWH Soft Workgroup Management Software is relied on by leading engineering consultancies, utilities, academic institutions and governments across the globe. The company has offices in the United Kingdom, United States, Malaysia and Australia, and also has a network of approved distributors throughout Europe, Asia and the Americas.

MWH Soft has an unrivalled reputation for continuous development of its functionally-rich planning and operations software for the modeling and management of water supply, wastewater and river and coastal systems.

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| Are you interested in Wastewater? | InfoWorks CS network modeling software  |
|                                   | see page 2                                |
|                                   | InfoWorks 2D surface flood modeling software  |
|                                   | see page 3                                |
|                                   | FloodWorks operational forecasting and warning software  |
|                                   | see page 18                               |
|                                   | InfoNet water asset and data management software  |
|                                   | see page 24                               |

| Are you interested in Stormwater? | InfoWorks SD network modeling software  |
|                                   | see page 4                                |
|                                   | InfoWorks 2D surface flood modeling software  |
|                                   | see page 7                                |
|                                   | FloodWorks operational forecasting and warning software  |
|                                   | see page 18                               |
|                                   | InfoNet water asset and data management software  |
|                                   | see page 24                               |

| Are you interested in Water Supply and Distribution? | InfoWorks WS network modeling software  |
|                                                   | see page 8                                |
|                                                   | InfoNet water asset and data management software  |
|                                                   | see page 24                               |

| Are you interested in River and Coastal Systems? | InfoWorks RS network modeling software  |
|                                                  | see page 12                               |
|                                                  | FloodWorks flood forecasting and warning software  |
|                                                  | see page 18                               |

| Are you interested in Asset Management? | InfoNet for water supply and wastewater including InfoNet Mobile  |
|                                       | see page 24                               |
InfoWorks CS allows engineers and planners to accurately simulate the movement of wastewater through a collection system network.

This powerful and effective tool provides fast, accurate and robust hydraulic modeling of the complete urban collection system network. This extends to full modeling of backwater effects and reverse flow, open channels, trunk sewers, complex pipe connections and ancillary structures. Urban flooding and receiving stream impact prediction, water quality, sediment transport and real time control simulation tools all come as standard with InfoWorks CS. A range of graphical or geographic views and animated presentations provide access to the underlying model data in user friendly formats for ease of analysis and presentation. Users can simulate models of up to 100,000 nodes with confidence that the results will be as accurate as those for far smaller models.

Applications
Applications include urban flooding and pollution prediction and the modeling of water quality and sediment transport throughout the network:

- Undertake drainage and sewerage master planning or studies
- Assess the impact of climate change on urban drainage systems
- Effectively implement sustainable urban drainage systems (SUDS)
- Undertake hydraulic analysis of wastewater treatment works
- Identify solutions to intermittent discharges from sewerage systems (UID’s, CSO’s or SSO’s)
- Flooding and pollution prediction
- Modeling of sediment transport and associated water quality
- Secondary drainage and urban storm water system assessment and management
- Wastewater system assessment and management
- Infiltration and inflow assessments
- Urban drainage storm runoff control and retention design and assessment
- Urban storm water quality assessments and pollution control
- Combined / wastewater interceptor system design and analysis

Modules
The software incorporates a number of modules, most of which are provided as standard but some are optional.

InfoWorks 2D Module
2D functionality is available as a fully integrated module within InfoWorks CS. This facilitates fast, accurate and detailed surface flood modeling, which is better for modeling flows through complex geometries such as urban streets and buildings, road intersections and other transport infrastructure. InfoWorks 2D features the most modern of 2D engines using a finite volume approach and a triangular irregular mesh. All of this powerful 2D functionality is fully and seamlessly integrated with the baseline 1D engine so a single simulation is all that’s needed to analyze the interaction of underground and above ground flows in the urban environment.

For more information about the modules standard in InfoWorks CS and SD and InfoWorks CS Viewer (Separately Licensed) please go to page 5.
A close relative of the powerful and internationally accepted InfoWorks CS, InfoWorks SD is the industry's first fully dynamic hydraulic modeling solution, designed specifically to fulfill the demanding requirements of storm water modeling in markets where the storm water system is separate from the sanitary system. InfoWorks SD is available to our worldwide customer base.

