Release Notes 2022

WEST

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Introduction

Welcome to WEST 2022 Update 1

In this Release Note you will find information about new features of WEST, and what you need to know in order to install and get started with WEST 2022.

WEST 2022 is the 7th release of the re-designed and re-engineered version of WEST, the powerful and user-friendly tool for dynamic modelling and simulation of municipal Water Resource Recovery Facility (WRRF) and Integrated Urban Water System (IUWS). The extensive state-of-the art model library of WEST enables one to model and evaluate almost any kind of modern WRRF and a variety of IUWS systems.

WEST 2022 comes in five different flavors:

- **WEST Basic**: Entry-level product: allows for the construction of a plant layout (limited in size) and for the execution simulations, using a reduced block library
- **WEST**: Construction of plant models using standard blocks, simulation, output visualization, and computation of user-specified objective functions, and execution of advanced experiments (formerly: WESTforDESIGN)
- **WEST +**: Construction of plant models using standard and custom blocks, simulation, output visualization, computation of user-specified objective functions, and execution of advanced experiments (formerly: WESTforOPTIMIZATION)
- **WEST Player**: Simulation, output visualization, and computation of user-specified objective functions on the basis of a fixed executable plant model, previously prepared by WEST or WEST + (formerly: WESTforOPERATORS)
- **WEST SDK**: Software Development Kit for the integration of the WEST engine (i.e. Tornado) in custom applications (formerly: WESTforAUTOMATION)

WEST 2022 comes with 2 separate model libraries: the conventional **MSL** library (that uses MSL as modelling language) and a new **Modelica** library (that uses Modelica as modelling language).

Important: issues that should surface in the MSL library will be solved, but the library will no longer be actively developed and will eventually be discontinued. As of Release 2020, all new (model) development is taking place in Modelica.

System requirements

Operating systems

Fully supported Windows operating systems *	Windows 11 Pro, version 21H2 (64 bit) Windows 10 Pro, version 21H2 (64 bit) Windows Server 2022, version 21H2 Windows Server 2019 Standard, version 1809
Non-supported but partially tested operating systems **	Windows Server 2016 Standard, version 1607

* Fully supported operating systems are systems that have been tested in accordance with MIKE's Quality Assurance procedures and where warranty and software maintenance agreement conditions apply.

** Non-supported but partially tested operating systems are systems, which are not officially supported by the MIKE software products. These operating systems have only undergone very limited testing for the purpose of MIKE software, but the software and key features are likely to work. Installation of MIKE software on a non-supported operating system is done so at the user's own risk. The MIKE software warranty and software maintenance agreement conditions do not apply for unsupported operating systems and DHI is under no obligation to provide assistance or troubleshooting for cases where the software is being used on a non-supported operating system.

Please note that when running a fully supported operating system as a 'guest operating system' on a virtualization platform, it is automatically downgraded to a non-supported operating system under the conditions provided above.

Minimum hardware/software requirements

Processor	compatible with x64 instruction set, 2.2 GHz or higher
Memory (RAM)	4 GB or higher *
Storage	64 GB or higher *
Display	resolution 1024 x 720 (High-Definition) or higher, 24-bit color (true color)
Graphics adapter	64 MB RAM (256 MB RAM or higher recommended), 32-bit true color
Software requirements	Microsoft .NET Framework 4.7.2 or higher

* The actual required amount of memory and disk space depend on the usage (application, model setup, size of data files etc.)

Installation

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DHI License Management - If you are installing on a computer or server where you will also install the license file, please also install the DHI License Manager. It must be downloaded separately.

To install WEST, please choose WEST in the ‘Product Overview’ dialogue box that appears when inserting the MIKE software 2022 USB and clicking the Setup.exe or executing the Setup.exe file from the downloaded installation files. Press the ‘Install’ button to begin installation.

The setup program will automatically install all necessary files and folders on your computer. Additionally, an entry is created in the Start Menu for WEST.

License file and dongle

Please Note that when using the local or network license option, which require a license file and a dongle, then

- the DHI License Manager must installed separately.
- all licensed applications included in MIKE 2022 require a 2022 version of the DHI License Manager.
- a new license file format (file extension dhilic2) has been introduced with MIKE 2022 and these license files can only be used together with a DHI License Manager 2022 or newer.

To use WEST software in licensed mode, please refer to the DHI License Manager Release Notes. (License Manager Release Notes)

Product invocation

Launch WEST from the Windows Start menu.

Support

For general support, please refer to our FAQ.

If you experience any difficulties, or if you have questions, please contact our Customer Care team at mike@dhigroup.com.

You can also contact your local Customer Care team for support in your local language. You can find the list here.

New features and fixed issues

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Every new release of WEST consists of new modules, new features and/or corrections to problems or significant inconsistencies discovered in previous releases. Please find below short descriptions of the most significant news.

Release 2022

New features

Module/type	New feature
Modelica Library	Models Guide (work-in-progress: available for download)
Modelica Library	New models: • Granular sludge partial nitritation/anammox treatment of reject water • Thermal Hydrolysis (THP) model compatible with ADM1
Modelica Library	Improvements: • Aeration mechanism in MABR • WATS model for H2S production in pressurized sewer

Modelica Library	New samples: • mBSM2_Biogas: for energy balance and biogas utilization • mIUWS_BSM2_River: demonstrates the IUWS library in Modelica, including H2S in sewer

Fixed issues/inconveniences

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Module/type	Error/Inconvenience
GUI	It is now possible to execute advanced experiments using WEST
GUI	OutputCategory in Influent Wizard is set as the default Category of the chosen Instance
Modelica Library	Updated catchment, sewer and river model library: improved description of in-sewer processes for prediction of hydrogen sulfide emissions; improved description of transport and conversion of pollutants in rivers
Modelica Library	Correction to Diffusivity vector for ASM2dMod and ASM2dISS
Modelica Library	Correction to mass balance of Tanks_Buffers.VolumePumped
Modelica Library	Correction to gasflow vector assignment for anaerobic digester
Modelica Library	Included missing ParamLib.xml in KwaMashu sample project

Known defects and workarounds

Module/type	Error/Inconvenience	Work-around
WEST GUI	The definition of Calculator Variables involving vectors or matrices in Modelica results in an error	Manually edit the TornadoMain.xml in the WEST\2021\etc\ folder and set to “**false**” the **EnableMSLCalcVarCompatibility** property
WEST GUI	Unit conversion does not work in Influent Tool	Use standard (SI) units rather than US or Imperial
Samples	Python Extensions sample only works after executing steady-state and dynamic simulation	Follow instructions provided in the Notes to the sample