InfoWorks SD provides the ability to model stormwater flows through a complex environment, with its diversity of underground and overland structures and paths applying the same high quality of function and analysis to open channels and closed conduits. With the option of event-based or real time continuous simulations, InfoWorks SD is ideal for infrastructure design, evaluation projects and real time operational use. An enhanced version of InfoWorks SD, complete with fully integrated 2D capability, is available as a value added option.

**Applications**

InfoWorks SD incorporates everything required to model stormwater flows effectively:

- Comprehensive modeling of stormwater structures
- Rapid and greenfield infiltration and inflow
- Future scenario analysis as well as existing network simulation
- Integrated flood mapping to generate visual representation of surface flood depths
- Optional fully-dynamic, 2D surface flood simulation, integrated with the pipe and surface-channel hydraulic simulation
- Models BMP design, construction and maintenance practices and criteria for stormwater facilities
- Simulation of control structures and control logic (Real Time Control)
Modules
The software incorporates a number of modules to support fast and accurate network modeling.

Infiltration Module
(Standard in InfoWorks CS and SD)
Unlike direct runoff, which responds to a rainfall event in minutes, infiltration inflows have a much slower response. The Infiltration Module allows users to represent this late response within the network. In networks where infiltration is dominated by tidal influences, users can create a time-varying profile for the groundwater storage level. This profile will override the level calculated by the infiltration model and groundwater infiltration is then based on this level.

Snow Melt Module
(Standard in InfoWorks CS and SD)
A Snow Melt Module has been incorporated into InfoWorks SD. The model is derived from the SWMM4 continuous simulation model. The Rainfall Event Editor allows the user to define the initial snow conditions, temperature profile and wind profile in addition to the rainfall profile. The melt rate, snow depth and free water depth results are available for any subcatchments containing snow packs. The Snow Melt Module operates by affecting rainfall before it reaches the runoff surfaces. When temperature falls below the dividing temperature between snow and rain, the rainfall profile is treated as snow. A melt rate is calculated for each surface type.

Real Time Control Module
(Standard in InfoWorks CS and SD)
Real Time Control (RTC) is the remote manipulation of control structures within a drainage system, based on conditions at any point in the system, in order to optimize storage and operation. RTC can be applied to individual, isolated, ancillary structures to provide local control of flows. It can also make global management of flows possible throughout an entire network.

Water Quality Module
(Standard in InfoWorks CS and SD)
The InfoWorks SD Water Quality Module is designed to help engineers develop cost effective solutions for pollution and sedimentation problems. The Water Quality Module can model physical processes such as sediment built up behind closed gates and penstocks. Using the Water Quality Module, engineers can control pollution by targeting the SSO problems, and predict quality components such as the volume of spillage and flooding. This leads to recommendations for corrective action through storage and real time control.

Physical process models within the Water Quality Module include a Surface Pollutant Build-up Model, a Surface Pollutant Wash off Model, a Gully Pot Model, a Sediment Transport Model and an In-pipe Water Quality Model.

InfoWorks 2D Module
2D functionality is available as a fully integrated module within InfoWorks CS and InfoWorks SD. This facilitates fast, accurate and detailed surface flood modeling, which is better for modeling flows through complex geometries such as urban streets and buildings, road intersections and other transport infrastructure. InfoWorks 2D features the most modern of 2D engines using a finite volume approach and a triangular irregular mesh. All of this powerful 2D functionality is fully and seamlessly integrated with the baseline 1D engine so a single simulation is all that’s needed to analyze the interaction of underground and above ground flows in the urban environment.

InfoWorks Viewer (Separately Licensed)
InfoWorks “Viewer” will be of interest to those people taking delivery of InfoWorks models from consultants, and those who are involved with the auditing of models built by others.

InfoWorks CS and SD Modules
InfoWorks WS gives an accurate view of the performance of a water distribution system so that a sustainable supply of high quality water can be provided to commercial, industrial and domestic users, at an acceptable pressure and flow rate whilst minimizing loss through leakage. Standard practice of a typical InfoWorks WS user shows the advancements possible, in that they will be running continuous simulations from day one, not steady state snapshot models.

More regulation, security concerns and climate change put increasing responsibilities on water managers. InfoWorks WS allows competent and informed decisions to be made and passed on to customers and senior management.

High quality all-mains InfoWorks WS models enable offline management decisions to be made with confidence. These include water quality, supply, demand and infrastructure problems and investigation of remedial measures.

InfoWorks Platform offers a complete solution that doesn’t require any add-on software or platform to run. All the tools, simulations and data integration needed are included in the single application.

- Integrated fully with GIS including automated model updates
- Flexible multi-user environment
- Efficient and back-end independent data storage
- Automated version control and audit trail
- Data source and result certainty management through data flags
- Designed for large model performance

InfoWorks Model Building is made simple with an intuitive user interface which maximizes productivity, reduces likelihood of errors and enables users to move swiftly between modules. Powerful model building tools include:

- Multiple data import options
- Flexible manual digitization
- Automated data validation and error correction
- Elevation extraction
- Adjustable demand management
- Linked customer management
- Models both hydraulics and operation of pumps and valves
- Matching of any Programmable Logical Controller (PLC)
- Automated model calibrations
- Integrated SCADA
- Allows for both top-down and bottom-up approaches to regional modeling
- Customizable data validation, correction, and analysis tools
InfoWorks WS simulations have over 30 years of refined development and use—resulting in the fastest and most reliable engine on the market. Included within the software are the following simulations:

- Steady state and extended period hydraulic analysis
- Water quality engine
- Fire flow simulation
- Automatic capacity check
- Main break isolation and shutdown simulation
- Critical Link Assessment (CLA)
- Unidirectional Flushing (UDF)
- Cost of pumping
- Cost of water
- Water hammer/transient analysis
- Leakage modeling
- Pressure related demands
- Automated optimization based on genetic algorithms

### Applications

- Planning of capital investments
- Investigation of supply deficiencies
- Scenario planning and fire flow analysis
- Assessment of supply to individual customer level
- Simulation of pollution incidents
- Assessing source blending requirements
- Optimization of pumping and storage systems
- Water quality and chlorination assessment
- Management of pressure related demand
- Sedimentation analysis and mains flushing
- Design and implementation of drought management plans
- Cost of pumping
- Cost of water
- Water hammer/transient analysis
- Leakage modeling
- Pressure related demands
- Automated optimization based on genetic algorithms

InfoWorks results and reports are fully interactive and allow the user to open any number of maps, tables, profiles and graphs at the same time. Reporting options include the following elements and if desired, the user can create customized MS Excel reports.

- Map Views (GeoPlan)
- Color Coding
- Contours
- Customizable Labelling
- Tables
- Graphs
- Profiles
- 3D Views
- Animation
- Result Comparison
- Derived Results
- Object Groups
- SQL Selection and Editing
- Tracing Tools
- Data and Results Export
- Google Earth Export
- Stored Views
- Viewer Application

### InfoWorks WS Viewer (Separately Licensed)

InfoWorks ‘Viewer’ will be of interest to those people taking delivery of InfoWorks models from consultants, and those who are involved with the auditing of models built by others.

The InfoWorks ‘Viewer’ allows existing InfoWorks databases to be imported and the data and results to be viewed. Everything appears just as it does in InfoWorks WS. It is fully functional with its ability to view data and results in the various graphical and grid views. This applies for both static and time varying data and results. It is also possible to import any Map layers (ArcView or MapInfo), so the models appear exactly as they were built. The entire audit trail resulting from the model build process is also preserved. There is no restriction on the size of model or length of simulation results that can be viewed.

Because it is a ‘viewing only’ tool, it is not able to amend any data, or set up any new simulations. However, it can be used to re-run any simulations that have previously been run to completion in a full copy of InfoWorks WS. This avoids the need to include results when producing transportable databases that are being passed to a third party that only has InfoWorks ‘Viewer’ and dramatically reduces the size of the .IWC file.
Combining an advanced 1D & 2D simulation engine, data management, geographical analysis and a relational database within a single environment, InfoWorks RS provides a single tool to import, clean-up and store survey and time-series data, build detailed and accurate models, analyze model results and present outputs in engineering report quality formats.

InfoWorks RS includes full solution modeling of open channels, culverts, floodplains, embankments and hydraulic structures. Rainfall-runoff simulation is available using both event based and conceptual hydrological methods. Water quality parameters may be simulated by looking at pollution inputs, dispersion, decay and the reactions between differing pollutants. Erosion, transport and deposition of channel bed material may also be simulated. Full interactive and animated views of data and results are available using geographical plan views and 3D views, sectional views, long profiles, spreadsheet and time varying graphical data. Full flood-mapping capability is provided based on a sophisticated flood-interpolation model overlaid onto an imported groundmodel. The underlying model data can be accessed from any graphical or geographical view.

As a result InfoWorks RS offers hydrologists, planners and engineers the most efficient modeling platform with which to investigate the full range of flood risk management and catchment planning issues.

**Applications**

InfoWorks RS may be used for a wide range of river, catchment and water resource applications; essentially anything that requires understanding of the movement of water and associated sediments and pollutants including:

- Indicative flood risk mapping on regional and catchment scales
- Detailed flood mapping at the individual property scale for urban planning and development control
- Dambreak analysis and associated flood, hazard and damage mapping
- Embankment breach investigations and prediction
- Catchment planning and management
- Flood defence planning and design
- Low flow assessments
- Water resources management
- Water quality assessments
- Saline intrusion studies
- Sedimentation and sediment control
- Flood forecasting system hydraulic model development platform

**Modules**

The software incorporates a number of modules, most of which are provided as standard while some are optional.

**InfoWorks 2D Module (Optional)**

2D functionality is available as a fully integrated module within InfoWorks RS. It facilitates fast, accurate and detailed surface flood modeling using finite volume analysis. Two-dimensional (2D) simulation is much better for modeling flows through complex geometries such as urban streets and buildings, road intersections and other transport infrastructure. This becomes a critical requirement in times of high intensity rainfall, bank overtopping or breaching where the situation in urban areas is exacerbated by the presence of drainage infrastructure, in which flows can both enter and exit the system during flood events. Clearly, modeling such complex flow scenarios both accurately and efficiently requires a model with both 1D and 2D engines. In rural areas or on open ground a 2D approach is also preferable, especially where the source or direction of flow is problematic to assume.
InfoWorks RS

Bank/Levee & Dam Breach Module (Standard)
InfoWorks RS offers dynamic simulation of the failure of earth embankments that lie either across the main channel to form dams or parallel to the channel forming flood banks or levees. The module allows for failure due to overtopping, piping or failure of surface protection layers. The embankment is described by its physical dimensions, material properties and condition. The module can represent banks of both homogeneous and composite construction and with a range of surface protection measures.

The breach evolution is calculated by the erosive capacity of the flow either over or through the bank. Seven choices of sediment transport equation are offered, depending on the materials used in the bank.

For piping failures the pipe diameter increases until the structural stability of the roof is exceeded causing the pipe to collapse and the failure continues as an open breach. For open breaches the module calculates both the vertical and horizontal erosion rates to predict the change in breach shape and flow characteristics. The module also assesses the slope stability of the sides of the breach, can represent headcutting and allows for collapse of bank material into the breach to form partial blockages.

Sediment Transport Module (Standard)
This module enables the prediction of sediment transport rates, bed elevations and amounts of erosion/deposition throughout a channel system. Various options are available including: specification of dredging; cohesive sediment transport; and rigid beds. Four sediment transport equations are available:
- Engelund-Hansen
- Ackers-White
- revised Ackers-White and
- Westrich-Jurashek

All include a calibration factor which has the default value of unity to give the published form of the equations. A range of methods are offered for updating the channel geometry.

Water Quality Simulation (Standard)
InfoWorks Water Quality is used to model water quality in open channels. It computes concentrations using a finite difference approximation to the advection-diffusion equation. Although InfoWorks Water Quality is a depth averaged model, for mud transport and water quality modeling an element is divided into four vertical sub-components: the main water column, the bed, the fluffy layer and pore water. The contents of the fluffy layer can interact biochemically and biologically with the water column. The material in the bed and pore water can interact but are isolated from the water column until re-suspended. Erosion of the fluffy layer and bed material returns their contents and that of pore water to the water column. InfoWorks Water Quality is capable of modeling a range of water quality variables and processes simultaneously. These include:
- Conservative pollutants
- Decaying pollutants
- Coliforms
- Salt
- Water temperature
- Sediment
- Oxygen balance
- Water/Sediment oxygen interactions
- pH

Logical Control Module (Standard)
Logical Control is the remote manipulation of control structures within the model, based on conditions at any point in the system, in order to optimize storage and operation. Logical Control can be applied to individual, isolated, ancillary structures to provide local control of gate positions and opening, pump status and abstraction discharges. It can also make global management of water possible throughout an entire network. For example, a rainfall of flow input at the top of the system may operate a sluice gate or outfall structure near the downstream limit.

Users can combine Logical Control modeling parameters to build up complex rules. This provides enormous scope to explore the potential storage capacity and optimal operating patterns within the system being modeled.
Conveyance Estimation (Standard)

The Conveyance Estimation System or 'CES' is a software tool that enables the user to estimate the conveyance or carrying capacity of a channel. This capacity is based on the ability of the channel to resist the flow, driven by gravitational acceleration in terms of channel gradient, through surface friction and channel morphology, for example, cross-section shape and platform sinuosity. The CES includes a component termed the 'Roughness Advisor', which provides advice on this surface friction or 'roughness', and a component termed the 'Conveyance Generator', which determines the channel capacity based on both this roughness and the channel morphology.

In addition, the CES includes a third component, the 'Uncertainty Estimator', which provides some indication of the uncertainty associated with the conveyance calculation. The primary outputs from the CES components are:

- Roughness Advisor: roughness values
- Conveyance Generator: stage-conveyance relationship
- Uncertainty Estimator: upper and lower bands for the stage-conveyance relationship

These three components are essential for determining site-specific stage-conveyance curves. The CES has a further module for calculating backwater curves in reaches upstream of a control point, for example a cross-section where the flow and / or depth are known.

InfoWorks RS Viewer (Separately Licensed)

InfoWorks 'Viewer' will be of interest to those people taking delivery of InfoWorks models from consultants, and those who are involved with the auditing of models built by others.

The InfoWorks 'Viewer' allows existing InfoWorks databases to be imported and the data and results to be viewed. Everything appears just as it does in InfoWorks RS. It is fully functional with its ability to view data and results in the various graphical and grid views. This applies for both static and time varying data and results. It is also possible to import any Map layers (ArcView or MapInfo), so the models appear exactly as they were built. The entire audit trail resulting from the model build process is also preserved. There is no restriction on the size of model or length of simulation results that can be viewed.

Because it is a 'viewing only' tool, it is not able to amend any data, or set up any new simulations. However, it can be used to re-run any simulations that have previously been run to completion in a full copy of InfoWorks RS. This avoids the need to include results when producing transportable databases that are being passed to a third party that only has InfoWorks 'Viewer' and dramatically reduces the size of the .IWC file.
FloodWorks is a modular software package for real-time simulation and forecasting of future hydrological and hydraulic conditions within river basins, stormwater and drainage systems and coastal areas. Designed for operational use in the control room, FloodWorks links varied live data sources with a wide range of models to provide detailed and accurate forecast water levels, flood depths, flows, velocities, water quality parameters and sea state.

Using FloodWorks, managers and engineers can carry out fast, accurate and detailed simulations of the future effects of an extreme event, providing key data necessary for the effective deployment of emergency response services and to minimize risk of loss of life and damage to public or commercial infrastructure.

Applications
FloodWorks may be used for a wide range of river, catchment and water resource applications, essentially anything that requires automating the linking of models with live data sources, running the models to predict future conditions and analyzing the results to produce automatically generated reports, bulletins, web pages and alerts for:

- Fluvial and coastal flood forecasting and warning
- Reservoir regulation and operation
- Water quality and pollution forecasting
- Low flow forecasting and warning
- Urban flood forecasting and warning
- Operational management of stormwater, wastewater and urban drainage systems
- Operational management of water resources and irrigation systems

Modules
The software incorporates a number of modules, most of which are provided as standard while some are optional.

FloodWorks Event Manager
The operational management user interface, FloodWorks Event Manager, emphasizes ease of use in combination with powerful facilities for visualizing and reporting forecast results. The software is developed for an international market, is available in any language (including those using non-Roman character sets) and allows clients to specify the local technical terminology used within the interface.
The following functionality is provided within the Event Manager user interface:

- Facility to initiate new runs of the forecasting system (with selection of initial conditions) or re-run previous forecasts or variants of those forecasts
- Scheduling of regular system and user runs
- Selection of forecast options (e.g. forecast for selected points only, switch between alternative meteorological forecasts, apply user-configured forecasts to specific points at particular times)
- Editing of input data, for example to correct or disable erroneous telemetry data, enter control data for structure operations, enter measured or forecast data from other sources, interpolate data
- Facility to ‘carry-over’ user-edited data from a previous run to a new run, or to all subsequent runs
- Map display of data from the forecast summary tables, with full pan and zoom
- Map backgrounds using data in standard GIS & CAD formats, with labeling options
- Tabular display of data from the forecast summary tables
- Graphical and tabular display of forecast and telemetry time-series data
- Export of time-series data and results to ASCII files
- ‘Point and click’ access to time-series displays from map and tabular summary displays
- Facilities to configure standard sets of display windows, for example for different geographical regions, and switch quickly between them
- Ability to display and compare forecasts from different runs
- Ability to instantly access results for user-configured ‘Areas of Interest’ (user-configured groups of data streams of particular interest)
- Facilities for constructing reports and bulletins printing and print-preview for all displays, reports and bulletins

FloodWorks Configuration Manager
The operational forecasting system is supported by a powerful suite of software tools, within FloodWorks Configuration Manager, for configuring the FloodWorks model network over GIS backgrounds such as ESRI shape files, standard image formats and for building and calibrating individual model components. These include:

- The FloodWorks network editor for configuring the model network. This includes the set-up of sites, data streams, and forecasting points for a full range of data types, including flow, level, rainfall, snow parameters, meteorological parameters, battery voltage and a range of parameters from the hydrodynamic model
- Calibration tools for PDM, KW and PACK model components
- Linkage with the InfoWorks software for building and calibrating hydrodynamic models
- Powerful workgroup model management facilities enabling: management of new and existing model libraries; management of multiple users on multiple systems; consolidation of data from multiple sources; model version control and audit trail through a central ‘master’ database; allocation of data source and confidence to model attributes using data ‘flags’; local administration and system management, including control of access permissions by individual user log-in details; comparisons between networks

FloodWorks Server
The FloodWorks Server module provides all the processing required to load data, run models and analyze the model results to generate warnings and reports. The FloodWorks Server is designed to run on both single PCs with single or multiple processes or to be distributed across a number of PCs either for load sharing or to provide resilience to hardware failure. Once configured, running of the FloodWorks server is entirely automatic and requires no user intervention.

The FloodWorks Server supports multiple users connected to the system at any given time and is available in various sizes, limited by the number of forecast nodes, meeting the requirements of differing local regional and national operational forecasting systems.

FloodWorks Web Publisher (optional)
The FloodWorks Web Publisher is an add-on to a FloodWorks Server Licence that enables the server to publish output in web compatible formats. Output includes XML formatted data on system status, events that have triggered, tabular summary or complete timeseries results, graph images and animated or summary maps. The published output is then compressed for fast and efficient distribution and sent to one or more FloodWorks Web Servers via ftp protocols.
FloodWorks Web Server

The FloodWorks Web Server is designed to run one or more web sites that present output from one or more FloodWorks Servers. The software manages four main tasks:

- Receipt and storage of compressed web reports from one or more FloodWorks Servers
- User authentication of client sessions as users browse to the web site
- Serving up the individual web pages requested by each authenticated user
- Sending run requests back to the appropriate FloodWorks server from appropriately authorized users

The Web Server application requires clients (such as web browsers) to log in before streaming web pages to them. Client licenses are based on the number of simultaneous logged-in clients.

The presentation and format of web pages is controlled by a user editable XML style sheet that allows customers to completely integrate the FloodWorks Web Server output with existing corporate web sites.
InfoNet is a purpose built asset and data management system for water distribution, wastewater collection and stormwater networks.

Designed for operations managers, engineers and planners in the water industry, InfoNet enables users to manage, integrate, validate, analyze and report on their network data to provide accurate, auditable up-to-date information and report on network infrastructure and performance, presented in easy to use formats. InfoNet ensures informed, swift and cost-effective decision making both for day-to-day operational management and for long term network planning. InfoNet provides for the integration of the wealth of different applications and data sets already in use including generic GIS, corporate databases, CMMS, field data systems, SCADA, hydraulic modeling / analysis software or other corporate applications to ensure that managers have a clear single picture of their network infrastructure.

InfoNet offers all the functionality of generic GIS and asset management systems, plus the advantages of being designed with the specific needs of water and wastewater network operators in mind. Where a GIS or asset management system is already in place, InfoNet transforms the existing application into a detailed decision support solution specifically designed for water and wastewater network owners, operators, consultants and contractors.

With InfoNet you can:
- Store, validate, review, clean, edit and analyze all water infrastructure asset data (from Asset Owners, Engineering Consultants and Contractors) in a single database
- Provide a complete audit trail for changes to network assets
- Recording network events
- Managing rehabilitation work
- Improve both planning and operational decision-making
- Increase the value and the use of spatial and asset data
- Utilize a similar user interface to InfoWorks for immediate high productivity
- Exploit the benefits immediately through using commercial off-the-shelf solutions

Features & Benefits of InfoNet:
- Integrated water network infrastructure survey data
- Managed, cleaned and analyzed water network data
- Access up-to-date information
- Report on network infrastructure
- Audit network rehabilitation

InfoNet is designed to help you and your partners perform these jobs effectively and efficiently. Historically decisions were often made on a mix of paper reports, costly customized software that failed to evolve, generic GIS and poorly supported databases - certainly not effective. The InfoNet user has access to multi-user and portable databases, all with inbuilt data models for water, wastewater and stormwater infrastructure, a point and click interface and an in-built report generator.

InfoNet provides the solution that integrates, manages, displays and reports on disparate data sets. At the same time it forms an essential part of an organization’s overall IT system, easily integrating with corporate databases, generic GIS, desktop office systems, hydraulic analysis systems, MMS, field data systems and SCADA.

Example Applications
For both long term planning and everyday operations, water network managers need accurate, up-to-date information about their networks - including location, construction and condition. InfoNet reports that information in an easy-to-use way enabling managers to make informed decisions in a cost effective and timely way.
**InfoNet Exchange**

**Automatic network database integration module**

InfoNet Exchange, a module of the InfoNet suite, allows for the automated exchange of data between an InfoNet master database, other third-party databases/file formats, and the generation of user-defined reports without the necessity to use the core InfoNet GUI application itself. The data transfer can either be from the InfoNet database outwards or into the InfoNet database. Transfers of data may include network updates, field-generated data, such as survey or repair data, and maintenance operations.

**Applications include:**

- Automatic updating of the external databases
- Automatic updating of the InfoNet database
- User-defined report creation
- Automatic delivery of daily, weekly or monthly standard reports

**Benefits**

- Increases the value of data that users store and analyze within the InfoNet environment
- Enables IT departments to integrate InfoNet with other corporate applications (GIS, billing etc.) without having to acquire core InfoNet GUI skills; thus facilitating the broader and speedier integration of InfoNet derived data
- Improves further InfoNet’s strength as a network reporting tool and extends the use of InfoNet derived data beyond those familiar with the InfoNet GUI interface
- Full audit trail creation

**InfoNet Mobile**

InfoNet Mobile, a module of the InfoNet suite, provides users with a complete ‘office to field and field to office’ solution. It uses mobile technology to link field workers seamlessly and securely to InfoNet asset and data management software, and can support a wide range of hardware including BlackBerries, laptops, tablet PCs, and PDAs. People in the field can now benefit from InfoNet as they would at the office, with all of the data they need. At the same time, managers can plan and assign works tasks from the office schedule and dispatch tasks straight to a portable device in the field. Other advantages, such as the avoidance of double handling data, makes the field data input process faster, easier, less expensive to manage and - crucially - far more accurate.

InfoNet Mobile has been designed to interface with many external databases and systems such as SAP, Oracle, SQL Server, JD Edwards, DataStream 7i, and Hanson, as well as InfoNet. This is achieved by the InfoNet Mobile database being connected to an intermediary database where the work orders and field forms are populated. This means that InfoNet Mobile can connect to and utilize data from multiple external systems and is not limited to a single system or interface.
MWH Soft employs a highly skilled team of software development and support staff. With our unrivalled experience in the development and application of high quality software for the water industry we are able to offer customers the opportunity to use our skills for their own software and modeling projects.

**Modeling assistance**
Our support team has extensive experience in the planning, construction and application of models and asset management systems. We can provide the high level expertise to assist with a specific project.

**Software integration**
InfoWorks & InfoNet incorporate an API that can be used to access many commonly used software functions from external software applications. The range of application varies from simple automation of repetitive user tasks (e.g. generating and running multiple model scenarios, automated model data entry) through to full integration with external software systems.

Application of the API is not covered by our standard support agreement. However, we are able to provide development and support with experience in the use of the API to assist with or implement your particular application.

**Model integration**
MWH Soft has been a key partner in the development of the OpenMI, an open standard for the exchange of data between environmental models at runtime. InfoWorks CS and RS both have an OpenMI compliant interface and can be linked to each other and to any other suitable OpenMI compliant modeling software.

As part of the HR Wallingford OpenWeb initiative, we have been developing tools and software to simplify the process of creating and running OpenMI compliant software applications. This has resulted in the OpenWeb SDK, a software development kit that extends the existing OpenMI tools to speed up the development of OpenMI compliant applications. We have also developed the Pipistrelle application, which provides a robust and extendable environment for linking and running OpenMI compliant applications.

**Custom developed software**
MWH Soft undertakes a wide range of software development activities for organisations working in water and environmental fields. We can assist with the design process, undertake application development, and then provide a full delivery and support service. An example of this is the development of the CES / AES software, which is widely used for simple assessments of channel conveyance and capacity.
The technical services team offers a range of training courses covering all of our products. We offer both standard training courses as well as tailor-made courses that can be designed to suit your needs. We regularly organize training in our offices around the world as well as conducting training on client sites if that is more convenient for you. We can also provide training over the Web.

A list of standard training courses are available for each product. Bearing in mind both your level of experience and the goals you wish to achieve with the product, you can select the ideal training course to suit you. The introduction courses aim to get you to know the basics and provide you with the skills you need for the tasks the products are predominantly used for. More experienced users will want greater detail for specific tasks and that is what you will find is offered in the advanced courses. All training courses are updated on a regular basis so that the new tools that come into the products with every release can be incorporated.

If you are a company with many users of our products or you have very specific goals that you wish to achieve, you may prefer us to design a course to address your individual requirements. The programme is agreed with you in detail, the most suitable trainer is chosen and your data is incorporated in the exercises and practical examples. This gives you the advantage of a course that deals with the specific challenges being addressed by your company that wouldn’t necessarily be covered in the standard training. Also, we always make an effort to conduct the training in the language that suits you best.

If you are urgently in need of some training, online training may be what you need. MWH Soft utilizes the services offered by WebEx Communications Inc. to offer you online training for urban drainage, water supply, rivers and coastal software. Training over the Web direct to your desktop is an efficient, economical and productive way to hold short courses.

Because all the trainers also provide support for our products on a daily basis, they are best placed for giving good quality training. Not only are they very experienced users of the software, they also know the common questions as well as knowing the most useful tips and tricks. They are seasoned in explaining all the tools and methods in a detailed and comprehensive manner.

You’ll be pleased to know that before joining MWH Soft most of the technical services team worked for the types of companies and agencies that generally use our products. This shared background helps them to understand very well what the client’s goals and challenges are.
MWH Soft has a dedicated worldwide technical services team. With staff based in the United Kingdom, the United States, Malaysia and Australia, and additional local support provided by our distributors in Italy, Benelux, Spain, France, Mexico, Japan, Korea, Taiwan, Brazil, and New Zealand, we have the world covered, 24 hours, 7 days a week, in many different languages.

Every need can therefore be met by the technical service team who are all dedicated to providing support, advice and detailed information.

In addition to the usual phone and email support we also offer online support that can be used to interactively demonstrate features and tools within the software. The online support is frequently used to help diagnose problems specific to a particular client set up. A member of the support team will sometimes come to your office to ensure that the software is set up to integrate with your existing systems ensuring maximum productivity and that all individual needs are met. The technical services team supports you right the way through your MWH Soft experience from correct installation to high-level modeling and asset management. Further to this the team often produce technical articles that are designed to provide detailed explanations of functions, features and hydrological advancements. These are available to all users either on demand, online or in the software’s Help package.

On top of all of this our technical services staff are an integral part of the software development cycle for all MWH Soft products giving them a highly detailed knowledge of the software which they draw on when helping clients. Through integration with our users our technical services team provide valuable feedback to the development team who in turn can determine the direction of future developments. Through this feedback process users of the products can have a direct impact on the advancement of the software by informing the technical service team of tools they would like to see or features that aren’t quite fulfilling their needs.

This all means that you can have the peace of mind that when you contact our support team that you are going to receive professional, dedicated, second-to-none services that will ensure you can continue working to your deadlines with a full explanation of anything you need to know. Plus you have the added reassurance that your close involvement with the MWH Soft Technical Services Team you can input and influence the product you use everyday as well as staying in touch with all the latest developments, features and news.
International office contact details

MWH Soft has offices in the United Kingdom, United States, Malaysia and Australia, and also has a network of approved distributors throughout Europe, Asia and the Americas.

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